# electronics

MID-MONTH JUNE 1952

Annual BUYERS' GUIDE ISSUE

PRICE . TWO DOLLARS

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Humidity . . . temperature . . . altitude testing



Tracing filter curves electronically



Development tests . . . 1/2 cycle filter

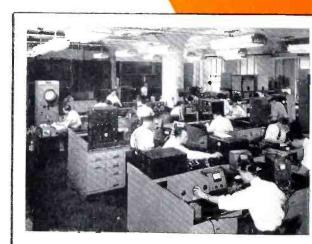


Filter development



## Engineering Leadership

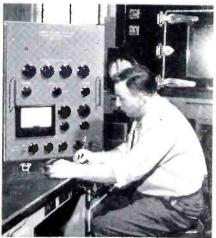
UTC has the reputation for exceptional quality and the ability to produce units previously considered impossible. This position of engineering leadership has been effected through a continuous program of research and development at the UTC laboratories. A few views of these laboratories are shown on this page.



**Audio development** 



Testing modulation transformer under operating conditions



Q meter measurements on low frequency coils



Pulse transformer development

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June, 1952-Mid-Month

**ELECTRÓNICS** Member ABC and ABP



Published monthly with an additional issue in June by McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1948), Founder. Publication Office, 99-129 North Broadway, Albany I, N. Y.

Broadway, Albany 1, N. Y.

Executive, Editorial and Advertising Offices: McGraw-Hill Building, 330 W. 42nd St., New York 36, N. Y. Curtis W. McGraw, President: Willard Chevaller, Executive President; Joseph A. Gerardi, Vice-President and Director of Advertising; J. E. Blackburn, Jr., Vice-President and Director of Nelson Bond, Vice-President and Director of Advertising; J. E. Blackburn, Jr., Vice-President and Director of Circulation.

Subscriptions: Address correspondence to Electronics—Subscription Service, 99-129 N. Broadway, Albany 1, N. Y., or 330 W. 42nd St., New York 36, N. Y. Allow ten control components, parts and end products. Position and company connection must be indicated on subscription orders.

Single copies 756 for United States and possessions, and Canada; \$1.50 for Latin America: \$2.00 for all other foreign countries. Buyers' Guide \$2.00. Subscription rates for two years. All other countries \$20.00 a year; \$30.00 for two years. Bate of the countries \$20.00 a year; \$30.00 for two years. Bate of a year; \$16.00 for two years. Other western hemisphere countries. \$15.00 a year; \$25.00 Mar. 3, 1879. Printed in U. S. A. Copyright 1952 by McGraw-Hill Publishing Co., Inc.—All Rights Reserved. BRANCH OFFICES: 520 North Michigan Avenue, Chicago 11. Rhodes-Haverty Bidg., Atlanta 3, Ga.; 1111 Wilslure Blvd., Los Angeles 17; 738-9 Oliver Building, Pittsburgh 22. ELECTRONICS is indexed regularly in The Engineering Index.

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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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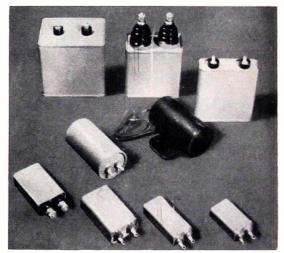
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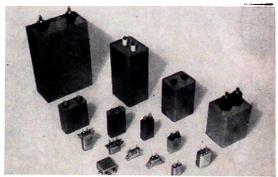
#### **CAPACITORS**



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, α-c, and 400 through 1500 volts, d-c, are now dual-rated and can be used for either α-c or d-c applications. Other α-c and d-c ratings available: 0.01 to 75 mu f, 236 to 660 volts, α-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.

#### 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—

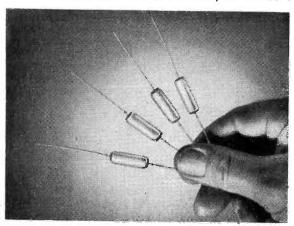


#### 1 to 10 Microfarads

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 above with smaller drawn-oval units). Drawnoval 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.

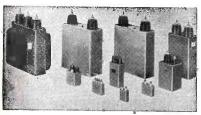
#### G-E TANTALYTIC CAPACITORS, 25 to 150 Volts, D-c — 0.1 to 50 Microfarads



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

The tantalytic capacitor is a foiltype, tantalum-electrode, electrolytic unit, similar in construction to an aluelectrolytic capacitor, because of the characteristics of tantalum foil and the electrolyte employed, is smaller in size. The tantalytic capacitor has lower leakage currents, longer shelf life, and a wider range of tem-

perature operation (-55C to +85C) than the conventional aluminum electrolytic capacitor. Currently, they are being used in telephone equipment and military communication and ordnance equipment. Write for Bulletin GEC-808.

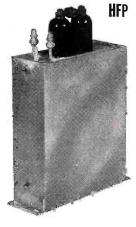


#### **Pulse-forming Network**

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.



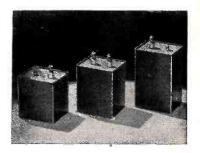
These capacitors are designed for commercial electronic applications, such as electronic precipitators and high-voltage grading. For high-voltage, low-capacitance, direct-current applications where cost, size, weight, sturdy construction, and dependability are the major factors. These units are also suitable for light-duty discharge pulsing and a-c service. May be mounted in any direction by using fuse clips or similar attachments. For information write Specialty Capacitor Sales, Hudson Falls, N. Y.



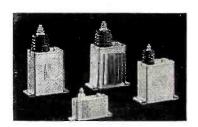
HFP Capacitors: These high-frequency, liquid-filled, parallel-plate capacitors are specifically designed for use in the resonant circuit of high-frequency electronic oscillators, such as those used in electronic-heater applications. They may be operated at relatively high voltages and will carry heavy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



Mu f Rating	D-c Voltage Rating	Characteristic	Watt- Second Rating
0.03	7,500	F	0.844
0.005	10,000	E	0.250
0.0075	10,000	F	0.375
0.01	10,000	F	0.500
0.001	15,000	Ε	0.112
0.0005	30,000	F	0.225



Energy Storage: These d-c Pyranol capacitors for phototube and similar light-duty energystorage 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.



#### **High-frequency Capacitors**

Fixed-paper-dielectric capacitors developed primarily for grid and plate blocking service in the electronic oscillator circuits of high-frequency induction-heating equipments. Also used to advantage in other high-frequency oscillator circuits of a similar nature. G-E high-voltage paperdielectric capacitors are of relatively high capacitance (0.01 mu f) for high-frequency units, and yet they are more economical than conventional high-frequency units of considerably smaller capacitance values. They provide savings in cost as well as reduced losses and lower voltage drop across the capacitor. Write for Bulletin GEA-4388.

D-c Voltage Roting	Microfarad Rating
5000	0.01
15,000	0.01
20,000	0.01
20,000*	0.01

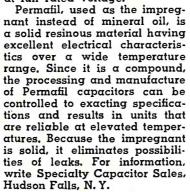
\*With cooling fins for higher current-carrying capacity. Capacitance tolerance

#### 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 +125C

at full rated voltage.

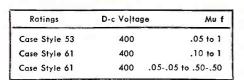




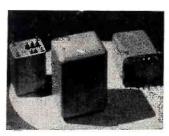
These paper-dielectric capacitors are designed for d-c electronic applications where it is desirable to obtain high voltage and low capacitance in a minimum of space.

For information, write Specialty Capacitor Sales, Hudson Falls,

W. I.		
Mu f Rating ±20%	D-c Voltage Rating	Watt- seconds
0.01	30,000	4.5
0.03	30,000	13.5
0.05	30,000	22.5
0.01	20,000	2
0.1	20,000	20



#### 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. Write for Bulletin GEA-5778.

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 encased 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. Write for Bulletin GEC-481.



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. Write for Bulletin GEC-481.

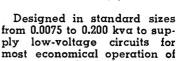


#### Compound-filled

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

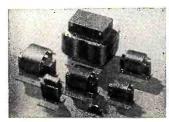
unit is not required, they are more economical than hermetically sealed transformers. They have wide application in the electronics field, such as in frequency-modulation, carrier-current, and speech-input equipment. An especially useful feature is the universal mounting—the units can be top- or bottom-mounted for open or underdeck wiring. Write for Bulletin GEC-481.

#### **Control & Signal Transformers**





numerous industrial, commercial, and household equipments. A complete standard line of normalreactance, 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. Write for Bulletins GEA-1358 and GEA-4887.



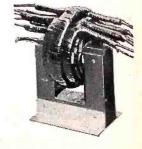
#### Aircraft Transformers

General Electric manufactures a complete line of standard 400-cycle aircraft transformers which includes generalpurpose 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. Write for Bulletin GEA-4866.



#### 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**

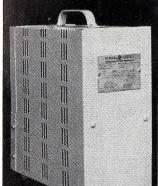


#### **Automatic Voltage Stabilizers**

For equipment that requires stable a-c input or for stable output of 115 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



To meet the increasing de-

mand for smooth voltage reg-

ulation in smaller electric ap-

paratus, G.E. has extended its

line of induction voltage regu-

lators to include the 300- and

600-volt-ampere ratings. With

these new inductrols, smaller

laboratory, industrial, and com-

munications applications are now afforded smooth control, high efficiency, and dependability. They can be automat-

ically or hand operated.

#### Vo amp Co 55 Ri

#### INDUCTROLS (Hand or Automatic)

Single-phase, 60 Cycles, Indoor Service, Automatic							
Volt- amperes, Cont,		R	aise an Regul		er	Net Wt.	Approximate Over-all
55C Rise	Input Volts	Per Cent	Amp	Per Cent	Amp	in Lb*	Dimensions in Inches
			120	Volts			
300 300 600 600	120 120 120 120	10 15 10 15	25 16.7 50 33.4		}	43 57	12½ by 6 by 10% 14 by 6 by 10%
			240	Volts			
300 300 600 600	240 240 240 240 240	10 15 10 15	12.5 8.3 25 16.7	5 7.5 5 7.5	25 16.7 50 33.4	43 57	12½ by 6 by 10% 14 by 6 by 10%
*14/****	Williams also make to study a contract on a struct to the state of						

\*Weights do not include control panel which is mounted separately from the regulator. Control panel weighs approximately 30 lb net.

	Hand-operated							
			120/	/240 Vol	ts			
300	120 240	20 10	12.5 12.5	10 5	25 25 16.6	32	10½ by	
300	120 240	30 15	8.3 8.3	15 7.5	16.6		6 by 77/8	
600	120 240	20 10	25 25	10 5	50			
600	120 240	30 15	16.7 16.7	15 7.5	33.4 33.4	46	11 <sup>3</sup> /4 by 6 by	
1200†	120 240	200‡ 100	5 5	100 _50	10		77/8	
†R:	†Rated for intermittent (1-hour) service. ‡200% raise and 100% lower.							



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, Bismuthwire 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).



## ELECTRONIC AMPLIDYNE Adjustable-speed Control

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  $1\frac{1}{2}$  hp. As regulated exciter for large adjustable-voltage drives up to 200 hp. The unit has an output of  $1\frac{1}{2}$  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-4053.

### GENERAL & ELECTRIC

#### HIGH VOLTAGE COMPONENTS



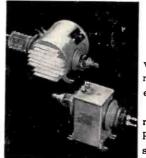
#### High-precision Rectifiers

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 as the tank circuit of an audio oscillator.



#### Oil-filled, Hermetically Sealed, Resonant Reactors

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. Certain small- and medium-size designs are provided with continuous adjustment of inductance over a wide range of 3:1.



#### Oil-filled, Hermetically Sealed Pulse Transformers

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 P.P.S.—will be found ideal for such applications as pulse voltage step-up or -down, impedance matching, phase reversing, measuring plate current of transmitter tubes.



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-capitance 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.



#### 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. Heatproof, 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. I. 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.





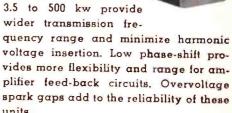
#### INDICATING LAMPS

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.

#### 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 fre-



For information on these and other high-valtage components, write Power Transformer Sales, Pittsfield, Mass., giving full details of application involved,

#### SWITCHBOARD COMPONENTS

Panel Instruments: 3½-inch Types: 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 micro-ammeters for measuring d-c voltage and current; Type AO-72 voltmeters, ammeters, and milliammeters for measuring a-c voltage and current.

DIRECT-CUR	DIRECT-CURRENT, TYPE DO-71		ALTERNATING CURRENT, TYPE A		
Туре	Rating Range	Approx. Resist. Range Ohms	Туре	Range Rating	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 1000 ohms per v	1 to 500 v	1000 to 500,000			
Kilovoltmeter	1 to 5 ky	1,000,000 to 5,000,000		25	





Types AB-18 (a-c) and DB-18 (d-c) **AMMETERS VOLTMETERS** WATTMETERS

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 dampening, and external zero adjusters.

General Electric switchboard instruments include voltmeters, ammeters, wattmeters, frequency meters, power-factor meters, varmeters, synchroscopes, 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.

WATTMETERS: 25-125 cycle; Accuracy— $\pm 1\%$ ; 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 frequencles; Accuracy—±1%; Operating Principle—Electrodynamometer with autotransformer.

2½-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  $\mathbf{v}$  to 300  $\mathbf{v}$ ).

1½-inch types: Extremely small, compact indicating instruments embodying fine quality and workmanship. Type DN-4 d-c microammeters, milliammeters, and ammeters up to and including 15 amp, and voltmeters from 25 mv up to 150 v can be supplied self-contained.

#### Long-scale Panel Instruments, Type DO-81

This long-scale panel instrument is designed for applications where greater ease and accuracy of reading are required and instrument space is limited. 250-degree, 4.92inch scale gives maximum legibility in a 31/2-inch instrument. Long scale and small size make this line especially suited to use with auxiliary apparatus for the measure-



ment of nonelectrical quantities, such as speed and pressure. Applications for standard electrical ratings include electronic apparatus, industrial testing equipment, and testing equipment for electronic circuits. Available as d-c microammeters, milliammeters, and ammeters from 200

mu a to 30 amp; d-c voltmeters from 1 to 300 v.

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 impeder; 50 and 60 cycles, self-cantained; 120 v; 360° rotation; Operating Principle—Polarized-vane,

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 cen

#### **Control and Transfer Switches**

Type SB-1 design is extremely flexible and can be applied to meet special requirements. Features include: square operating shaft with cams to provide positive contact operation; silver-to-silver contacts; complete protection of live parts; compact design; ample space for connecting leads; choice of operating handles; permanent-finish Textolite\* escutcheons; wide range of stages and contact positions, the number of circuits to be controlled determining the number of stages and contacts needed. Switches having up to 16 stages are commonly furnished.

The maximum number of positions, or throws, is twelve. Rating of Type SB-1 switches is 600 v, 20 amp continuous, 250 amps for 3 seconds. Interrupting rating depends upon voltage and character of circuit, as well as number of contacts in series. Write for Bulletin GEA-4746.

<sup>\*</sup>Registered trade-mark of General Electric Co.

### GENERAL % ELECTRIC



#### 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.

Portable Test Instruments (A-c and D-c): 4.1 in. scale length for general-utility testing. Useful for checking motor loads, checking power circuits, measuring power consumption, trouble shooting, and similar purposes. The high initial and sustained accuracy of these instruments is due to their lightweight moving element. a magnetic shield, high torque, and large clearances. The accuracy of the Type AP-9 is  $\frac{3}{4}$  of 1 per cent of full-scale value; that of the Type DP-9 is  $\frac{1}{2}$  of 1 per cent of full-scale value. The line includes ammeters, milliammeters, voltmeters, and wattmeters in all standard ratings. Contained in molded compound case 27/16 by 69/16 by 413/16 in. Write for Bulletin GEA-1784.



Vacuum-Tube Voltmeter, Type AA-1: A high-sensitivity instrument intended for measurement of voltage in electronic and other lowenergy circuits where minimum current drain is desirable. Because of the 0.010-volt range, this instrument is also useful for measuring low voltages in 60-cycle power circuits. Voltage ranges: 0-.01-.03-0.1-0.3-1.0-30-100-300. (Voltages as low as 300 microvolts may be observed.) Decibel ranges: -52 db to +52 db — 10 ranges. Accuracy: 10 cycles to 500 cycles — ±3 per cent, 500 kilocycles to 1 megacycle—+5 per cent. Write for Bullstin CFC-461 ±5 per cent. Write for Bulletin GEC-461.



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 GEA-4174.



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.

Second Harmonic (Magnetic) Converter: A static device that converts small d-c potentials to proportionate a-c which can be readily amplified and used to perform measurement or control functions. Weighing only three ounces, the converter can be used wherever precise control is required from small d-c signals. Designed primarily for use on 400-cycle power, giving a double frequency output of 800 cycles, it can be used on other frequencies by selecting a suitable value of the external capacitor which tunes the output. Typical applications: exhaust gas temperature control of jet engines, control approach systems, industrial measurements, computing devices, and numerous servomechanisms and electronic control systems. Write for Bulletin GEC-832.





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.

> Generalpurpose **Automatic** Time Switch. Type T-27



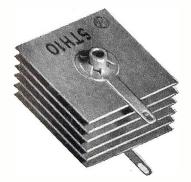
One of the most versatile of all G-E time switches, the T-27 can control two circuits for as many as 12 ON-OFF operations per day. Can be furnished with omitting device to skip a day or more, and with astronomic dial for dawn-to-dusk operation. Powered by the famous Telechron\* motor, the T-27 is available for 25-, 50-, or 60-cycle operation and from 115 to 460 volts. Contacts are rated 35 amperes at 230 volts. Dimensions are  $10\frac{3}{4}$  by  $5\frac{3}{8}$  by  $4\frac{7}{8}$  inches. Write for Bulletin GEA-535.

\*Registered trade-mark of General Electric Co.



## GENERAL # ELECTRIC

#### RECTIFIERS



#### Selenium Rectifiers for Electronic Applications

They improve quality. They cut costs. They provide dependable performance. They save space. Special construction provides constant and uniform contact pressure on all cells, regardless of temperature variations. A moisture-resistant finish gives protection against humidity, condensation, and dampness.

G-E selenium rectifier stacks are available

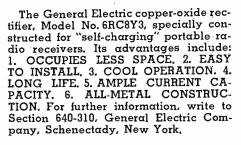
for use in radio, television, and other electronic circuits requiring 117-volt input with output loads ranging from 80 ma to 450 ma. Thus G-E rectifier stacks may be used in amplifier circuits, voltage-doubler circuits, to eliminate tubes, etc. Made by the G-E evaporation process, these selenium rectifiers have a long life with minimum aging and a stabilized output.

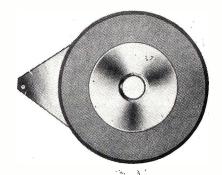
## K-type Rectifier Cells for Electronic Circuits

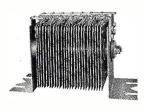


G-E miniature K-type cells can be used to replace tubes in many electronic circuits. Their small size makes them ideal for many applications where space is a problem. Low forward resistance, low back leakage, and minimum aging assure satisfactorily service under normal conditions. Typical applications are: Dual-diode circuits • Voltage-doubler circuits • Blocking. Advantages are: Longlife • Stability • Less replacements (under normal conditions expected to outlast tubes) • Uniformity • Save space • Lower cost (no sockets, minimum installation expense).

#### Copper-oxide Rectifiers





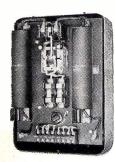


Copper-Oxide Rectifier Stacks offer the following advantages. They . . . Cost less per cell • Stop "aging" after a few months • Are more efficient at high current densities • Will stand short-time voltage (as well as current) overloads. Used for such applications as . . . Circuit-breaker operations • Blocking relays in control circuits • Exciter circuits for ignitrons, etc.



Selenium Rectifier Stacks are made from the highest-quality selenium cells. Because of their low forward resistance and low back leakage, G-E selenium rectifiers are recognized as the leader in quality at competitive prices. Used for such applications as . . . Control circuits — Power supplies — Arc suppressors — Testing equipment—Relay and solenoid power supplies — Magnetic amplifiers—Business machines—and many special electronic circuits.

#### General-purpose Rectifiers, CR7501



Provide a convenient and reliable source of direct current for numerous applications. Are ideally suited for use with such devices as magnetic chucks, magnets, and to supply power for direct-current motor fields when properly applied.

A typical rectifier consists of a metal panel on which are assembled the electronic tubes, anode contactor, anode fuses, and cathode protective relay, together with the necessary circuit components. The panel is housed in a standard sheet-metal enclosure suitable for wall or floor mounting, depending upon size and rating. Write for Bulletin GEC-206.

#### RESISTANCE-WELDING CONTROLS, CR7503

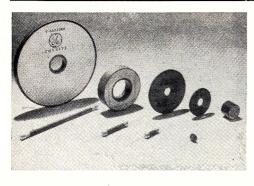


Resistance welding, a means of uniting metals or alloys. Some of the most striking examples of cost-saving by using resistance welding are in the manufacture of electronic tubes, auto mufflers, spark plugs, milk cans, transformer tanks, automobile bodies, boxcars, etc. This method is especially effective in welding together dissimilar metals.

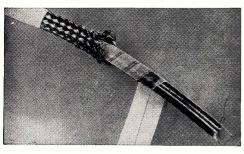
Production costs go down because no weight is added to the material; speed of manufacture is high; quality is more consistent; and a minimum of operator skill is required. Resistance welding is versatile; foil as thin as 70

millionths of an inch can be spot-welded to leads, or two pieces of heavy steel one-half inch or more in thickness can be welded together.

Good welding requires fast, accurate control. G-E electronic control applied to resistance welding increased by 400-500 per cent the speed of forming liquid-tight and gas-tight joints. A complete line of G-E electronic resistance-welding controls is available; such as ignitron contactors, synchronous and nonsynchronous spot-welding controls, frequency converters, synchronous seam-welding controls, and sequence and sequence-weld timers.

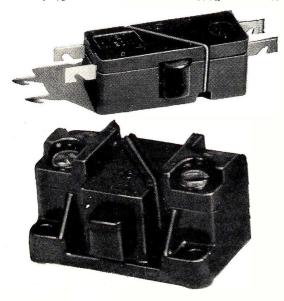


DELAY LINES provide a means for delaying electrical signals by desired and definite amounts of time, (10 microseconds). The limitations are allowable attenuation and wave-length distortion. They are most frequently employed, however, in lengths which give a delay ranging from 0.25 to 3.00 microseconds. Lines may be obtained in bulk form up to 100-ft.



Specific applications include: Rendering receivers insensitive for a definite time-interval immediately following a transmitter signal. Generation of pulsed signals of predetermined and definite width. Oscilloscope applications—to delay signals with respect to the servo sweep and for single pulse transients.

The delay line has a small-diameter core of insulating material covered with numerous turns of insulating wire covered with insulation and a shielded braid or conducting sleeve. A protective covering is wound over the shielded braid. One end of the wire and the braid represents input terminals; the other end represents output terminals. The delay is equal to approximately  $\frac{1}{2}$  microsecond for each foot.



**THYRITE\*** resistance material is a nonlinear resistance possessing the unique electrical property whereby the current varies as a power (3.5 to 7) of the applied voltage.

APPLICATION: To limit voltage surges • As a stabilizing influence on circuits supplied by rectifiers • As a potentiometer • For the control of voltage-selective circuits, either independent of, or in combination with, electronic devices.

SHAPES & SIZES: Disk Form, with or without central mounting holes. Dia 0.25 to 6 in. Min. thickness approx. 0.03 for dia of 1 in. or less; 0.06 in. for dia of 3 in.; 0.25 in. for dia of 6 in. Resistor Rods, with wire leads. Dia  $\frac{1}{4}$  in.; length 1.19 in. to 6.19 in. Miniature Disks, with wire leads. Dia  $\frac{1}{2}$  in.; thickness .06 in. to .09 in.

POWER RATINGS: CONTINUOUS: 0.25 watt per sq in. of Thyrite surface for separated disks, with the plane surfaces vertical in still air. Rating may be increased by the use of special provision for cooling, such as radiating fins, forced-air draft, or immersion under oil or Pyranol, SHORT-TIME: dependent upon volume of disk; assuming no time for radiation, a temperature rise of 80 C results from energy input of 2000 watt-seconds per cubic in. of Thyrite.

\*Registered trade-mark of General Electric Co.

**TERMINAL BOARDS:** For use where leads are brought to any part for permanent or temporary connection, especially if many wires are involved.

Type EB-5 are fabricated terminal boards. Each is equipped with the necessary washer-head binding screws for circuit-wire connections.

Type EB-6 are fabricated terminal boards of the same construction and dimensions as the Type EB-5, except that pressure —.5603 connectors are furnished for circuit-wire connections.



Typical EB-5 board with short-circuit strips



Typical EB-6 board with hinged cover

Boards will accommodate wire sizes from No. 18 to No. 10 inclusive. Where more than 12 poles are required for a particular application, combinations of the standard boards may be used. Write for Bulletin GEA-1497.



**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:  $\pm 2\%$  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.

#### SWITCHETTES, CR1070

These midget devices have snap action and double-break construction. They are especially applicable where space is limited and long life is desired. They are used wherever a manually or mechanically operated switch is required, such as in automatic washing machines; in temperature or pressure limits for domestic oil burners and stokers; in juke boxes, vending machines; and to time industrial processes and operations. A large variety of forms is available to meet any requirements. Rating at 50,000 feet on 12 and 24 volts. Single-circuit forms or 2-circuit forms with electrically separate circuits . . . Size 1, 10 amp. Size 2, 25 amp. Wired to provide single-pole,

single-throw... Size 1, 3.5 amp. Size 2, 4 amp. Contact structures available: single-circuit, normally closed; single-circuit, normally open; two-circuit—one normally open, and one normally closed. Write for Bulletin GEA-4888 (Size 1) and GEC-207 (Size 2).

	Size 1	Size 2
Weight	0.02 !b	0.125 lb
Plunger travel differential	0.020 in. -0.007 in.	0.040 in.†
Travel to trip	0.037 in. -0.012 in.	

†Approximately same as contact air gap.

#### 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 pushor 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. Cutout switches are available for use on d-c circuits. Write for Bulletin GEA-5163.

#### Industrial-type Solenoids, CR9503

Type	Pounds Pu	Pounds Pull or Push		
Sole- noid	At 85 Per Cent Voltage	At 100 Per Cent Voltage	Wt of Plunger in Lb	Max. Stroke in in.
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	11/4
Push	4.0	6.0	0.8	1 1/4
Pull	10.2	14	0.9	11/4
Push	10.2	14	1.2	11/4
Pull	22.7	30	2.5	13/4
Push	22.7	30	3.3	13/4
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

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.

## 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

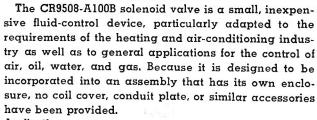
It is simple in design, having only two moving parts and no stuffing box, thus assuring long life and low maintenance. To permit regulation of flow through the valve, a conveniently located metering pin is provided. The metering pin may be omitted if desired. This valve is supplied with cadmium-plated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



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  $\pm$  1 degree and the general-purpose type which has an accuracy of  $\pm$  5 degrees. Selection can be made from a variety of sizes suited for each application. Selsyns are also available in a variety of complete indicators and transmitters. Write for Bulletin GEA-2176.

#### Solenoid Valve, CR9508-A100B



Applications: Water control for humidifiers. Water control for laundry and dish-washer equipment. Oil shutoff for oil-burner service. Pilot-gas control for gas burners. Air control for compressed-air devices. Evaporative cooling equipment control (dessert coolers).



#### Limit Switches

G.E. has a complete line of switches to make or break control or indicating circuits when a part of the mechanism comes in contact with a lever arm. Available for operation by roller lever, plunger, or push rod and may have a combination of circuits.



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 Relay, 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, generalpurpose relay comes in 7 open or enclosed forms: enclosed in generalpurpose case, or in explosion-proof and watertight case; open relays may be front-connected or backconnected or for mounting on a metal base or an insulated base, or with plug-in jacks. 3 contact arrangements are available: doublepole, double-throw; double-pole, single-throw; single-pole, singlethrow. Protection against hazard from restarts after power failures can be provided with the doublepole form when one pole is used as a holding interlock in the coil circuit together with a momentarycontact push-button station. The relay can be mounted on either insulated or non-insulated bases. The enclosed forms have convenient conduit entrances at both 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. Heavy-duty push-button stations handle higher control currents. Large, double-break contacts and substantial construction of heavy-duty stations withstand frequent operation and rough usage on machine-tool and similar applications. General-purpose, watertight, dust-tight, and explosion-proof enclosures. 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 765 ma; 0.059 ohms to 14,000 ohms coil resistance; and weigh from 0.22 lb. Contact rating 24 v d-c or 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 undervoltage protection.

Hp Rating, Single-phase

Туре	110 y	220 v
Open Enclosed	1/ <sub>2</sub> 1/ <sub>2</sub>	1/2

#### 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 deënergized, 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 4-POLE, DOUBLE THROW — 28 VOLTS, D-C, 3 AMPERES

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

and portable land-based electronic equipment.

Ambient temp ...—55°C to 70°C (-67°F to 158°F); 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



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	1.5 amperes	1.5 amperes
Motor	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.

#### **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. 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.
- \*Registered trade-mark of General Electric Co.

- 4. 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.
- 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.

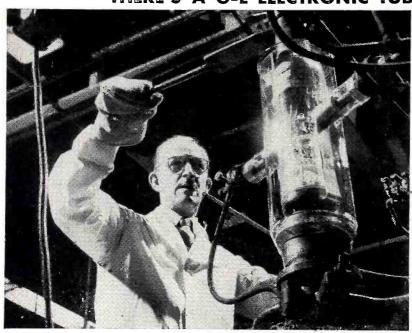
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Dynamometers Electrodynamometers . GEC-635
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Furnaces High Frequency GEC-1005
Gages
ComparatorGEC-466
Paint Depth CEC 210
Pressure Hdhk 3362
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Generators
Gas-engine-driven
GEA-5299, GEC-499
Harmonic Frequency GEC-582
right frequency Hable 6119
Induction and Dielectric Heating Hdbk. 2608
Motor GFC-202
Pulse
Motor
Heating
Electronic-Accessories &
Associated Equipment
GEA-4348, GEA-4989 Electronic InductionGEA-4945
Indicators
Antenna Position GEA-2176
Antenna Position GEA-2176 Broadcast Volume Hdbk. 8041 Dew Point
Dew Point GEC-588 Film Thickness GEC-319
Dulliulty Habk 2210
IlluminationGEA-4926

Liquid Level
Material Thickness CEC 405
Moisture Udbb 2212
Nuclear Radiation CEA 5705
Photographic Evensores GEA-5735
Photographic Exposure GEC-4926 Positioning GEA-2176 Power Level Write for details Pressure Hdbk 2230 Shorted Turn GEA-4539 Smoke & Combustion GEA-5254 Sound Level GEC-536 GEC-665 Strain GFA-3679
Power Terral GEA-2176
Pressure Level Write for details
Shorted Times Hdbk. 2230
Smolted 1 urn GEA-4539
Silloke & Combustion . GEA-5254
Sound Level. GEC-536, GEC-665
T-lam
Telemetering GEA-5233
Temperature
Timing
Torque GEA-4441
Turbidity
VacuumGEA-4313
inverters Hdbk 1545
Irons, Electric Soldering, CEC, 1005
Sound Level         GEC-536         GEC-665           Strain         GEA-3673           Telemetering         GEA-5233           Temperature         GEC-565           Timing         GEA-5108           Torque         GEA-4441           Vacuum         GEA-44713           Inverters         Hdbk         1545           Irons         Electric         Soldering         GEC-1005           Jewels         Glass         CEC-370
Manh:
Magnetometers GEC-342 Magneters GEA-4648
Magnetic Analysis GEC-309
Equipment
MagnetometersGEC-342
MetersGEA-4648
d'Arsonval
Decibel GEC-368 Distortion and Noise GEC-665 Field Intensity GEC-238 Field Strength GEC-238 Footcandle GEC-238
Field Intensity Noise GEC-665
Field StrongthGEC-238
FootcandleGEC-238
Light CEA-4926
Field Strength   GEC-238   Footcandle   GEA-4926   Footcandle   GEA-4926   Footcandle   GEA-4926   Footcandle   GEC-308   GEC-308   GEC-403   GEC-403   GEC-403   GEC-665   GEC-339   GE
BE Down GEC-308
Sound Tower
Vibration GEC-665
Vices-it-
Motors
Prosting 11
Company No GEC-189
Motors
Synchronous GEA-4240
GEA-5426 GEC 244
Oscillators, Ultrasonic
Oscinographs GEC-544
Multi-element J
Ovens, Electric
Ovens, Electric Hdbk. 3625 Photoflash Equipment. Electronic CEC 302
_ Electronic
Photometers
Electronic GEC-337 Photometers GEC-412 Pilots, Automatic Write for details Pots Soldering GEC-1005 Power Supplies High
Pots, Soldering Write for details
Pots and Tanke Hook GEC-1005
Power Supplies, neating GEC-1005
High Voltage GEC-751, GEC-752 RegulatedHdbk. 3357RL
Regulated GEC-752
Hdbk. 3357RT.

Pyrometers and Potentiometer PyrometersGEA-5534, GEC-713
Recorders Material Thickness
Write for details
Moisture GEC-588 Potentiometer GEC-367 Temperature GEA-5534
Regulators
Current
(3H:A_5Q
Shunts, MeterHdbk. 8029 Spectrometers, Mass Spectrometers and SpectrographsGEC-587
SpectrophometersGEC-307 Speedometers Electric
Switches Write for details
Float Type
Pressure OperatedHdbk. 2232 Snap Action
Toggle and Pushbutton GEA-1522 Vacuum
Synchros
Telemetering Systems
Electronic GEA-5233 Terminal Strips GEC-400 Testers
Coating Thickness GEC-319 Coil GEA-4539 Insulation GEC-612 Meter GEC-373 Thermocouples Proceedings
Insulation
Thermocouples, Pyrometric GEC-714 Thermometers, Resistance GEC-565
Automatic CycleGEC-452 Automatic IntervalGEA-5108 Automatic ResetGEC-452 Motor OperatedGEC-526
Seguence
Thermocount
Recording and C. GEC-385
trol Equipment Varistors (Thyrite)GEA-4138C Vibration Analysis
Equipment . GEC-285. GEA-4140
BalancingGEC-320

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





G-E Electronic Tubes are accurately designed to meet the exacting requirements of electronic circuits — whether for communications or industrial use. They are manufactured under rigid material and process controls to assure lasting performance within their ratings. New applications in communications and industrial equipment constantly demand new tube types. G-E designs tubes to meet every need.

## A listing of typical G-E industrial and transmitting tubes, with special section on receiving tubes.

The broad scope of the G-E line is indicated by this abridged listing of typical tubes. For more detailed data on these or other G-E tubes, write: Tube Department, General Electric Company, Schenectady 5, New York.

	GL-2C39-A				GL-5654	
1	GL-2C40	PE	LOT	RONS	GL-5670	
	GL-2C42				GL-5674	
	GI-2C43				GL-5680	
	G!-2C46	GL-801-A		GL-892	GL-5686	
	01.0507	GI802		GL-892-R	0.000	
ı	GL-2E24	GL-803		GL-893-A	GL-5691	
	GL-2E26	GL-805		GL-8931-R	GL-5692	
	GL-2E30	GL-806		GL-895	GL-5693	
	GL-4C21	GL-807		GL-895-R	GL-5725	
	GL-4D21/	G1-809		GL-898-A	GL-5739/FP-62	
	4-125A	GL-810		GL-898-A GL-954		
	GL-4X150A	GL-811-A			GL-5740/FP-54	
	GL-4-250A/	GL-812-A		GL-955	GL-5742/PJ-7	
	5D22			GL-956	GL-5743/PJ-21	
-	GL-5C24	GL-813		GL-957	GL-5749	
ı	GL-7C29	GL-814		GL-959	GL-5750	
ı	01-7 027	GL-815		GL-1000-T		
1	GL-7D21	GL-826	9	G!-1603	GL-5751	
1	GL-8D21	GL-828		GL-1612	GL-5763	
I	GL-9C24	GL-829-B		CL 1/10	GL-5797	
1	12AY7	GL-830-B		GL-1613	GL-5798	
1	GL-35T	GL-832-A		GL-1614	GL-5814	
		GL-833-A		GL-1619	01.5007	
	GL-100TH	GL-835-A		GL-1620	GL-5824	
	GL-146	GL-833		GL-1621	GL-5844	
ĺ	GL-152	GL-837		GL-1622	GL-5963	
	GL-159	GL-838		GL-1623	GL-6005	
l	GL-169	GL-842		GL-1624	GL-6019	
I	GL-203-A	GL-843		GL-1625	GL-6039	
1	GL-204-A	GL-845		GL-1629	GL-6183	
l	GL-207	01.040			GL-8000	
	GL-207 GL-211	GL-849		GL-1633	GL-8002	
	GL-241-C	GL-851		GL-5513		
l	GL-242-C	GL-862-A		Gl-5516	GL-8002-R	
l	FP-265	GL-880		GL-5518	GL-8005	
	FP-285	GL-889-A		GI-5549	GL-8025-A	
	GL-473	GL-889R-A		GL-5556/PJ-8	GL-8023-A GL-9001	
-	GL-592	GL-891		GL-5588	GL-9001 GL-9002	
ĺ	GL-800	GL-891-R		GL-5610		
ļ	01-000	GL-091-K		GL-3010	GL-9003	

#### THYRATRONS

GL-C1J GL-2D21	GL-2050
GL-2D21 GL-3C23 FG-27-A FG-81-A FG-97 FG-98-A	GL-5544 GL-5545 GL-5557/FG-17 GL-5559/FG-57 GL-5560/FG-95
FG-105 FG-154 FG-172	GL-5632 GL-5662 GL-5663
GL-393-A GL-414 GL-502-A	GL-5720/FG-33 GL-5727 GL-5728/FG-67
GL-627 GL-672-A	GL-5830/FG-41 GL-5855
GL-678 GL-884 GL-885	GL-6011 GL-6044

#### VACUUM CAPACITORS

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

#### • CATHODE RAY TUBES •

#### PICTURE TUBES

5TP4 7JP4 8AP4-A 10BP4-A 10FP4 10FP4-A 12KP4-A 12LP4-A 12UP4-B 14CP4 16AP4-A	16WP4-A 17BP4-A 17BP4-B 17CP4 17CP4/17HP4 17VP4/17LP4 17QP4 19AP4-A 19AP4-B 20CP4-A 20CP4-A
16AP4-A	.20CP4-A
16GP4-B	21 EP4-A
16KP4/16RP4 16KP4-A 16LP4-A	21EP4-B 21FP4-A 24AP4
	•

#### MEASUREMENT TUBES

GL-2AP1-A	GL-5FP14
GL-2BP1	GL-5UP1
GL-3AP1-A	5QP4
GL-3BP1-A	GL-7BP7-A
GL-3KP1	GL-7UP7
SL-3MP1	GL-914-A
GL-3UP1	GL-10KP7
SL-5BP1-A	GL-12SP7B
SL-5CP1-A	GL-17ADP7
SL-5CP7-A	No.

#### KENOTRONS • PHOTOTUBES • PHANOTRONS

GL-2B22	GL-1P21*	! FG-166
GL-2B23	GL-1P29/FJ-401	GL-266-B
KC-1	GL-1P37	FG-280
KC-3	GL-1P39	GL-575-A
2X2-A	GL-1P40	GL-673
5R4-GY	PJ-22	GL-816
GL-217-C	GL-441	GL-857-B
GL-218	GL-868/PJ-23	GL-866-A
GL-3B24-W	GL-917	GL-869-B
FP-400	GL-918	GL-870-A
GL-411	GL-919	GL-872-A
GL-836	GL-920	GL-5558/FG-32
GL-1616	GL-921	GL-5561/FG-104
GL-5625/KC-4	GL-922	GL-8008
GL-5726	GL-923	9
GL-5741/FP-85-A	GL-927	
GL-5973	GL-929	1
GL-8013-A	GL-930	1
GL-8020	GL-931-A*	14.
GL-9004	GL-935	1
GL-9005	GL-5581	A.
	*Multiplier	

#### GLOW TUBES • BALLAST TUBES • KON-NEC-TORS

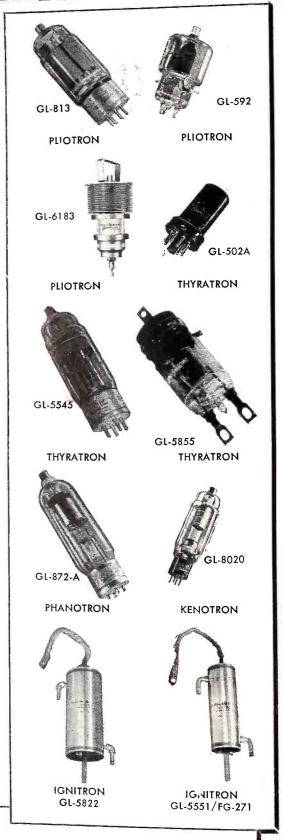
GL-OA2 GL-OA3 GL-OB2 GL-OB3 GL-OC3 GL-OD3	GL-5620/FB-50 GL-5621/B-6 GL-5622/B-25 GL-5623/B-47 GL-5624/B-46	1-1KR1 1-2KR1 1-15KRO 2-25KR1 2-33KR1 2-36KR1	4-19KR1 4-21KR1 4-24KR1 4-40KR1 7-19KR1 7-21KR1
GL-874		2-52KR1 Note: Mount available for Kon-Nec-Tors	

#### VACUUM SWITCHES . PHASITRONS . VACUUM GAGES

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

GL-5550/GL-415 GL-5551/FG-271 GL-5552/FG-235-A	GL-5553/FG-258-A GL-5822 GL-506 GL-5779	GL-5554/FG-259- GL-5555/FG-238- GL-5630
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#### GENERAL ELECTRIC

## ELECTRONIC TUBE MANUALS...

complete data a nical men, the new data on the electric every G-E tube type to solve your appl on these manuals we company. Schened

complete data available on every G-E tube. Designed for and by technical men, the new G-E Electronic Tube Manuals contain comprehensive data on the electrical, mechanical, and performance characteristics of every G-E tube type. Let their easy-to-read graphs and tube outlines help to solve your application problems. For prices and further information on these manuals write: Tube Department, Building 267, General Electric Company, Schenectady 5, N. Y.

#### 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.

#### **G-E FIVE-STAR TUBES**

#### G-E Five-Star Tubes Now Available for Commercial and Industrial Applications!

The entire line of General Electric operationally-dependable Five-Star tubes is now available for the first time to commercial and industrial users.

These tubes can now be obtained for other than

defense orders. Further information on Five-Star tubes is available from your G-E sales representative located at your nearest G-E regional sales office listed below.

	FIVE-STAR TUBE TYPES	
Tube Type	Description	Prototype
GL-5654	Sharp-Cutoff R-F Pentode	(6AK5)
GL-5670	H-F Twin-Triode	(2C51)
GL-5686	Beam-Power Amplifier	
GL-5725	Dual-Control Sharp-Cutoff R-F Pentode	(6AS6)
GL-5726	Twin Diode	(6AL5)
GL-5727	Thyratron	(2D21)
GL-5749	Remote-Cutoff R-F Pentode	(6BA6)
GL-5750	Pentagrid Converter	(6BE6)
GL-5751	High-Mu Twin Triode	(12AX7)
GL-5814	Medium-Mu Twin Triode	(12AU7)
GL-6005	Beam-Power Amplifier	(6AQ5)
GL-6072	Medium-Mu Twin Triode	(12AY7)
GL-6135	Medium-Mu Triode	(6C4)
GL-6136	Sharp-Cutoff R-F Pentode	(6AU6)
GL-6137	Remote-Cutoff R-F Pentode	(6SK <b>7</b> )
GL-6201	High-Gm Twin Triode	(12AT7)
	NOTE: Complete interchangeability between FIVE-STAR TUBES and their prototypes depends on individual applications.	
EXTRA- DEPENDABLE	LONG LIFE FEWER SHORTS FAILURES	SHOCK.

#### • TUBE DEPARTMENT REGIONAL SALES OFFICES •

#### EASTERN REGION SALES OFFICE

General Electric Company, Tube Department, 200 Main Ave., Clifton, N. J. GRegory 3-6387

#### CENTRAL REGION SALES OFFICE

General Electric Company, Tube Department, Suite 1192, Merchandise Mart Chicago 54, III. WHitehall 4-3915

#### WESTERN REGION SALES OFFICE

General Electric Company, Tube Department, Suite 1300, 530 West 6th St., Los Angeles 54, Calif. Trinity 3417

#### MAGNET WIRE



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.

#### FFATURES 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.

	Bare	Toler-	Ft/lb -		F			HF		Ohms/	Chms/
	Diam.		ance	Bare	Min Ins.	Max Ins.	Ft/lb	Min Ins.	Max Ins.	Fî/lb	F) Nom
41 -	.0028	±.0001	42100	.0002	.0032	40800	.0005	.0007	40000	1.32	1.42
42	.0025	$\pm .0001$	52900	.0002	.0029	51400	.0004	.0006	50400	1.66	1.800
43	.0022	$\pm .0001$	68200	.00015	.0025	66000	.0004	.0006	64500	2.14	2.35
44	.0020	$\pm$ .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	$\pm .00005$	330000	.0001	.00125	319000	.0002	.0004	306000	10.37	11.53

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 adhe-

sives and impregnating compounds.

<sup>\*</sup>Registered Trade-mark of General Electric'Company

Series Resistance For 105-125 Volts (Circuit)<sup>A</sup>

200,000EX.

200,000EX.

30,000IN.

30,000EX.

30,000IN.

30,000EX.

7,500EX.

**GLOW LAMPS** (Low Current Indicators)

Unbased (Wire

Terminals)

S.C.Bay.Min.

Cand.Screw

Cand.Screw

—Screw base lamps have required series resistor mounted

Bayonet based and wire terminal lamps require external series

Foregoing lamps, when new, have approximate starting volt-tages of 65 A.C. and 90 D.C. except as shown below:

D.C.Bay.Cand.

D.C.Bay.Cand.

D.C.Bay.Cand.

D.C.Bay.Cand.

Watts

1/4

1/4

1/4

1/4

resistor of values marked "EX".

NE-57, NE-17: 55 A.C., 75 D.C.

NE-2

NE-51

NE-45

NE-48.

NE-16<sup>B</sup>

NE-57

NE-17

**NE-32** 

NE-32:

1/25 T-2

1/25 T-31/4

T-41/2

T-41/2

T-41/2

T-41/2

 $T-4\frac{1}{2}$ 

G-10

within base. Values are shown marked "IN."

60 A.C., 85 D.C.

B — Designed to meet JAN-1A specifications for 991.

Bulb

## For trouble-free performance.. SPECIFY G-E DIAL AND INDICATOR LAMPS

FILAMENT LAMPS (Radio Dial & Indicator)										
Lamp Number	Volts	Amps or Watts	Bulb	Base						
Miniatur	e		-							
40	6-8	0.15	T-31/4	Min. Screw						
41	2.5	0.50	T-3½	Min. Screw						
42	3.2	0.35	T-31/4	Min. Screw						
43	2.5	0.50	T-31/4	Min. Bay.						
44	6-8	0.25	T-31/4	Min. Bay.						
45	3.2	0.35	T-31/4	Min. Bay.						
46	6-8	0.25	T-31/4	Min. Screw						
47	8-6	0.15	T-31/4	Min. Bay.						
48	2	0.06	T-31/4	Min. Screw						
49	2	0.06	T-31/4	Min. Bay.						
51	6-8	Max. 0.25	G-31/2	Min. Bay.						
55	6-8	Max. 0.45	G-41/2	Min. Bay.						
1490	3.2	0.16	T-31/4	Min. Bay.						
Large										
10 <b>C</b> 7	115-125	10	C-7	Cand.						
10C7DC	115-125	10	C-7	D.C.Bay.						

	10C7 10C7DC	115-125 115-125	10 10	C-7 C-7	Cand. D.C.Bay.	NE-16: Designed for 67-87 volts D.C. (D.C. operating voltage at 1.5 milliamperes 53-65 volts)
	dial lights n cial care to t	nust operate their design	e, Gener n and m	ral Electi anufactu		General Electric Neon Glow Lamps are being used a constantly increasing number of applications as dicators, and because of their unique electrical charteristics, as components of electronic circuits. Exam
-	G-E researc	n is const	апшу ат	l work t	o assure their	at the state of th

and base torsion tests are used in the laboratory to make certain customers will get good service from these General Electric lamps. Features like these make it worthwhile to use and in-

quality and serviceability. Shock tests, vibration tests

stall G-E lamps:

- 1. Dependable, trouble-free performance.
- 2. High level of maintained light output.
- 3. Low current consumption.
- 4. Long life.
- 5. Preferred by both dealers and customers.

ed in s inaracthese characteristics:

- 1. Distinctive orange-red glow. No colored cover glass needed.
- 2. Dependable long life. Generally lasts life of your product.
- 3. Low current consumption.
- 4. Variety of sizes and wattages. 1/25th watt to 3 watt.
- 5. Rugged construction. Thrive on vibration, shock.
- 6. Operate on 105 to 125 volt circuits without need for voltage reduction

#### GENERAL ELECTRIC FUSED QUARTZ

Made in standard sizes of ingots, plates, tubing and rods.

Fused quartz has unique electrical properties. High resistivity (approximately 1 x 10<sup>19</sup> ohm-Cm<sup>3</sup>), low dielectric losses (.0009 Dielectric loss factor) and ability to withstand wide and sudden temperature changes make fused quartz a superior material as an electrical insulator. It has less affinity for moisture than any of the other highly refractory materials.

#### LOUDSPEAKERS AND PHONO ACCESSORIES



General Electric Variable Reluctance Cartridge with the replaceable stylus provides unsurpassed record reproduction. Available with 3 mil stylus for standard records (RPX-040) and with 1 mil stylus for LP records (RPX-041). These cartridges virtually eliminate needle talk and needle scratch. Minimum distortion.



General Electric manufactures two dual reversible sapphire\* styli, two dual reversible diamond styli and one combination diamond and sapphire stylus. All of them incorporate the "double twist" feature of the Baton Stylus design. See table at right for complete information on these items.



The "Baton Stylus" design is incorporated in all G-E single styli. Virtually eliminates buzzing, blasting or fuzziness — three foes of listening pleasure. Table at right lists complete information on these products.

\*Some sapphires are synthetic.



General Electric manufactures 2 Triple Play Cartridges, making it possible to play 33, 45 and 78rpm records without changing the cartridge or even its position in the arm. Model RPX-050 is equipped with dual sapphire "Baton" stylus. Model RPX-047 is turnished without stylus but will accommodate all of the General Electric dual reversible styli.



This Webster Plug-in Head contains the G-E RPX-050 cartridge for playing 33. 45 and 78rpm records. Although the cartridge is equipped with the RPJ-010 dual reversible stylus, it can also accommodate any of the other General Electric dual reversible styli. A simple twist of the positioning knob on the cartridge selects the proper stylus for any of the record speeds. Known as Model UPX-111.

Stylus Radius in Inches	Recommended Use	Diamond	Color	Sapphire	Color Code
		Stylus	Code	Stylus	
S	INGLE STYLI FOR RPX-	040, RPX-0	41 AND RPX-04	6 CARTRIDG	ES
.001	Microgroove (33 & 45 RPM)	RPJ-004	Black	RPJ-005	Red
.0025	5 NAB Transcriptions		Yellow	RPJ-006	White
.003	Standard 78 RPM	RPJ-003	Violet	RPJ-001	Natural
DUAL (SA	PPHIRE AND DIAMOND	) STYLUS FO	R RPX-047 AND	RPX-050 C	ARTRIDGES
.001 & .0025	Triple Play (Microgroove & NAB)	RPJ-011	.001 Black .0025 Yellow	RPJ-007	.001 Red .0025 White
.001 & .003	Triple Play (Microgroove & Standard)	RPJ-012	.001 Black .003 Violet	RPJ-010	.001 Red .003 Natura
	APPHIRE OR DIAMOND	STYLI FOR	RPX-047 AND	RPX-050 CA	RTRIDGES
DUAL (S				-	



1201D-Wide Range Speaker

T FTFC	IKIC	ALNICO	5 LO	DUDSPEAKE	RS WITH	THE	ALUMI	NUM	BASE	<b>VOICE COIL</b>		
Speaker Size Inches	Watts Output	Alnico 5 Mag. Wt. Oz,	VC Imp. Ohms	Response Cycles	Cat. No.	Speaker Size Inches			VC Imp.	Response Cycles		
4	4	1.3	3.2	140-7000	810D	8	12	4.0	_			
4	4	1,0	3.2	140-7000	818D		-			80-10000		
4	4	.68	3.2	140-7000	1				-	80-10000		
5	4	1.3	3.2	125-8000		-			3.2	60- <b>8</b> 00 <b>0</b>		
5	4	.68	3.2					14.5	8.	60- <b>9000</b>		
51/4	4	1.3				-	25	9.0	8	60-9000		
	4						12	3.16	3.2	60-8000		
						10	12	6.8	8	60-8000		
						12	12	6.8	3.2	60-9000		
			3.2 110-9000	1201D*	12	25	14.5		50-13000			
		_				,00		1203D*	12	25	9.0	
•					1212D*	12			-	50-13000		
			3.2	70-13000	1218D*	12				60-9000		
- 8	8	2.98	3.2	80-11000		-	12	0.8	8	60- <b>9000</b>		
		Specia	ıl Cons	truction for D	rive-in The	eatre Ar	plication					
4	4	1.3	3.2	180-7000	525C18	51/4	4	1.3	3.2	160-7000		
	Speaker Size Inches  4  4  5  5  5  4  5  4  6  6  6  6  6  8	Speaker   Size   Watts   Coutput	Speaker Size Inches         Watts Output         Alnico 5 Mag. Wt. 0z.           4         4         1.3           4         4         1.0           4         4         68           5         4         1.3           5 1/4         4         1.0           5 1/4         4         1.0           5 1/4         4         1.3           6 1/2         4         1.3           6 1/2         4         1.0           6 1/2         4         1.0           6 1/2         4         1.0           6 1/2         8         2.98           6 x 9         8         1.47           8         8         2.98           Specio	Speaker Size Inches         Watts Output         Ainlco 5 Mag. Wt. 0z. Ohms         VC Imp. Ohms           4         4         1.3         3.2           4         4         1.0         3.2           4         4         .68         3.2           5         4         1.3         3.2           5         4         1.3         3.2           5 1/4         4         1.3         3.2           5 1/4         4         1.0         3.2           5 1/4         4         .68         3.2           6 1/2         4         1.3         3.2           6 1/2         4         1.0         3.2           6 1/2         4         1.0         3.2           6 1/2         8         2.98         3.2           6 x 9         8         1.47         3.2           8         8         2.98         3.2           Special Cons	Speaker Size Inches         Watts Output         Alnico 5 Mag. Wt. 0z.         VC Imp. Ohms         Response Cycles           4         4         1.3         3.2         140-7000           4         4         1.0         3.2         140-7000           4         4         .68         3.2         140-7000           5         4         1.3         3.2         125-8000           5         4         .68         3.2         120-7000           5½         4         1.3         3.2         120-7000           5½         4         1.0         3.2         120-7000           5½         4         1.3         3.2         110-9000           6½         4         1.0         3.2         110-9000           6½         4         1.0         3.2         110-9000           6½         8         2.98         3.2         100-10000           6 x 9         8         1.47         3.2         70-13000           8         2.98         3.2         80-11000    Special Construction for Domain and all strains an	Speaker Size Inches         Watts Output         Alnico 5 Mag. Wt. 0z.         VC Imp. Ohms         Response Cycles         Cat. No.           4         4         1.3         3.2         140-7000         810D           4         4         1.0         3.2         140-7000         818D           4         4         6.68         3.2         140-7000         1000D*           5         4         1.3         3.2         125-8000         1001D*           5         4         6.8         3.2         120-7000         1012D*           5½         4         1.0         3.2         120-7000         1018D*           5½         4         6.8         3.2         120-7000         1018D*           5½         4         1.3         3.2         110-9000         120D*           6½         4         1.0         3.2         110-9000         1201D*           6½         4         1.0         3.2         110-9000         1202D*           6½         8         2.98         3.2         100-10000         1212D*           6 x 9         8         1.47         3.2         70-13000         1212D*           8	Speaker Size Inches         Watts Output         Alnico 5 Mag. Wt. 0z.         VC Imp. Ohms         Response Cycles         Cat. No.         Speaker Size Inches           4         4         1.3         3.2         140-7000         810D         8           4         4         1.0         3.2         140-7000         818D         8           4         4         6.68         3.2         140-7000         1000D*         10           5         4         1.3         3.2         125-8000         1001D*         10           5         4         6.68         3.2         120-7000         1012D*         10           5½4         4         1.3         3.2         120-7000         1018D*         10           5¼4         4         1.0         3.2         120-7000         1018D*         10           5¼4         4         6.8         3.2         120-7000         1018D*         10           6½4         4         1.3         3.2         110-9000         1200D*         12           6½2         4         1.0         3.2         110-9000         1203D*         12           6½2         8         2.98         3.2	Speaker Size Inches         Watts Output         Alnico 5 Mag. Wt. 0z.         VC Imp. Ohms         Response Cycles         Cat. No.         Speaker Size Inches         Watts output           4         4         1.3         3.2         140-7000         810D         8         12           4         4         1.0         3.2         140-7000         818D         8         12           4         4         6.68         3.2         140-7000         1000D*         10         12           5         4         1.3         3.2         125-8000         1001D*         10         25           5 1/4         4         1.3         3.2         120-7000         1012D*         10         12           5 1/4         4         1.0         3.2         120-7000         1018D*         10         12           5 1/4         4         1.0         3.2         120-7000         1018D*         10         12           5 1/4         4         1.0         3.2         120-7000         1018D*         10         12           6 1/2         4         1.3         3.2         110-9000         1200D*         12         25           6 1/2         8 </td <td>  Speaker Size   Watts   Size   Othms   Size   Size   Output   Output   Size   Output   Outpu</td> <td>  Size   Nation   Size   Size</td>	Speaker Size   Watts   Size   Othms   Size   Size   Output   Output   Size   Output   Outpu	Size   Nation   Size   Size		

GENERAL ELECTRIC WILL WELCOME INQUIRIES FROM MANUFACTURERS REGARDING TELEVISION COMPONENTS

### GERMANIUM PRODUCTS WELDED GERMANIUM DIODES

WELDED CONTACT
LOW SHUNT CAPACITY
INSULATING CASE
SMALL SIZE



## LONG LIFE NO FILAMENTS HIGH RECTIFICATION EFFICIENCY HIGH MOISTURE RESISTANCE

ELE	CTRICA	L CHARACT	ERISTICS	AT 25°C		MAXI	MUM RATINGS	AT 25°C			
Designation Max. Inverse Current (MA)  RTMA G-E At -50v At -10v						Current (MA) Current (MA) Inverse		Continuous Reverse Working Voltage	Average Rect. Current (MA)	Peak Rect. Current (MA)	Ambient Temperature Range
		-10v	At +1v								
1N48	G5	.833	7.00	4.0	85	70	50	150	-50 to +75°C		
1N51	G5C	1.667		2.5	50	40	25	100	-50 to +75°C		
1N52	G5D	.150		4.0	8.5	70	50	150	−50 to +75°C		
1N63	G5E	.05		4.0	125	100	50	150	-50 to +75°C		
1N64	G5F			oad current in speci-	20	,			-50 to +75°C		
1N65	G5G	.20		2.5	85	70	50	150	-50 to +75°C		
1N69*	G5K	.85	.05	5.0	75	60	40	125	-50 to +75°C		
1N70*	G5L	.30	.025	3.0	125	100	30	90	70°C Max.		
1N72	Ģ7	Noise fig 500 MC		to 19 db in specific			25	75	70°C Max.		
1N75	G5M	.05		2.5	125	100	50	150	-50 to +75°C		
1N81*	G5P		.01	3.0	50	40	30	90	70°C Max.		

\*Jan Types

Also

MATCHED PAIRS of 1N48, 1N52, 1N63, and 1N75 - forward currents within 10% of smaller current at +1 volt.

QUADS TYPES 1N73 and 1N74 — Four carefully matched diodes for ring or bridge modulators mounted and hermetically sealed in 6H6 tube shell.

TRANSISTORS — Types G11 and G11A — G11 Rated for 17 db power gain at 1 kc — G11A tested for base current characteristics suitable for trigger circuits.



Diffused junction power rectifiers—new products in the semi-conductor field—pioneered by General Electric. These revolutionary devices have characteristics heretofore unachieved by other rectifiers, including semi-conductor as well as thermionic types.

Consider these advantages:

- Low forward resistance; only 2 to 2.5 ohms per junction at full load.
- High reverse resistance: 500,000 ohms is typical at rated inverse voltage.
- 3) High peak inverse: up to 200 volts for a single junction.
- 4) Long life.
- 5) Sealed against moisture.

These diffused junction rectifiers may be supplied with pigtails for soldering directly into a circuit. They can be connected in series or parallel when higher inverse rating or higher output current are required. While these devices are rated up to 50 KC, they have been found to give efficient operation up to 100 KC.

It is to your advantage to consider them in any application which requires a rectifier of the very highest efficiency.

DESCRIPTIONS AND MAXIMUM RATINGS									
	Type G-10		Type G-10A		Type G-10B		Type G-10C		
AMBIENT TEMPERATURE	40° C	55° C	65° C	25° C	40° C	25° C	40° C	25° C	40° C
RMS Input Voltage (Max.) -Volts	130	130	130	32	32	50	50	65	65
RMS Current (Max.) —Amps	1.2	1.2	.2	.6	.5	.6	.5	.6	.5
D-C Output Current (Max.) -Ma	400	350	50	200	150	200	150	200	150
D-C Surge Current (Max.) —Amps	25	20	2.5	10	8	10	8	10	8
Peak Forward Current (Max.) -Amps	3	3	.5	1.5	1.2	1.5	1.2	1.5	1.2
Peak Inverse Voltage (Max.) —Volts	400	400	400	100	100	150	150	200	200
Full Load Voltage Drop (Max.) -Volts	1.5	1.4	1.3	.8	.7	.8	.7	.8	.7
Operating Frequency (Max.) -Kc	50	50	50	50	50	50	50	50	50



#### GERMANIUM DIODE HANDBOOK - 1952 Edition . . . 5th Printing

New charts, complete specifications on G-E germanium diode products — all in this 100-page loose-leaf leatherette book. Contains diode and rectifier characteristics and applications, curves on resistance, voltage, temperature, efficiency, circuit diagrams covering AM, FM and TV receivers, radar, carrier current.

This book is worth many times its cost to electronics designers, engineers and manufacturers. We will send it to you for \$1.25 postpaid. Send check or money order to: General Electric Company, Section 862, Electronics Park, Syracuse, New York.

#### Regulated Power Supply



Type YPD-2 This G-E Regulated Power Supply is a superior quality, medium power, electronically regulated unit designed for use in laboratories, broadcast stations, and wherever a closely regulated d-c voltage of low ripple content is

#### OTHER UNITS AVAILABLE-SPECIFICATIONS-

DC Voltage Output • YPD-4: 250-450 v

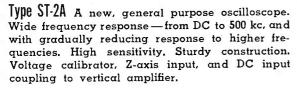
ST-9A:

DC Current Output

160-1500 v. Current: 0-125 ma. Dual power supply, each unit supplying 0-500 v. Current: 100 ma max. each.

0-300 ma • 4ST1A1: 180-300 v. Current: 0-60 ma.

#### OSCILLOSCOPES





#### Type YNA-4

Industrial Oscilloscope. For applications where test equipment is essential for installation and maintenance purposes. Insulated case, sturdy construction, versatile circuits with D-C amplifiers, and good magnetic shielding recommend this oscilloscope for use in industrial and educational laboratories and for production testing.

#### Type ST-2C

A new 5" scope for general purpose work. Particularly useful for maintenance of microwave installations and TV stations. Wide frequency response (5 mc) without recourse to peaked amplifier coupling circuits, resulting in excellent response. Power requirements: 105-125 volts AC, 50-60 cycles, 120 watts.



#### TELEVISION TEST INSTRUMENTS

#### Sweep Generator Type ST-4A

Provides at least 15 mc wide linear sweep. Channels 2-13 as well as IF frequencies. Double shielding holds leakage to minimum. The output voltage is greater than 0.1 volts from 4-110 megacycle, greater than 0.5 volts from 170-220 megacycle.



#### Marker Generator Type ST-5A

For use with wideband sweeps, Permits employment of multiple markers simultaneously. Separate crystal for each TV channel. No tuning required. Individually calibrated dial for IF (20-50) mc range. Dial can be mechanically indexed at crystal calibration points.



#### TV Channel Sweep Type ST-11A

Designed for production line use, this turret type sweep and marker covers 12 VHF TV channels. Sweep width: Max. at least 8.5 mc to 13 mc channels 2 to 13 respectively. Width internally adjustable from 0 to max. in 7 steps. Output voltage open circuit .28 v with isolating pad.

#### ELECTRONIC RESEARCH, ENGINEERING AND MAINTENANCE EQUIPMENT

The high quality test equipment shown here is only a small segment of the entire group offered by General Electric. A detailed description of all G-E measuring units is included in the catalog listed at the bottom of this page.

#### NUCLEAR INSTRUMENTS 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.

#### Type ST-2B Oscilloscope

A new 5" general purpose G-E oscilloscope designed primarily for laboratory and industrial applications. Driven or recurrent sweep (extremely slow sweeps are available). High accelerating potential permitting use of P1, P7 or P11 screens. Identical, vertical and horizontal amplifiers having high sensitivity on a-c or d-c, and a band width from 0 to 1 megacycle.



#### Alpha Survey Meter Type 4SN10A2



A "must" for anyone handling radium or other alpha emitting material. Light, portable, thoroughly reliable even in high humidity. Accuracy  $\pm 10\%$  of indicated reading. Developed from Navy Type AN/PDR10A and AEC Cat. No. SPC-2C.

#### INDUSTRIAL TEST EQUIPMENT

#### Industrial Tube Analyzer Type YTW-3

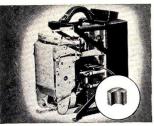
This portable equipment is designed so that nontechnical personnel can quickly and efficiently determine the performance of mercury vapor and gas recilier tubes by measuring the arc drop voltage under load. The periodic testing of rectifier tubes can help prevent equipment failure and loss of operating time.



New, Complete CATALOG

Complete specifications, descriptions, charts and photographs of G-E electronic test equipment, quartz and germanium crystals. Write: General Electric Company, Commercial Equipment Div., Electronics Park, Syracuse, New York.





METERS—In this new-type portable current recorder a Carboloy permanent magnet cut costs by eliminating power-supplying parts. It also reduced recorder's weight by 10 pounds, greatly contributed to sensitivity, accuracy of the instrument. A typical case of modernization through magnets.



controls—Plugging control for brakeless stopping of polyphase induction motors features Carboloy permanent magnet. Eddy current disk, rotating in magnetic assembly, creates a torque. As motor's speed nears zero with power reversed, torque decrease interrupts circuit, quickly stops motor.



GENERATORS — When engineers left a 6" x 6" space for a jet's tachometer generator, [design problem was whipped with a permanent magnet. It supplied the strong magnetic field required. It eliminated coils and wires, saved space, permitted a compact design to fit limited area.



speakers — In radio and TV speakers Carboloy permanent magnets replace the larger electromagnets in the field structure. Current passing through its uniform magnetic field causes voice coil and attached cone to vibrate in proportion to applied voltage . . . producing truer tone.

## CAN CARBOLOY PERMANENT MAGNETS IMPROVE YOUR ELECTRICAL PRODUCTS?

Here's how lasting energy without wires breaks down design barriers, opens door to finer products, new profit opportunities

Is magnetic energy essential or useful in your product?

Then chances are excellent that Carboloy permanent magnets can improve its function, lower its cost... put you out front of competitors with a finer-performing, more dependable product.

Carboloy permanent magnets are simple, self-containing sources of magnetic energy that *never* fail. Need no outside power, help simplify design, reduce fabrication cost by eliminating wires, coils and operating parts.

They are very powerful, even in small sizes; let you build a lighter, more compact product (particularly important in

magnetos, motors, instruments, control devices, communications equipment).

#### Free Engineering Help

Check the Carboloy magnet applications on these pages. Perhaps they'll spark an idea for a similar use in your electrical product.

Then check skilled Carboloy magnet engineers. They'll give you a hand in magnet design, application at no cost. And Carboloy production lines supply you with high-quality, uniform magnets for the most exacting needs. Any size, any shape; cast or sintered.

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

#### CARBOLOY PERMANENT MAGNET ADVANTAGES!

- **1** SIMPLE. No operating parts
- 2 UNIFORMLY POWERFUL
- 3 LAST FOREVER
- 4 NO COILS TO WIRE
- 5 COOL-RUNNING
- 6 NO OPERATING COSTS
- 7 NO POWER FAILURES
- 8 COMBINE ELECTRICAL AND MECHANICAL FEATURES
- 9 SIMPLIFY MECHANICAL ASSEMBLIES
- 10 UNINTERRUPTED OPERATION
- 11 MOISTURE-RESISTANT
- **12** CREATE SAVINGS

"Carboloy" is the trademark for the products of Carboloy Department of General Electric Company

## CARBOLOY

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

## ALNICO PERMANENT MAGNETS

PLANTS AT DETROIT, MICHIGAN; EDMORE, MICHIGAN; AND SCHENECTADY, NEW YORK

ALNICO GRADE

ALNICO GRADE,

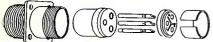
PROPERTIES OF CAST ALNICO	2 .	3	4	5	6	7	PROPERTIES OF SINTERED ALNICO	2	4	5
Average Density—Lbs. per cu. in.	.256	.249	.253	.264	.268	.259	Average Density— Lbs. per cu. in.	.243	.232	.241
Resistivity—Microhms per cm. per cm.² at 25°C	65	60	75	47	50	58	Resistivity—Microhms per cm. per cm.² at 25°C	68	68	_
Mean Coef. of Expansion per °C ( $ imes$ 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. ih.	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	<b>70</b> 0	575	750	1,050	Min. Coercive H.	520	700	575

### ELECTRICAL CONNECTORS & WIRING ASSEMBLIES

Type AN Connectors

AN3100

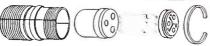




AN 3100 WALL MOUNTING RECEPTACLE: For feed through connections in cabin walls, bulkheads, etc. Eliminates the necessity of installing a conduit box for electrical connections. One piece aluminum housing contains an integral polarizing key. Features a snap-in retaining sleeve to prevent insert from sliding out. Sleeve cannot work loose, but can be released quickly and slid back for inspection or soldering.

1015NA

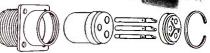




AN 3101 CABLE CONNECTING RECEPTACLE: Provides a detachable splice connection in cable or conduit where mounting provisions are not required. Aluminum housing contains an integral polarizing key. Features a snap-in retaining sleeve as in the 3100. Certain sizes available with split shell for quick disassembly.

AN3102

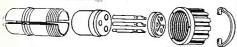




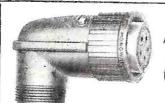
AN 3102 BOX MOUNTING RECEPTACLE: Mounts directly on equipment, chassis, or panel. Aluminum one piece housing contains an integral polarizing key. Pin contact inserts below size 22 are permanently assembled in housing, but can be made with a snap ring for removal when needed. (Exception: Pin contacts 4 and 0 are removable on all sizes per specification requirements.) Certain sizes available pressurized to 30 lbs. P.S.I.



AN3106



AN 3106 STRAIGHT PLUG: For connecting circuits with the receptacles. Housing is made of aluminum and contains a polarizing slot. Features a snap-in retaining sleeve as in 3100. Certain sizes available with split shell to facilitate inspection and assembly when used in connection with conduit. Coupling ring has extra heavy duty, lug-type grips for ease in connecting and disconnecting with receptacle, and is drilled for safety wiring.



AN3108



AN 3108 ANGLE 90° PLUG. Plug has slide-off cover for easy removal. Used where space for plug is limited. Special locking arrangement permits back shell to be turned and locked in any position. Housing is aluminum. Insert Housing contains a polarizing slot. Coupling ring has extra heavy, lug-type grips for ease in connecting and disconnecting. Drilled for safety wiring.

AN3057 AN 3057 CABLE CLAMP: For use in holding cable securely to connector and relieving strain on solder connections. Made of aluminum, in two styles — with or without fiber washer and rubber gasket.

#### **FEATURES**

- Pins machined of tellurium copper and heavily silver plated.
- Sockets made from commercial bronze with a phosphor bronze spring sleeve that maintains constant pressure on pin for tight connection.
- Pins and sockets designed so they will not rotate when soldering.
- Solder cups pre-tinned.
- Socket contacts float easily in the inserts.
- Inserts made of high grade dielectric material with high arc-resisting qualities.
- Where required, barriers are molded between contacts to lengthen surface creepage distance.
- Contacts identified by letter molded on front and rear insert sections.
- Socket front insert sections designed to prevent accidental shorting of the contacts.
- Because assembled inserts are interchangeable within the connector shells, either plug or receptacle can be supplied with the socket insert for "live" side of the line.



For complete information send for CATALOG D-1 Complete data for AN connectors shown above. Full description of ordnance connectors and accessories, harness assemblies, and other wiring components.

Send request on company letterhead to . . .

MONOWATT DEPARTMENT, General Electric Company, Providence 7, R. I.



#### **ORDNANCE CONNECTORS**

Made to Government specifications, for ordnance vehicles. Includes a complete line of accessories which provide moistureproofing, radio shielding, prevention of wire breakage, and use under special applications.



#### HARNESS ASSEMBLIES

Made to customer's or Government specifications, for aircraft, ordnance vehicles, electronic equipment, and instruments. Facilities include rubber and plastic molding equipment, a metal fabricating plant, a complete and modern plating department, assembly departments, wire and cable forming facilities. Assemblies tested for continuity, short circuit, high voltage breakdown, and terminal strength.

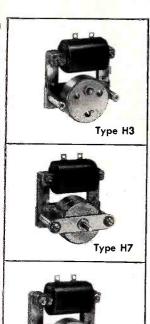


#### Switches, outlets, sockets, caps, and connectors for all types of mass-produced electrical equipment and appliances.

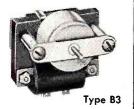
lunction boxes, plug and socket assemblies, and similar parts—for all types of electronic and electrical equipment—can be made to meet required customer or government specifications.



## Telechron Synchronous Timing Motors







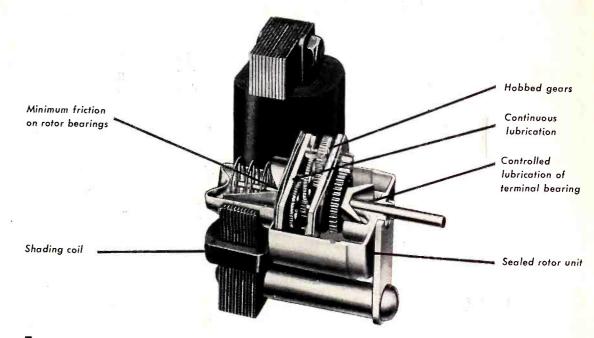




Type C-5M



Type IM-9



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.

Type	Speed*	* Torque—pound-inches			Rated	Over-all dimensions	Net	Shipping
1704	Rotation	60 cy.	50 cy.	25 cy.	watts input	(inches)	Wt. (oz.)	Wt. (lbs.)
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 <mark>,</mark> 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. 1 2 4 60	.375 .375 .19 .10 .006	.375 .340 .17 .09 .006	.375 .240 .12 .06 .004	4	2-5/16 x 2-1/2 x 2-3/8	10	1-1/2
C5	1 rpm. 2 4	1.0 0.5 0.25	0.8 0.4 0.2	0.4 0.2 0.1	6	3-3/8 x 3-9/16 x 2-13/16	22	2
C5M	1 rpm. 2 4	2.00 1.00 0.50	1.60 0.80 0.40	0.80 0.40 0.20	12	3-3/8 x 3-3/4 x 3-3/4	32	2-1/2
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	

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

<sup>\* \*</sup> Intermittent maximum peak torque .375 dependent on duty cycle.

<sup>\*\*\*</sup>Type IM-9 provides a totally enclosed circular gear train. Adaptable to most instrumentation and especially for chart drives.

Has special backlash eliminators.

# for the basic component building blocks it's ALDEN

Use Alden components as the building blocks of your new or prototype equipment and save vital engineering, tooling and manufacturing time.

25 years of designing for large manufacturers of radio and TV has given Alden directness of design and economy of material and labor. This same directness has been carried through in a complete new line of basic components that can be the building blocks — the Backbone, Nerves, Senses — for almost any electronic gear.

ALDEN PRODUCTS COMPANY

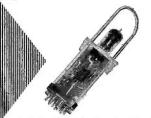
112 North Main Street, Brockton 64, Mass.

#### FOR THE BACKBONE



#### ALDEN BASIC CHASSIS

Here's a Basic Chassis on which you can easily lay out and build up any circuitry. Circuitry assembles into chassis as functional unit subassemblies. Completed equipment is neat, accessible, slide in, plug in — it has 30 second unit changeover time. Chassis available in 4 sizes that can be adapted to standard rack.



#### ALDEN "20" PLUG-IN PACKAGES

Here are standard components for making a tremendous variety of circuits into compact plug-in units — Simple to lay out circuitry — easy to wire it and assemble. Gives any equipment 30 second unit changeover time. Available as complete packages or as separate component elements.



#### **MINIATURE TERMINALS 650 SERIES**

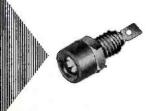
Here for the first time are terminals which put soldering on a real production basis — available in 4 sizes — easily rivet to pre-punched Alden Terminal Cards in any pattern. Components snap in terminals and are held for soldering — no pliers necessary — no distortion or binding of leads.





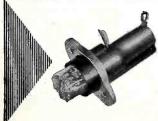
#### ALDEN PAN-i-LITE 86L

Here's the first really practical indicator light. Design so simple bulb can be changed from front of panel with gloves on. Small (only 1/6" overall length). Gives brilliant indication when lit, yet no false illumination when out. Available in ruby, sapphire, pearl, emerald, topaz.



#### MINIATURE TEST POINT JACK 110BCS

With the Alden test jack you can take a voltage reading or check any critical circuit point while equipment is in operation. Takes absolute minimum of space (1" overall length) — has actual breakdown to ground of 8,000 volts. Available in phenolic or nylon. Colors: Red, brown, black, green, blue.



#### ALDEN FUSELITE 440-4FH

Signals immediately blown fuse. To replace fuse simply unscrew lens. Takes minimum of space so can be mounted nearly anywhere. Easy to mount — fits into standard assembly techniques. Also available are whole series of standard type fuseholders with the features of simple fuse replacement, compactness and easy assembly.

#### FOR THE NERVE SYSTEM

### SPACE & WEIGHT SAVING FLUGS AND SOCKETS



Here's a series of pre-wired cables and connectors — any number of contacts. Reduce wiring and cabling problems. Just specify connector and lead lengths. We assemble. You drop connector assembly in circuit and solder. Series feature Forward Connected Contacts, less space, less material needed — 100% insulation — individual lead strain relief — no danger of cold solder joints.

#### MINIATURE PLUGS AND SOCKETS

Reduce wiring and cable problems on your small space connections. AC/DC, shielded, audio, high voltage, shield grounded, disconnects and antenna connectors — all available with leads tailored to your exact specs. You specify lead lengths. We assemble. You simply drop into circuit and solder.



#### **CRT SOCKETS**

For a whole line of quality CRT and Tuning Eye Sockets to solve almost any radar or instrument mounting, insulation or cabling problem, here's the one place you can come. Sockets have long life figure "8" contacts, individual, lead strain relief, 100% insulation and ideal dielectric design. Rapidly available in small or large volume to any schedule.



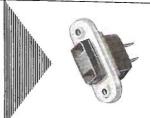
#### TUBE CAP CONNECTORS 90 SERIES

A whole series to meet every need — available in phenolics or one-piece molded assemblies. Material available to meet any operational or climatic condition. Specials for difficult problems: with long integrally molded skirt to prevent flashover, with in-line balancing components. Hundreds of different moldings and types of wire to draw from.



#### DIAL LIGHT SOCKETS 80 SERIES

The dial light sockets of basic simplicity — One stroke of the press makes socket and bracket on 81L. Whole series feature famous "Center File" contact which gives positive bulb to base "bite contact". Take least possible material. Occupy smallest cubic space. Made on automatic machines—low cost, fast delivery.



#### AC CONVENIENCE OUTLETS



#### DETACHABLE LINE CORD

Now you can have a practical detachable line cord on your equipment . . . select color to enhance apearance — have just the right length cord to eliminate tangled mass. 202FIAC has neat, compact male and female connections. Chassis socket mounts easily and takes very little space; eliminates need for UL knots or clamp—cuts assembly and servicing problems.



Adapters, Bases, Back Connectors, Serve-A-Unit Lock, Target and Cap Captive Screws, Wire, Wire Harnesses, Tube Sockets, Components for Facsimile Equipment, Toroidal Coil Winding, Special Moldings, Telegraph Keys.

Send for Catalogue information.

ALDEN PRODUCTS COMPANY
112 North Main Street, Brockton 64, Mass.

# GENNINGS CACUUM ELECTRONIC COMPONENTS

## FIXED and VARIABLE HIGH VOLTAGE VACUUM CAPACITORS & SWITCHES

SPECIFICATIONS

		_			4 5	AMPS	5/	/=	1- =	200	
	FIGURES	MICKEL	COPPER	CAPACITY MAFE.	PEAK VOLTAGE KILOVOLTS	MICKEL	COPPER	OVERALL	MAXIMUM 0. D.	CONTACT	MOUNTING CENTERS
	24	VC	vcc	6, 12, 25, 50, 75, 100, 150	20, 25, 30	14	42	61/2	21/4	13/16	57/8
	24	vc	vcc	209, 250	20, 25, 30	14	42	61/2	211/16	13/16	57/8
	23	W		6, 12, 25, 50, 100	20	10.5		43/16	21/4	3/8	37/8
	20	Х		5, 10, 15, 20, 25	17	7		31/4	11/16	11/32	27/8
S 🖢	21	Υ		1, 2, 3, 4, 5	17	7		31/4	11/16	11/32	27/8
Ö	26		JCS-1	25, 50, 75, 100, 150	7.5, 10, 15		28	3 3/4	21/3	55/64	31/4
CAPACITORS	25		JCS-2	5,10,20,50	10, 15		21	211/16		3/8	21/4
A	27		JCS	250 500	7.5, 10, 15 7.5,10,15		42	3 3/4	25/8 31/16	5 5/64 5 5/64	31/8
A	29	-	JCS	1000	7.5, 10		42	4 5/8	3 5/8	2	3 1/8
			JCS-L	250	3, 5		20	21/2	1 7/8	11/32	21/8
FIXED	31		JC-2	25, 50, 100	15,20,25,30		42	315/16	31/4	5 1/64	31/4
×	34		JC-3	20, 40, 50, 60	35, 40, 50, 60		140	81/4	31/2	2	61/4
			JC-4	100, 125	35, 40, 50, 60		175	91/4	5	31/8	7
VACUUM	33		JC-5	200	35, 40, 50, 60		225	111/4	7	41/8	83/4_
	36	M	MC	500, 750, 1000	10, 15, 20	21	60	83/8	5	2	61/4
ုသူ	37	ML	MLC	500, 750, 1000	25, 30	21	<b>60</b>	91/4	5	2	71/4
>	36	MH	MHC MMC	200 or less 1500, 2000	35, 40, 50 10, 15	21	125	8½ 9¼	5 6½	41/8	63/8
	38	MMH	MMHC	450	35, 40, 45	21	125	91/4	61/8	41/8	63/4
1	35		MC-1	500,750,1000	10, 15	24,0	150	31/4	5	2	215/16
•	30	K		12, 25, 50	35, 40, 50	14		8 1/2	3	13/16	73/4
=	14A	-	TRC-1	1-8, 2-10	15		30	41/4	1 3/8	1 3/8	2
	14	Т		5-25	20	10.5		61/4	21/4	1/2×5/8	4
	14		TC	5-25	20		21	65/8	21/8	5/8	45/16
	16	R		2-8	10, 15, 20	10.5		51/2	1 3/4	11/32× 5/8	3
tel.	15	TR		2-8	17	10.5		61/4	21/8	11/32×5/8	4
	18	SS		10-30 per section	25, 30, 35	7		61/8	3	11/32×5/8	37/8×23/4
Ě	19		SSC-1	2-10 per section	10	L	15	61/16	2 5/8		1 1/2×3 7/8
CAPACITORS	17	AT	ATCS	10-50 10-110, 20-200	20, 25, 30	10.5		61/2	3	1/2× 5/8	4
ື ວຸ	9	-	UCS	5-200	7.5, 10 7.5,10,15,20		20 42	615/16	3	5/8	47/16
2	9		UCS	10-300	7.5, 10, 15	-	42	8 ½ 8 ¾	2 5/8 2 5/8	55/64×2 55/64×2	4 3/8
<b>ا</b> ک	10		UCS	25-500	7.5, 10, 15		42	9	31/8	55/64×2	47/8
			UCS-L	4-250	3, 5		20	47/8	1 3/4	3/8	33/4
VARIABLE	11		UCS-V	8-110	7.5, 10, 15	1	60	43/4	3	7/8	33/16
≤	6		UCSM	3-500	7.5, 10		80	10	3 5/8	113/16	51/4
4	7		UCSX	10-500	7.5,10,15		42	91/8	3 3/8	55/64×31/8	5
m			UCSX	25-700	7.5, 10		42	99/16	3 5/8	2x3 1/8	43/4
Σ	8		UCSX	25-1000	7.5, 10		42	93/4	3 5/8	2x3 1/8	415/16
5	5		UCSXH	10-200	35, 40, 45		42	103/4	41/2	2	5 1/2
VACUUM	1	UH	UHC	50-250 10-75	10, 15, 20	21	60	117/16		2	61/2
>	1	UH	UHC	75-150	35, 40, 50, 60 35, 40, 50, 60	21	60	117/16	5	2 2	61/2
	2	UX	UXC	25-500	10, 15, 20	21	60	14	5	31/8	71/16
	2	UXH	UXHC	25-150	35, 40, 50	21	60	145/8		31/8	81/4
	3	VM	VMMC	50-1000	10, 15	21	100	141/2	61/8	41/8	77/8
	4	VMM	VMMC	100-2000	10, 15	21	125	151/2	61/8	41/8	85/8
P _	4	VMMH	VMMHC	25-450	35, 40, 45	21	125	15 1/2	61/8	41/8	8 5/8
9	!		TAS-4	Variable Capacitor in abov	e ranges						
Z	-	-	500 JR TAS-5	Tube EIMAC Type 4x500 Variable Capacitor in above	o Bangos	_	_	-		_	
TRONAD		Also ava	2500 JR	Tube EIMAC Type 3x2500 th air and water-cooled units		o 25 ki	lowa	tts. Wr	ite for	details.	
<b>a</b> —			R-1	Vacuum Switch	50	1	50	7	3	5/8	51/8
VACUUM SWITCHES			R-2	Vacuum Switch	65		50	9	3	5/8	71/4
ī			R-3	Vacuum Switch	35		50	5	113/16		3
A.S.			R-4	Vacuum Switch	20		50	51/8	19/16	5/8	31/8
Ξ			R-5	Vacuum Switch	15		35	3 5/8		11/32×9/16	
	-		R-6	Vacuum Switch	15		35	35/8	17/16	11/32	23/16
\$			RH-1 RK-1	Vacuum Switch Keying Switch	35 10	-	100	61/2	25/8	7/8	41/2
-			nr.	reying switch	10		5	511/16	41/16	1/2	4 1/2

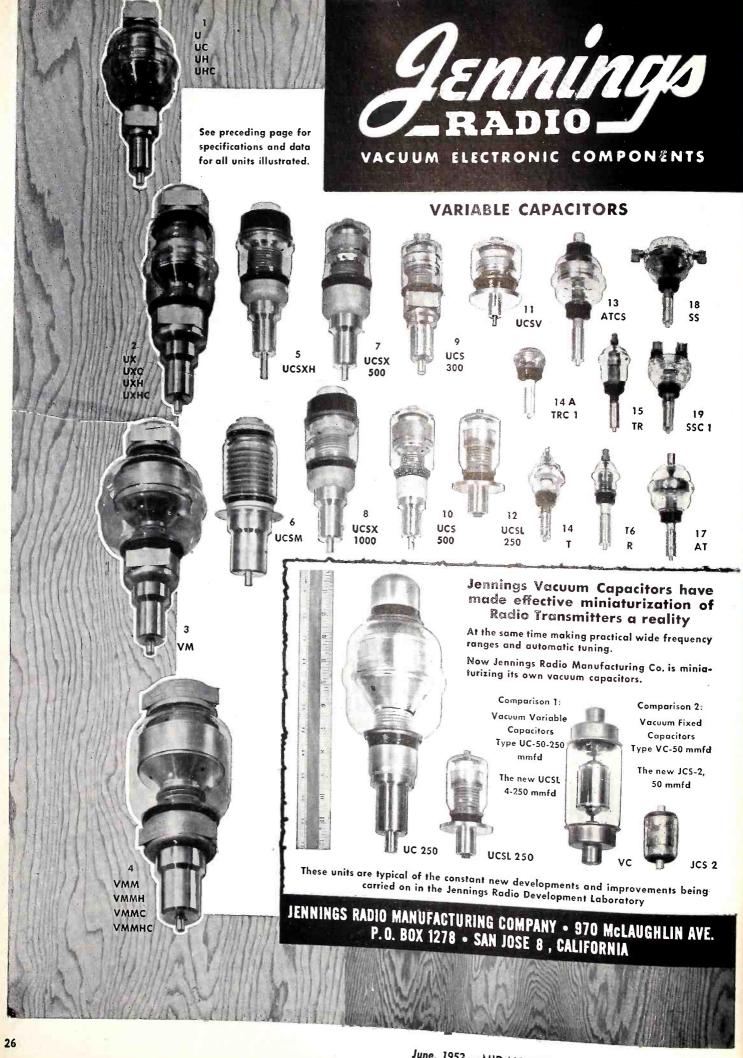
Current ratings may be increased by forced cooling with adequate mountings.

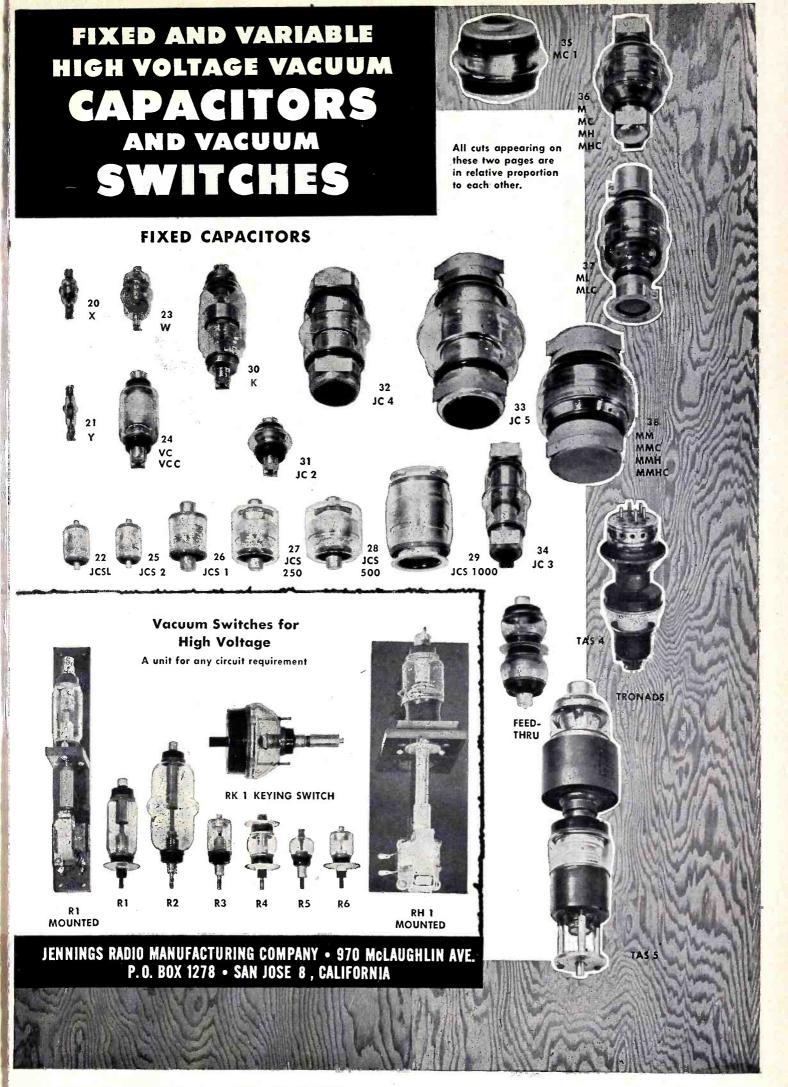
Feed-thru Up to 100 MMFD

Correspondence invited for other capacities and voltages.

ENNINGS RADIO MANUFACIURING CO. • 970 McLAUGHLIN AVE. • P.O. BOX 1278 • SAN JOSE 8, CAL,

Vacuum Transformer 2:1 step-up to 40 kv.







# The New STAVER MINI-SHIELD PATENT AND TRADE MARK REG. PEND.



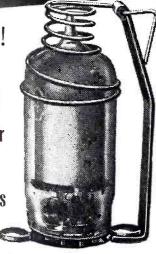
The shield that fits all Miniature Tubes

A flexible shield that snugly fits all miniature tubes because it compensates for all variations in tube dimensions. Mini-Shields are mode for both T5½ and T6½ bulb tubes. Send for catalog sheet.

## The New STAVER MINI-SPRING

PATENT AND TRADE MARK REG. PEND.

Available!
Special
Improved
Types for
Military
Apparatus

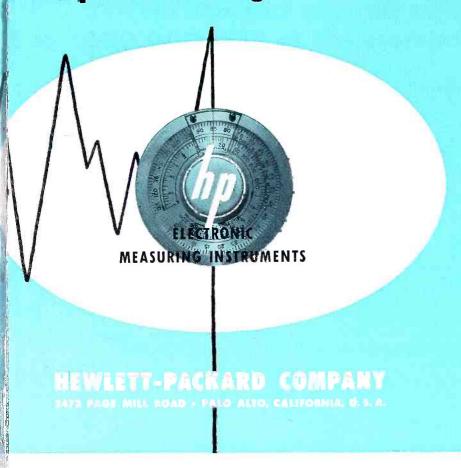


Gives support two ways—Keeps pressure downward and gives sideway support. The spring action is constant ond resilient permanently. Send for catalog sheet.



41-51 North Saxon Ave., Bay Shore, N. Y. Bay Shore-3620

## Complete Coverage in Electronic Test Instrumentation



Oscillators, voltmeters, generators, analyzers, amplifiers-frequency measuring, 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.

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

#### -hp- 200 SERIES AUDIO OSCILLATORS



Six standard models. 200A, 200B have transformer - coupled output, deliver 1 watt into matched load. 200C, 200D and 202D (for sub-audio,

audio, supersonic and carrier measurements) have resistance-coupled output, supply constant voltages over their entire frequency ranges. 200I, 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  $\mu$ v to 3 v. Frequency re-

sponse flat  $\pm$  1 db. Output impedance 600 ohms, or 6 ohms with voltage divider. \$475.00.

Instrument	Primary Uses	Frequency Range	Output	Price
-hp- 200A	Audio tests	35 cps to 35 kc	1 watt/22.5v	\$120.00
-hp- 200B	Audio tests	20 cps to 20 kc	1 watt/22,5v	120.00
-hp- 200C	Audio and supersonic tests	20 cps to 200 kc	100 mw/10v	150.00
-hp- 200D	Audio and supersonic tests	7 cps to 70 kc	100 mw/10v	175.00
-hp- 200H	Carrier current, telephone tests	60 cps to 600 kc	10 mw/lv	350.00
-hp- 200I	Interpolation and frequency measurements	6 cps to 6 kc	100 mw/10v	225.00
-hp- 201B	High quality audio tests	20 cps to 20 kc	3w/42.5v	250.00
-hp- 202A	Low frequency measurements	.01 cps. to 1 kc	20 mw/10v	450.00
-hp- 202B	Low frequency measurements	½ cps to 50 kc	100 mw/10v	350.00
-hp- 202D	Low frequency measurements	2 cps 10 70 kc	100 mw/10v	275.00
-hp- 204A	Portable, battery operated	2 cps to 20 kc	2.5 mw/5v	175.00
-hp- 205A	High power audio tests	20 cps to 20 kc	5 watts	390.00
-hp- 205AG	High power tests, gain measurements	20 cps to 20 kc	5 watts	425.00
-hp- 205AH	High power supersonic tests	1 kc to 100 kc	5 watts	550.00
-hp- 206A	High quality, high accuracy audio tests	20 cps to 20 kc	+15 dbm	550.00
-hp- 230A	Carrier test oscillator	35 cps to 35 kc	+14 dbm/600 ohms	275.00
-hp- 233A	Carrier test oscillator	50 cps to 500 kc	3w/600 ohms	475.00
-hp- 234A	Carrier test oscillator	160 cps to 160 kc	+14 dbm/600 ohms	300.00
-hp- 650A	Wide range video tests	10 cps to 10 mc	15 mw/3v	475.00

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- 4108 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 μμfd capacity across circuit under test. This, plus high shunt impedance (10 megohms at low frequencies) means circuits under

are not disturbed, and true voltage readings Also measures de voltage to 1,000 s and resistances to 500 megohms. \$245.00.

Instrument	Primary Uses	Frequency Range	Voltage Range	Input Impedance	Price
-hp- 400A	General purpose oc meosurements	10 cps to 1 mc	.005 to 300 v 9 ranges	1 megohm 24 μμfd shunt	\$185.00
-hp- 400B	Low frequency ac measurements	2 cps to 100 kc	.005 to 300 v 9 ranges	10 megahms 24 μμfd shunt	195.00
-hp- 400C	Wide range or measurements High sensitivity	20 cps to 2 mc	.0001 to 300 v 12 ranges	10 megohms 15 μμfd shunt	200.00
-hp. 404A	Portable, battery operated	2 cps to 50 kc	.0005 to 300 v 11 ranges	10 megahms 20 μμfd shuni	185.00
-hp- 4108	Audio, rt, VHF measurements; dc voltages; resistances	20 cps to 700 mc	1 to 300 v 7 ranges	10 megohms 1-5 μμfd shuni	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 10,000 mc

#### -hp- 618A SIGNAL GENERATOR



3,800 to 7,600 mc. Provides a 1 mw signal into a 50-ohm coaxial load (zero dbm). Output attenuator directly calibrated in dbm and volts, reduces output level to less than -100 dbm. Frequency dial direct-

ly calibrated, accuracy 1/2 of 1%. Repellor voltage automatically tracked. No adjustment during operation CW, pulsed or fm output. Internal square wave modulation. \$2,250.00.

Instrument	Frequency Ronge	Characteristics	Price
-hp- 608A	10 to 500 mc	Output 0.1 $\mu$ v to 1 <b>v</b> into 50 ohm load. Pulse or CW modulation. Direct calibration.	\$ 850.00
-hp- 610 <b>B</b>	450 to 1,200 mc	Output 0.1 $\mu v$ to 0.1 $v$ into 50 ohm lood. Pulse, CW or Square wave modulation. Direct calibration.	925.00
-hp- 614A	800 to 2,100 mc	Output 0.1 µv to 0 223 v into 50 ahm laad. Pulse, CW or FM madulation. Direct colibration.	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- 618A	3,800 to 7,600 mc	Output 1.0 µv to 0 223 v into 50 ohm lood	
-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.	1,650.00
-hp- 624A	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 μν. 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

-bp- 330C, for FM broadcasters, includes VU meter meeting F.C.C. requirements. -bp- 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	Wove form analyzer	30 cps to 16 kc	Voriable selectivity; measuring range 1 mv to 500 v	\$625.00
-hp- 320A	Meosures total distortion	400 cps ond 5 kč	Requires external detector	75.00
-hp- 3208	Measures total distortion	50, 100, 400 cps, 1, 5 and 7.5 kc	Same as above	150.00
-hp- 3308	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 GEN	IERATOR	4
-hp- 210A	Transient and frequency response	20 cps to 10 kc	Output 50 v peak-ta-peak. 1,000 ahm impedance	150.00

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



# -hp- Microwave Test InstrumentsFor Coaxial and 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

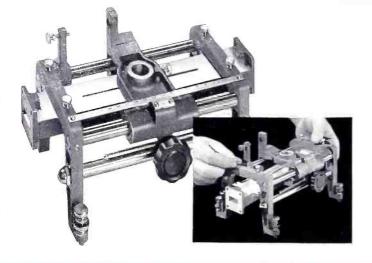
or Sperry 821 barretter. Also measures CW or pulsed power with negative coefficient thermistor. Operates with -bp- 475B or 476A Bolometer Mounts; also 485B Detector Mounts. \$250.00.



#### -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°, at 52 mc and above. Also measures SWR, % reflected power. VHF system flatness. \$495.00.



Instrument	Primary Uses	Frequency Range	Characteristics	Prite
hp - 360A-D Low Pass Filters	Eliminates harmanic vallages from UHF systems	Cutoff frequencies A: 700 mc. C-2,200 mc B:1,200 mc. D 4,100 mc.	50 db rejection at 1.7 cutoff fing	\$ 50 00
.hp. 415A Standing Wave Indicator	VSV/R indicator or null indicator	300 to 2,000 cps. Normal freq. 1,000 cps	0 to 60 db. attn. Ma, senstardy 0 3 pv	200 00
tp. 417A VHF Delector	VHF bridge detector (for hp. 803A)	10 to 500 mc	Approx 5 // v	250 00
.4 n 4303 Microwave Power Meter	Measurement of all power	Depends an Bolomoter mount	.01 to 10 mw ± 5% occuracy	250 00
thp- 4758 Tunable Balameter Mount	Measurement of if power (with 4308)	3,000 to 4,000 ms	Marchen 50 Ohm lise to 100 or 200 ohms	700 00
-Fp. 476A Universal Bolometer Maunt	Measurement of it power (with 4308)	10 to 1 000 mc	No human regarded by VSMCR last than 25	125 00
hp- 803A VHF Bridge	Measurement of VHF impedance, VSWR	50 to 500 ms	2 to 7 000 ah an emiledance - 90° to 4 90° phicie angle	495 00
-hp - 805A Cop+of Statted Section	Measurement of VSWP	500 to 4 000 mc	For Type ti Cornectors Re+ble cabbe	473 00
ha- 8058 Coasial Statted Section	Same as abave	Same at above	For rigid 7c PG44 U line	475 00
hp- 8068 Coarrol Slatted Section	Same as above (mounts in 8098	3,000 to 17,000 mc	For Type to Competers Booksio colples	200 00
hp. 8098 Universal Probe Carriage	Supports 8058 G. J. H. X and P.810		Accepts 4128 and 144A 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.)



#### -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 coaxconnector. -hp- 805B, 46.3 ohms, for  $\frac{7}{8}$ " rigid transmission lines. \$475.00.

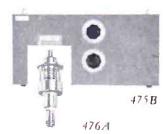
-hp-806B Coaxial Slotted Section, 3,000 to 12,000 mc. For use with -hp-809B carriage. Section and connector VSWR 1.04 to 8,000 mc. 50 ohm impedance, negligible slope. Type N connectors. \$200.00.



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



-bp-415Δ 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 μv. sensitivity, 60 db calib. attenuator. \$200.00.



-bp- 476A Universal Bolometer Mount measures of 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. -bp- 475B Tunable Mount, continuous 1,000 to 4,000 mc. \$200.00

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





-bp-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 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.

-bp- 623B SHF Test Set, like 624A but operates over frequencies determined by klystron installed. Six klystrons available (each with 300 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).



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

fiers 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 µsec; 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- AMPLIFIERS

-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 µsec rise and decay time to meet requirements of radar, TV and nuclear work. Pulse length variable 0.07 to 10 µsec; 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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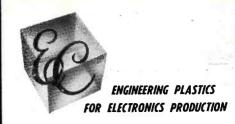
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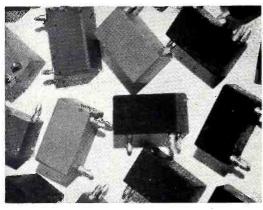




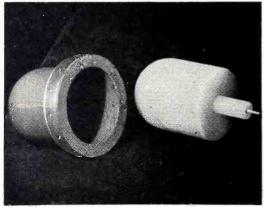
# PLASTICS ELECTRONICS



#### Examples of EMERSON & CUMING **PRODUCTS**



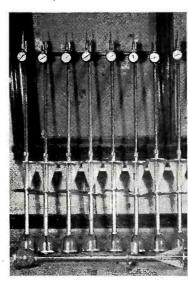
Packaged Electronic Sub-Assemblies, Digital computer delay lines, color-coded in a moistureproof, shockproof, fungus-resistant package.



At the right is a helical antenna embedded in a cast block of polyethylene. A fiberglass-resin radome is at the left.



A plastic embedded circuit in a guided missile application. Hermetic sealing, shock resistance, visual inspection and operation over extremes in temperatures were required.



Gas pressurized microwave antennas. The radomes must withstand 10 lb. per sq. inch pressure and are of a low loss material.

#### MATERIALS AND SERVICES AVAILABLE

#### CASTING RESINS

Stycast TP — A low dielectric constant and extremely low loss material which can be used from -65°C, to 135°C.

Dielectric constant, 60 to 10<sup>10</sup> cycles approx. 2.6

Dissipation factor, 60 to 10<sup>10</sup> cycles below .002

Stycast 35 — A polystyrene casting resin with excellent electrical properties.

Stycast 4030 CM — A rigid casting resin featured by extreme ease of use.

Stycast 1030 CM — A high impact strength material useful from -65°C, to 170°C,

Stycast 40 — A crystal-clear material for use where visual inspection is required.

#### PLASTIC EMBEDMENTS

Components and circuits supplied by electronic equipment manufacturers are embedded in plastic materials to meet the most rigid specifications.

#### **WAVEGUIDE PLUGS**

Moldings are made from low loss materials. The dielectric constant can be varied to suit individual requirements.

#### RADOMES

Impervious radomes for pressurized systems are a specialty. Materials used are of very low dissipation factor.

#### CONDUCTIVE PLASTICS

A wide range of bulk resistivities is possible to as low as .01 ohm-cm.

#### HIGH DIELECTRIC PLASTICS

Low loss materials are produced with dielectric constants in the range from 3 to 20.

#### PLASTIC FOAM

A wide variety of materials with uni-cellular or connecting cell structures.

#### **IMPREGNATION**

Components are impregnated to produce void-free solid structures.

#### DIP COATING

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RG 59/U RG 11/U RG 8/U		72-ohm, and other commercially used types, with black vinyl plastic jacket.
SHIELDED PLASTIC ANTENNA CONDUIT		Hollow polyethylene tube, shielded with bare or tinned copper or aluminum braid, black vinyl plastic jacket.
TWIN ANTENNA LEAD		Parallel stranded twin conductors; 18, 20 or 22 AWG; insulated with low-loss polyethylene.
MULTI-LEAD FOR ANTENNA ROTATORS		3, 4 or 5 stranded conductors, 20 AWG, one tinned for polarity; polyethylene insulation.
ROUND TYPE ROTATOR CABLE		4, 5, or 8 cdrs. 22 AWG color coded insulation, twisted, tube of brown vinyl overall.
SHIELDED MICRO- PHONE CABLE		Flexible construction; 1 to 8 individually insulated stranded conductors, twisted, paper served, shielded with tinned copper braid, jacketed in rubber, neoprene, or plastic.
UNSHIELDED MICRO- PHONE CABLE		2 to 8 stranded conductors, 20 AWG, with rubber or neoprene jacket.
TEST LEAD WIRE		Single, stranded conductor insulated with high-voltage rubber compound.
HEAVY DUTY 600-VOLT SERVICE		2, 3 or 4 soft copper conductors, rope lay stranded, 6 or 8 AWG; paper served and insulated with 30% rubber, N.E.C. color coded; cabled with jute, cotton wrapped and sheathed in hard rubber, or neoprene.
CHARGING CABLE 600-VOLT SERVICE		Flexible, rope lay stranded conductor, 2 to 10 AWG, tinned, or bare and paper served; jacketed in rubber or neoprene.
PORTABLE CORD 600-VOLT SERVICE		2, 3 or 4 bare stranded conductors, 10 to 18 AWG; paper served, insulated with color coded rubber compound; cabled with jute, served with cotton; tough outer jacket of 40% rubber.
PORTABLE CORD 300-VOLT SERVICE		Similar to 600-volt cord except that individual insulation is rated for 300 volt service; for stationary service, conductors are stranded of No. 30 wires; for portable service, stranded of No. 34 wires.
1		Tough, extremely flexible cable; rope lay stranded of soft annealed No. 34 copper wires from 4/0 to 6 AWG; paper served for easy stripping, jacketed in abrasion-proof rubber of high tensile

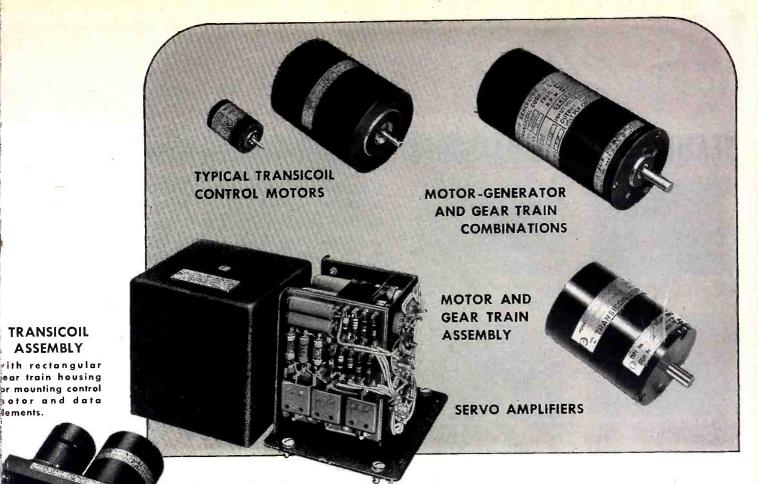
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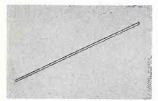
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PRECISION

COMPONENTS

# Superior TUBE COMPANY Electronics Division

#### SEAMLESS NICKEL CATHODES



Round, .015" O.D. x .002" Wall, Plain cut 1" long.



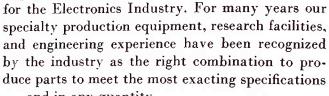
Oval, single bead, .025" x .048" x .003" Wall. 12 mm long. Print #S25F4-11.



Round, no bead, .121'' x .003'' /.004'' Wall. Plain cut .312'' long. Print # \$121R1-1.



Elliptical, double bead, .025  $^{\prime\prime}$  x .048  $^{\prime\prime}$  x .003  $^{\prime\prime}$  Wall. 11 mm long. Print #S25E5-17.



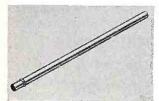
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## LOCKSEAM\* NICKEL CATHODES



Round, single bead, .045" O.D. x .002" Wall. 27 mm long. Print #S45R2-6.



Rectangle, single bead, .030" x .0975" O.D. x .002" Wall. 11 mm long. Print #S30T2-10.



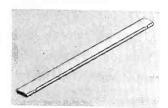
Plate, .170'' O.D. x .005'' Wall. 1'' long. Print #EX99.



Round, tabbed, single bead, .045" O.D. x .0021" Wall. 27 mm long. Print #LT45R2-8.



Round, double bead, .025" O.D. x .002"/.0025" Wall. 28.5 mm long. Print #S25R3-2.



Rectangle, double bead, .040'' x .132'' O.D. x .004'' Wall, 1.312'' long. Print #54015-1.



Round, double bead, .045'' O.D. x .0021'' Wall, 1.063'' long, Print #L45R3-1,



Round, vertical emboss, .045" O.D. x .0021" Wall. 26.5 mm long. Print #L45B1-7.



Oval, double bead, .025" x .048" x .003" Wall, 12 mm long. Print #\$25F5-7.



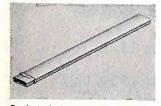
Round, flanged one end, .115" O.D. x .105" 1.D. .180" long. Print # ET14-5.



Oval, serrated, single bead, .045" x .100" O.D. x .0021" Wall. 35 mm long. Print #LC45F4-2.



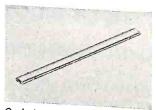
Rectangle, single bead, .030'' x .100'' O.D. x .0021'' Wall. 13 mm long. Print #L30T4-3.



Oval, single bead, .045" x .149" x .002" Wall. 31 mm long.



Round, flanged one end, .070''/.072'' I.D. x .0025'' Wall. .295'' long. Print #ET8-5.



Oval, double bead, .034"  $\times$  .084" O.D.  $\times$  .0025" Wall. 33 mm long. Print #L34F4-2.



Round, single bead, .185" O.D. x .003" Wall. 25 mm long. Print #L185R2-7.

News Flash!

Superior now offers CATHALOY\*\* a new line of nickel cathode alloys far both Seamless and Lockseam \* type cathodes.

# Superior TUBE COMPANY Electronics Division

## Electronic Application

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On these pages you will find pictured and described just a few of the many kinds and types of tubular parts we make. If you do not find exactly the part you wish, if you want more information, or if you wish to consult with us about a problem, please write—no obligation, of course.

#### ANODES and GRID CUPS

for CR Tubes



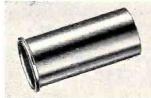
Weldrawn†, 304 Stainless Steel, Double angle cut. .520'' O.D. x .500'' I.D. x 1.321 long. Print #ET54-1.



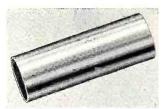
Seamless Nickel, Flattened one end. .500" O.D. x .025" Wall x 1.625" long. Print #ET27-1.



Weldrawn, 305 Stainless Steel, Single angle cut. 520" O.D. x .500" I.D. x 1.102" long. Print #ET3-16.



Weldrawn, 305 Stainless Steel, Rolled one end. .500" I.D. x .010" Wall x 1.182" long. Print #ET28-12.



Weldrawn, 305 Stainless Steel, Straight cut. .520" O.D. x .500" I.D. x 1.750" long. Print #ET11-6.



No. 2 Grid Cup, 305 Stainless Steel, Rolled edge. .499" O.D. x .010" Wall x .262" long. Print #EP37-1.



Weldrawn, 305 Stainless Steel, Rolled and bent 10°. .499" I.D. x .010" Wall x 1.050" long. Print #ET47-2.



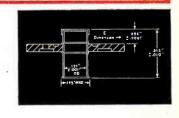
No. 1 Grid Cup, 305 Stainless Steel. .499" I.D. x .010" Wall x .438" long. Print #EP34-2.

\*\* U.S. Trademark applied for

#### FABRICATED PARTS

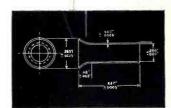


Disc Cathode, Dimensions above, Print #ED-3.





Seamless nickel tube, Flared both ends ,200" I.D. x .005" Wall x .527" long. Print #ET19-1.





Seamless, 316 Stainless Steel Tapered tube. (Sunk & expanded) 1/4" x 3/6" O.D. x .232" I.D. x 2%6" long. Print #GT-5-1.

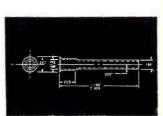




Seamless nickel, Flonged tube. (Flanged one end to .215") .137" O.D. x .005" Wall x 13%" long. Print #ET-14-10.



Seamless Monel, Expanded and flanged. (Exp. to .165"/.168" 1.D.—FL to .230") .139" O.D. x .005" Wall x 1.100" long, Print #ET4-4.





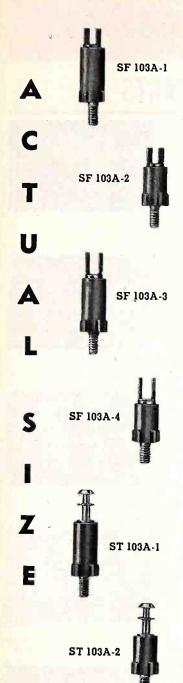
Certain analyses (.035" max. wall) up to 136" O.D.

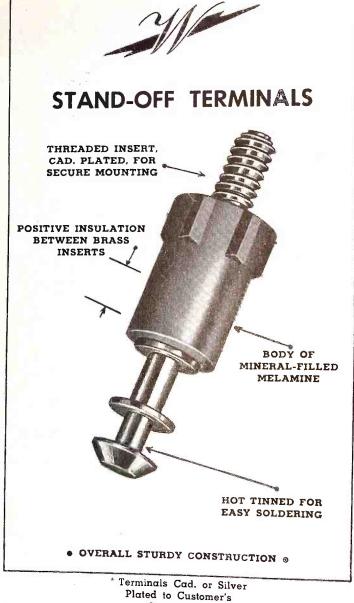
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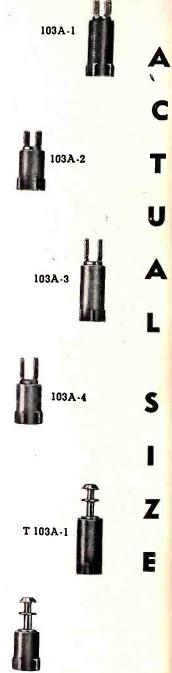
\*Manufactured under U. S. Patents †Reg. U. S. Trademark, Superior Tube Company

CATHALOY will permit the production of tubes to meet execting requirements for low impedance, high emission and long life for tube reliability, increased mechanical strength for ruggedization.

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\*MST 103A-1



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ts feature sine and square wave output.

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Model	Featuring	Frequency Ronge	Distortion	Output	Power Consumption	Price
400-A	Sine and Square Wave True RC Oscillator Compact Design	.009 cps to 1.1 kc	1%	25 mw/10 v	45 watts	\$350.00
410-A	Sine and Square Wave Amplitude ±.25 db Low Distortion	.02 cps to 20 kc	1/4%	10 mw/5 v	150 watts	\$950.00
420-A	Sine and Square Wave Audio and Sub-Audio Compact Design	.35 cps to 52 kc	1%	25 mw/10 v	45 watts	\$290.00
430-A	Wide Range Compact Design Outstanding Value	5 cps to 520 kc	1%	50 mw/10 v	45 watts	\$145.00
400-C	Sine and Square Wave Rack Panel Balanced Output	.009 cps to 1.1 kc	1%	100 mw/10 v	65 watts	\$375.00
420-C	Sine and Square Wave Rack Panel Audio and Sub-Audio	.35 cps to 52 kc	1%	100 mw/10 v	65 watts	\$325.00
440-A	Push-Button Controlled Excellent Resetability Low Distortion	.01 cps to 100 kc	1/10%	100 mw/10 v	120 watts	\$450.00

#### \* Filters - .01 cps to 200 kc



Models 310-A and 360-A 12" wide, 7" high

The Models 350-A and 360-A are variable rejection filters which provide either a rejection band in which the gain falls at a rate of 24 db/octave or a sharp single frequency full. Both high and low requencies are independently adjustable.

The Models 310-A and 330-A are variable band-pass filters with unity pass band gain and 24 db/octave outside the pass band. Both high and low cut-off frequencies are independently adjustable over the entire frequency range.



Models 330-A and 350-A 18" wide, 10" high

leboM	Туре	Featuring	Frequency Range	Noise & Hum	Power Consumption	Price
310-A	Band-Pass	Variable Band-Width Zero db Insertion Loss 24 db/octave Slope	20 cps to 200 kc	3 mv	40 watts	\$275.00
220.4	Band-Pass	Low Internal Noise Zero db Insertion Loss 24 db/octave Slope	.02 cps to 2 kc	0.1 mv	50 watts	\$450.00
330-A	Band-Pass	AudioandSub-AudioRange 24 db/octave Slope Variable Band-Width	0.2 cps to 20 kc	0,1 mv	50 watts	\$450.00
340-A	Servo	Proportional-Plus-Derivative Proportional-Plus-Integral Servo-Design Filter	.01 cps to 100 cps	10 mv	40 watts	\$350.00
350-A	Rejection	Low Internal Noise Rejection Band or Null 24 db/octave Slope	,02 cps to 2 kc	0.1 mv	50 watts	\$450.00
360-A	Rejection	Variable Rejection Band Variable Null 24 db/octave Slope	20 cps to 200 kc	5 mv	40 watts	\$275.00

#### ABOUT THESE INSTRUMENTS

The Oscillators and Filters described here are being effectively used in a growing number of interesting applications for engineering, research, and production.

WRITE FOR A FREE DESCRIPTIVE CATALOG

All instruments are fully guaranteed for one year against defective materials and workmanship.

Prices Net F.O.B. Cambridge



# KROHN-HITE

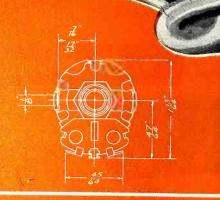
INSTRUMENT COMPANY
580 MASSACHUSETTS AVENUE
CAMBRIDGE 39, MASS., U.S.A.

# A Complete Lin

TYPE 45 (JAN-R-94, Type RV2)



% watt, 1%s" diameter varlable composition resistor. Also eveilable with other special military features not covered by JAN-R-94. Attached Switch can be supplied.



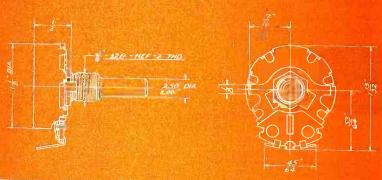
TYPE 35 (JAN-R-94, Type RV3)



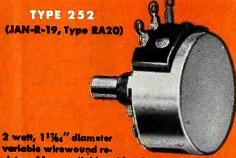
1/4 west, 11/4" diameter veri-

able composition resistor.

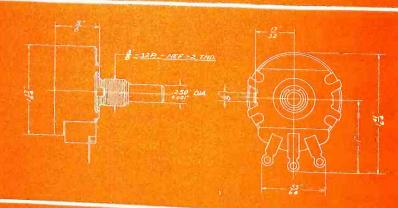
Also available with other special military features not covered by JAN-R-94. Attached Switch can be supplied.



**TYPE 252** (JAN-R-19, Type RA20)



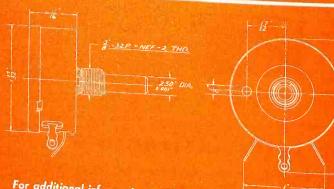
veriable wirewound resister. Also available with other special military features not covered by JAN-R-19: Attached Switch can be supplied.



TYPE 25 (JAN-R-19, Type RA30)



4 wett, 111/32" diameter variable wirewound resister. Also available with other special military features. not covered by JAN-R-19. Attached Switch can be supplied.



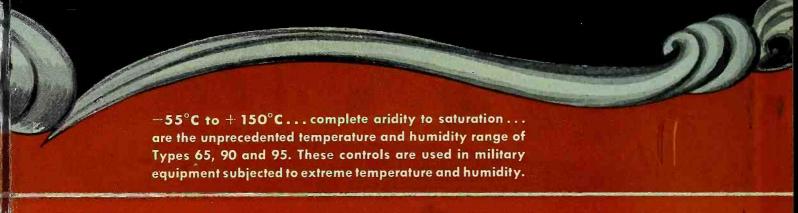
For additional information on these 7 controls, write for Data Sheet No. 160

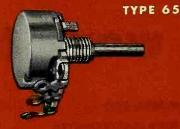
EXCEPTIONALLY GOOD DELIVERY CYCLE on military orders due to enormous mass production facilities . . . Immediate delivery from stock on more than 170 different types and resistance values . . . Please give complete details on your requirements when writing or

NEW COMPLETE CTS CATALOG. Write for your copy today.

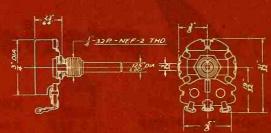


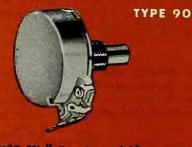
# Variable Resistors EETS MILITARY SPECIFICATIONS



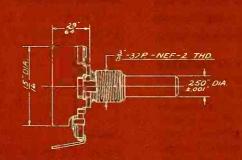


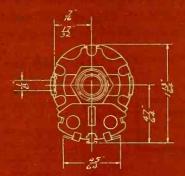
in 70°C, 4" diameter minigrarized variable composition resistor.





# 70°C, 1%e" diameter veriable comporesistor. Attached Switch can be supplied.







Specialists in Precision Production of Variable Resistors FOUNDED 1896



CHICAGO TELEPHONE SUPPLY



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#### IN CANADA

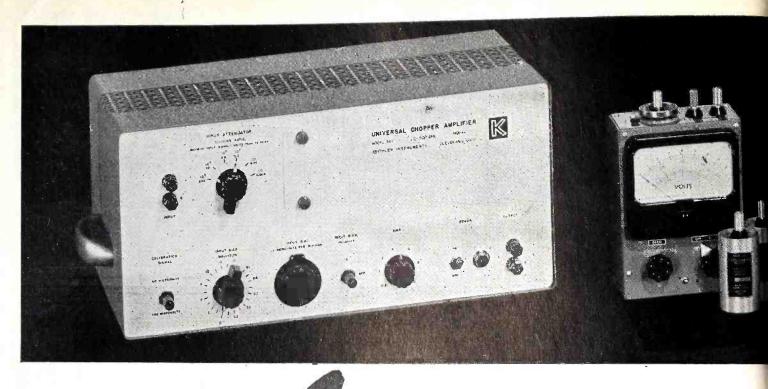
C. C. Meredith & Co. Streetsville, Ontario

#### SOUTH AMERICA

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

#### OTHER EXPORT

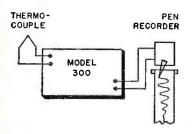
Sylvan Ginsbury 8 West 40th Street New York 18, N. Y.





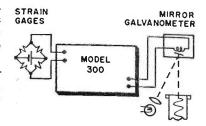
#### KEITHLEY MODEL 300 UNIVERSAL CHOPPER AMPLIFIER

Here is an exceptional new dc amplifier that sets new standards in performance and operating ease. The Keithley Universal Chopper Amplifier has a maximum gain of 800,000, frequency response of 0 to 500 cps, input impedance of 1 megohm, noise and drift less than about 25 microvolts, or 2% of full-scale output.



USES ANY PEN RECORDER to indicate the small potentials developed by thermocouples, strain gages, and other sources in which the dc and ac components are of equal interest. Output of Universal Amplifier will deliver up to 25 milliamperes, and can develop ±80 volts.

**DRIVES PRACTICALLY ALL** recording galvanometers. Series and damping resistor terminals permit attenuating the output to work with sensitive mirror galvanometers. Terminals are also provided for equalizing recorders. The high level dc output also works well into cathode ray oscilloscopes,



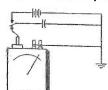
INPUT BUCKING POTENTIAL includes both step and continuous controls—allows the zero to be offset 150 times full scale. Other features include stabilized gain, a simple circuit, and a mechanical chopper with a rate of 5000 per second. Uses 110-volt, 50-60 cps power.



## KEITHLEY MODEL 200 VACUUM TUBE ELECTROMETER

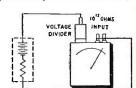
recise ways

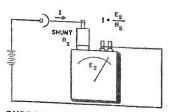
An unusually versatile dc voltmeter with many uses, the Keithley Electrometer has an input resistance of over  $10^{14}$  ohms shunted by 6 mmf. Available with either 2 and 20 or 2 and 8 volt scales, with input currents of  $5 \times 10^{-14}$  to  $5 \times 10^{-13}$  ampere. Accuracy is within 2% full scale.



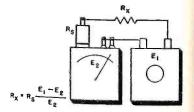
**EXCEPTIONALLY FAST WAY** to check capacitor leakage — by direct measurement of voltage decay. Also easily measured: piezo-electric potentials, vacuum tube electrode potentials, electrostatic fields.

POTENTIALS TO 200 VOLTS, such as the open circuit voltage of this high impedance source, are read directly with Voltage Dividers—available with 10:1 or 100:1 ratios.





ampere are measured directly with Model 2001 Shunts. Resistance from  $1.0 \times 10^6$  to  $1.0 \times 10^{12}$  ohms. Typical uses: photocell currents (shown), ion chambers, capacitor and insulation leakages.



RESISTANCES UP TO 1016 ohms are easily measured using Test Voltage Supply and Shunt. Typical uses include: standardizing resistors (shown), measuring insulation samples.

#### WRITE FOR COMPLETE LITERATURE

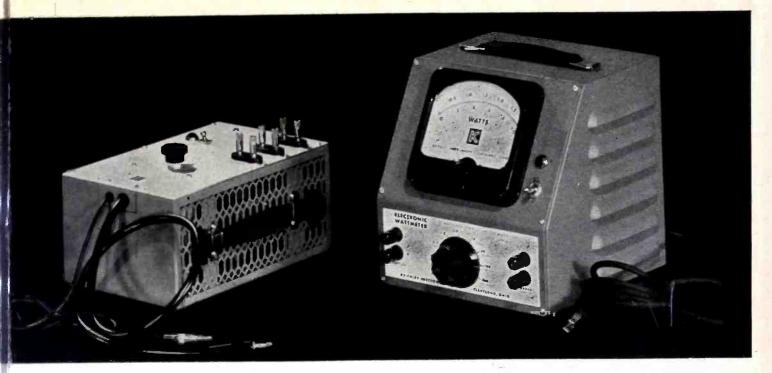
SALES OFFICES ALBUQUERQUE Gerald B. Miller Company CHICAGO Hugh W. Marsland Co. CLEVELAND M. P. Odell Company

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Bivins & Caldwell
HOLLYWOOD
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MINNEAPOLIS
H. M. Richardson & Co.
NEW YORK
(See Ridgewood)
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The long to the control of the control of

RIDGEWOOD, N. J. G. Curtis Engel SAN FRANCISCO Gerald B. Miller Co. ST. LOUIS Hazris-Hanson Company



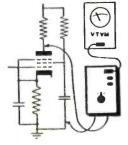
## learn a circuit's secrets





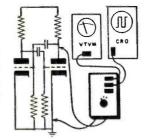
#### KEITHLEY MODEL 102 PHANTOM REPEATER

When a scope or voltmeter loads a high impedance circuit, here's the instrument to use. The Keithley Model 102 Phantom Repeater is a bridging amplifier with an extremely high input impedance — 200 megohms shunted by 5 mmf. Gains of 1.0, 10, and 100. Connected between the unknown circuit and test instruments, it provides greater accuracy and a way to make measurements otherwise not possible.



MORE EXACT TESTS of high impedance circuits when a voltmeter or oscillograph is connected through the Phantom Repeater. There is no appreciable voltage reduction or loss of high frequency response caused by test cable capacitance and input circuit impedance.

**SIMULTANEOUS** voltage measurement, visual wave-shape inspection, aural monitoring, or other tests can be made with negligible loading of most circuits—giving two checks that the voltage checked is the desired one.

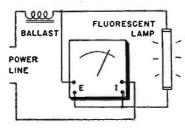


INCREASED SENSITIVITY of almost any volumeter or cathode ray oscilloscope when used with the Phantom Repeater. It also eliminates the maze of test leads often encountered; only a single conductor has to be moved about the circuit.



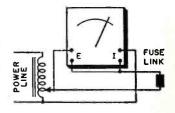
#### KEITHLEY MODEL 109 ELECTRONIC WATTMETER

An amplifier driving the potential coil of a dynamometer wattmeter provides the Keithley Electronic Wattmeter with several useful features. It offers a high input impedance, sensitivity to low voltages, wide selection of wattmeter ranges, and a broad frequency response.



POWER INPUT TO FLUORESCENT LAMPS is easily measured—a typical application, showing the value of the wattmeter's high input impedance of 500,000 ohms to the potential coil. Measurements can be made in relatively high impedance circuits without the disturbing effects of potential coil current, thus eliminating the need for corrections.

sensitive voltage ranges permit measurements of power to a fusible link, shown here. Measurements in circuits with voltages as low as 3 millivolts can be made without the use of auxiliary equipment. Typical other low-voltage measurements are the determination of transformer core losses and combined core and copper losses.



NINE WATTMETER RANGES provide full-scale readings from .03 to 300 watts. Corresponding voltage limits run from .03 to 300 volts. Maximum current is 1.0 ampere, with external shunts extending the range to 3.0, 10, and 30 amperes.

WIDE FREQUENCY RESPONSE of 20 to 3000 cps permits measurement of aircraft power and audio circuits. Accuracy within 2% full scale.

KEITHLEY INSTRUMENTS

3868 CARNEGIE AVENUE CLEVELAND 15, OHIO

## with the

# Browning OSCILLOSYNCHROSCOPES ON - 5A

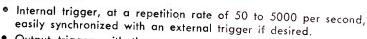
SYNCHROSCOPE



Models ON-5A and ON-5X are designed as basic, highly flexible laboratory instruments for general pulse work. Their specifications include:

- · High-gain vertical amplifiers.
- Triggered sweeps, from an external trigger or from the input to the vertical amplifier.
- Recurrent sweeps, at a repetition rate of 10 to 100,000 per second.
- Vertical input delay of 0.45 microsecond (ON-

Model P4-EX is designed for applications requiring a triggered sweep, and where the signal levels met do not demand extremely high-gain amplification. Its many outstanding features include:



 Output trigger, with the same range of repetition rates, which can be continuously phased to lead or lag the sweep start by a maximum of 500 microseconds.

Detailed specifications and performance data available promptly on your request. These new instruments represent a high level of precision design and versatility of application at remarkably low cost. Major features that are common to all three instruments include:

Type 5UP cathode-ray tube, operating at an accelerating potential of 2600 volts. P1, P7 and P11 screens are available.

• Sweep writing rate continuously variable from 1.0 to 25,000 microseconds per inch.

• Sweep calibration in microseconds per horizontal scale division, accurate to plus or minus 10%.

Vertical amplifier flat within 3 db from 5 cycles to 5 megacycles.

Vertical calibration voltages, at accuracy of plus or minus 5% for Model P4-EX, and plus or minus 10% for Models ON-5A and

Vertical amplifier input step attenuator.

• CRT cathode connection externally available, for application of blanking or marker pulses.

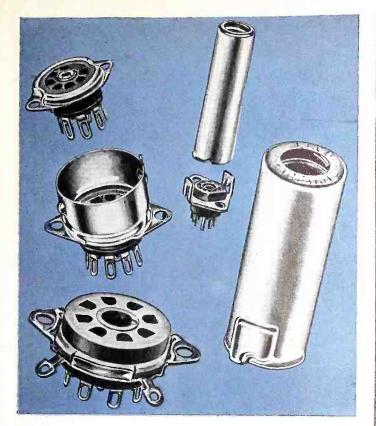
NET PRICES, F.O.B. Winchester, Massachusetts: P4-EX . . . \$465.00 ON-5A . . . \$485.00 ON-5X . . . \$535.00

Write today for FREE BULLETINS giving detailed specifications and









# TUBE-SOCKETS ...and SHIELDS

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ELCO TUBE-SOCKETS AND SHIELDS is the complete "high standard" line! Complete in number of types, sizes, variety of body and contact materials! Complete in adherence to every engineering standard essential in the production of a superior socket and shield! Manufacturing is to the highest possible standards of tolerance offered by advance production methods and rigid inspection. If you make a quality product, investigate these high standard components by writing for Catalog C-3, and . . .

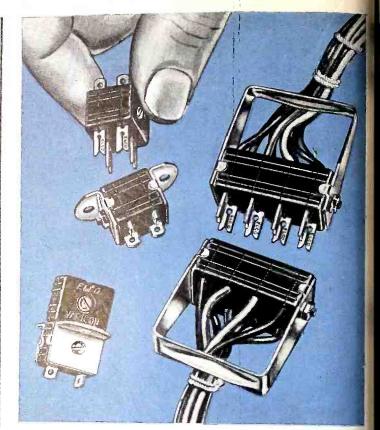
Request samples now: Examine them for appearance and finish: Test them for voltage and current capacity... insertion and withdrawal pressure: See how contact pressure is maintained, even after hundreds of insertions: Notice the saddles and mountings... how they fit and how well they are designed for greater rigidity and strength!

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RADIO · TELEVISION · ELECTRONIC COMPONENTS

190 W. GLENWOOD AVE., PHILA. 40, PA.



# VARICONS

PATENTS APPLIED FOR

positive means for connecting electronic or electrical circuits ever conceived! Varicons have only four basic parts, yet give you the maximum number of variations, plus contact combinations in any number! Varicons "Keying Control" makes it impossible to connect unmatched parts! And with Varicons, it is possible for you or us to assemble any connector from stock parts! For the design of a new product or redesign of a present product, request Catalog V-1 today!

identical: Contacts always under pressure: Current rating 30 amps, 115 volts: Withstanding voltage maximum 4000 volts between closest terminals: Low contact resistance: Low capacitance, 300 ohm line spacing: Easy insertion pressure: Excellent retention pressure between contacts.

if it's new . . . if it's news . . . it's from

# ELCO

CORPORATION

RADIO - TELEVISION - ELECTRONIC COMPONENTS

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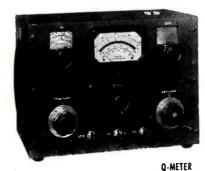
48

June, 1952 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

# CISION ELECTRONIC MEASURING INSTRUMENTS







Q-METER TYPE 190-A





Q-METER TYPE 160-A

#### **Signal Generators**

Frequency and Amplitude Modulated
Crystal Monitored
For Mobile Communications Receivers

#### **Q** Meters

Low, Medium and High Frequencies

Very High Frequencies

#### Univerters

Low, Medium and High Frequencies
VHF for Glide Slope Receivers

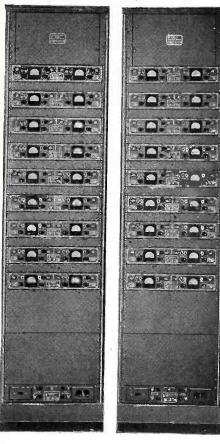
Write for complete information

			Q METERS		
Туре	Freq. Range	Q Range	Tuning Capacity Range	Q Accuracy	Price
160-A 190-A	50 kc to 75 mc 20 mc to 260 mc	20 to 625 5 to 1200	30-450 mmf 7.5 to 100 mmf	5% to 30 mc 5% to 100 mc	\$625. \$625.
		FM-AM	SIGNAL GENERATORS		
Туре	Freq. Range	Output Range	Modulation FM AM	Application	Price
202-B 202-C 202-D	54-216 mc 54-216 mc 175-250 mc	0.1 to 200,000 μν 0.1 to 200,000 μν 0.1 to 200,000 μν	0-240 kc 0-50% 0-240 kc 0-50% 0-240 kc 0-100%	General Mobile Telemetering	\$975. \$1090. \$980.
	F	N SIGNAL GENERATOR	(For Mobile Communication	s Receivers)	
Туре	Freq. Range	Output Range	Modulation	Application	Price
206-A	146-176 mc	0.1 to 200,000 μv	0–250 kc	Mobile	\$910.
		OMNI-RANGE SIGN	AL GENERATOR (Crystal Mo	nitored)	
Туре	Freq. Range	Output Range	Modulation	Application	Price
211-A	88-140	0.1 to 200,000 μv	0-100% am	Omni-Range Rcvrs.	\$1800
		GLID	DE SLOPE TEST SET		
Туре	Freq. Range	Output Range	Modulation	Accessory to	Price
212-A	329-335 mc	0.1 to 200,000 μv	0-100% am	211-A	\$875.
			UNIVERTERS		
Туре	Freq. Range	Output Range	Modulation FM AM	Accessory to	Price
207-A	0.1 to 55 mc	0.1 to 100,000 μv	0-240 kc 0-50%	202-B 202-C	\$345
207-B 207-C	0.1 to 55 mc	0.1 to 100,000 µv 0.1 to 100,000 µv	0-240 kc 0-50% 0-240 kc	202-D 206-A	345



# Commerce and the Military write THEIR SPECIFICATIONS to...

#### The Industry's Complete Line of High Quality Communications Equipment



#### MULTI-CHANNEL FREQUENCY SHIFT TELEGRAPH SYSTEMS

Today's constantly growing demand for greater, faster, more deplindable communications has made the need for improved Multiplex equipment more acute than ever before. In response to this need, Northern Radio Company now makes available several new Frequency Shift Multi-Channel Telegraph Systems. Reflecting the heritage of Northern Radio's constant research and precision manufacture over the years, these multi-channel systems display novel concepts of design together with outstanding performance, fidelity and operating economy.

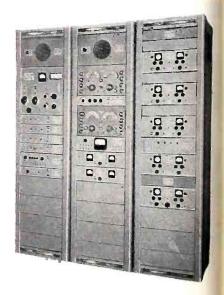
These Multi-Channel Teiograph Systems are audio carrier systems capable of multiplexing such circuits as telephone lines, VHF, UHF, or radio frequency links—or practically any type circuit from which a two-wire audio circuit can be derived. Designed to meet any speed requirements, these systems are fully electronic, without relays or moving parts to wear. They can be used for high-speed printer, Morse or time division Multiplex circuits, as well as such applications as Telemetering, Control Circuits and Servo-Mechanisms. Instantaneous and complete sending end channel control permits any binary code groups, either "Clear Text" or "Cryptographic," to be channelized without need for additional phasing or synchronizing equipment, while paralleling of channels will allow for transmission of other type codes, such as 3 element cable code. The completely independent operation of each channel, including its own power supply, localizes faults to one channel only, leaving other channels unaffected. Individual channel separation filters are used at both transmitting and receiving ends. This arrangement allows for sending telegraph or control signals over a circuit carrying, simultaneously, other forms of intelligence; or for two-way communications on the same line.

The audio frequency shift principle of transmission provides for high fidelity of signal reproduction over a wide range of signal levels as well as under severe noise or interference conditions. Circuit requirements of any speed, shift and center frequency can readily be met. The systems illustrated is for use on printer circuits up to 100 WPM channel capacity. The system arrangement is very flexible, permitting grouping of the basic units into various arrangements of Multiplex Systems. These systems can be made to accommodate a large variety of channel numbers and speeds to meet any individual requirements. The flexibility is further improved by the fact that the racks, power control units, and terminal connection panels are the same for both transmitting and receiving terminals.

#### RADIO MULTIPLEX SYSTEM

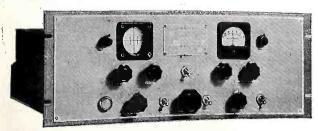
Multi-Channel Equipment for Standard Communications Frequencies. Adapts existing transmitting and receiving facilities for radio multiplex.

The system illustrated is a four-channel unit, used for transmitting and receiving radio tele-printer, telegraph or other similar low speed keying intelligence, where a limited assigned carrier band-width may be utilized. The two bays at the right are the complete receiving units; left, the transmitter terminal and exciter facilities. The system may be adjusted for band widths of 3 to 12 kc and is intended to take advantage of periods of time where propagation conditions give signals which are better than the minimum required for one channel of channels as the conditions permit. These switches automatically maintain the pre-set bandwidth to standard 850 cycle frequency shift operation. However, experience indicates that when propagation conditions permit frequency shift operation, they will usually allow at least two channels of multiplex.



#### **☆** ★ ★ ★

#### FREQUENCY SHIFT CONVERTER



TYPE 107, MODEL 2

A dual channel unit, used with frequency shift receiving systems to convert the mark and space tones from the output of single or diversity receivers, into DC pulses capable of operating a tele-printer, tape recorder or other device so operated. Also used as demodulator when receiving make and break CW or ICW signals.

2" oscilloscope tuning pattern indicates proper receiver adjustment of both mark and space frequencies, either during initial setup or under actual keying conditions. This pattern and a specially designed discriminator, coupled with a high degree of limiting, make if the outstanding performer in its

INPUT FS LIMITS 100 to 1000 cps. frequency shift. Mark frequency set at 2975 cps.

CW-ICW INPUT 400 to 7500 cps.

KEYING SPEED Up to 600 w.p.m.

OUTPUT: 1. Neutral DC pulses. 60 ma in 1800 ohm external load. One side grounded,

- 2. Polar DC pulses ± 30 ma in 1800 ohms load. Center grounded.
- 3. May be operated into any impedance from 100 to 100,000 ohms.

# IORTHERN RADIO COMMUNICATIONS EQUIPMENT

FANDARD FREQUENCY SHIFT KEYERS
HIFT CONVERTERS \* TONE FILTED
MPLIFIERS TEMS  $\star$  MULTI-CHANNEL TONE SYSTEMS  $\star$  DIVERSITY RECEIVERS SHIFT KEYERS  $\star$  FREQUENCY TONE FILTERS  $\star$  TONE KEYERS  $\star$  DEMODULATORS  $\star$  LINE MPLIFIERS \* MASTER OSCILLATORS **MONITORS** 

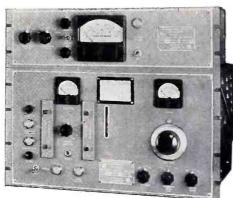
# **TYPE 110**

#### 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 this and the preceding page.

#### FREQUENCY and SHIFT MONITOR SYSTEM



METER: TYPE 127 MODEL 2 MONITOR: TYPE 106 MODEL 4

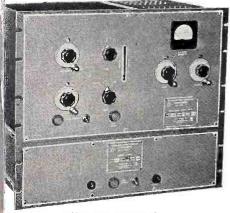
This system consists of a Type 106 Frequency and Shift Monitor and a Type 127 Frequency Meter. It is designed as a secondary standard to monitor the frequency and amount of shift of transmitter carrier outputs. It is particularly intended to measure the frequency shift of a mark and space (FS) signal 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.

#### FREQUENCY SHIFT KEYER

incorporates the following outstanding features:



TYPE 105 MODEL 4

Frequency shift dial adjusts "mark" and "space" frequencies equally above and below the carrier position, which remains fixed. • Simplified frequency setting permits only the upper side band tuning indication to be visible on the meter over substantially all of tuning range. • Direct eading frequency calibration of shift from 0 to 1000 cycles. • Direct reading frequency calibration of

xer and output tuning dials from 2.5 to 6.7 mc. • Direct read-g of calibration of output frequency vernier ± 600 cycles. • ilse shaping circuit to permit operation within assigned banddth with no adjacent channel radiation.  $\bullet$  Highly stable temperare controlled oven with temperature control of  $\pm 0.1^{\circ}$  C. at  $^{\circ}$  with heaters on 4 sides of inner oven.  $\bullet$  Component ratings cording to JAN Specs provide greater assurance of trouble-free eration.

#### TONE CHANNELING SYSTEMS

emplete package systems of Multi-Channel Tone Equipment (both M and Frequency Shift) are available for application to land ie or radio link systems.

#### VARIABLE MASTER OSCILLATOR



TYPE 115 MODEL I

Principally used in diversity reception to supply local common oscillator injection voltage to receivers. Crystal oscillator for BFO. The Variable High Frequency section gives stability equivalent to that of non-temperature controlled crystal oscillators. It is also equipped with three crystal controlled frequencies

for opertion of receivers on a fixed frequency basis. The variable high frequency oscillator is provided with local crystal oscillator for spot checking of twenty points within its range.

#### TECHNICAL DATA

Variable HFO output frequency. 2-32 mcs continuous
Fixed Frequency crystals...... 2-4 mcs for output frequencies of 2-32 mcs Variable HFO output frequency.
Fixed Frequency crystals.....
Output impedance.
Output level.
Variable HFO Stability..... 72 ohms coaxial cable
2 watts 2-4 mcs, 0.5 watts 4-32 mcs
20 cps per mc for ambient change ±25° C,
5 cps per mc for ± 10% Line Voltage
20 cps per mc for resetability
20 cps per mc for readability

This unit can also be used as a transmitter exciter or for laboratory measuring purposes.

FOR FULL DATA ON THE COMPLETE LINE, WRITE NOW FOR CATALOG BG

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Pace-Setters in Quality Communication Equipment

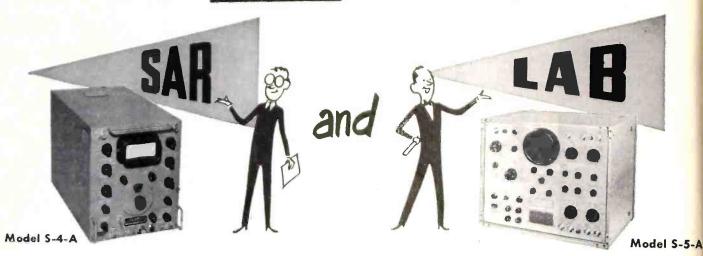
147 WEST 22ND STREET, NEW YORK 11, N. Y.

**WATKINS 9-9117** 



#### WATERMAN PIONEERING

# PULSESCOPE®



PULSESCOPES are Oscilloscopes to portray the attributes of the pulse: such as shape amplitude, duration and time displacement. Both of the PULSESCOPES have Video amplifiers with frequency response up to 11 megacycles with Video delay of 0.55 microsecond and pulse rise and fall time better than 0.07 microseconds.

S-4-A SAR PULSESCOPE—Video Sensitivity 0.5vp to p/in. S Sweep 80 cycles to 800KC, either trigger or repetitive. A Sweep 1.2 microseconds to 12,000 microseconds. R Delay 3 microseconds to 10,000 microseconds directly calibrated on precision dial. R Pedestal (or Sweep) 2.4 microseconds to 24 microseconds. Internal Crystal Markers 10 microseconds and 50 microseconds. Size 91/8 x 111/4 x 171/4". Weight: Less than 32 pounds.

S-5-A LAB PULSESCOPE—Video Sensitivity 0.1v to p/in. Sweep 1.2 microseconds to 120,000 microseconds with 10 to 1 expansion. Sweep either trigge or repetitive. Internal Markers synchronized with Sweep from 0.2 microseconds to 500 microseconds Trigger Generator and built-in precision amplitude calibrator. Completely cased. Size: 16½ x 14½ x 14½ Weight: Less than 60 pounds.

#### WATERMAN RAYONIC TUBE DEVELOPMENTS

1

Since the introduction of Waterman RAYONIC 3MP1 tube for miniaturized oscilloscopes, Waterman has developed a rectangular tube for multi-trace oscilloscopy. Identified as the Waterman RAYONIC 3SP, it is available in P1, P2, P7 and P11 screen phosphors. The face of the tube is  $1\frac{1}{2}$ " x 3" and the over-all length is  $9\frac{1}{4}$ ". Its unique design permits two 3SP tubes to occupy the same space as a single 3" round tube, a feature which is utilized in the S-15-A TWIN-TUBE POCKETSCOPE. On a standard 19" relay rack, it is possible to mount up to ten 3SP tubes with sufficient clearances for rack requirements. All RAYONIC cathode ray tubes are available in P1, P2, P7 and P11 phosphors. We are authorized to supply 3SP1, 3JP1 and 3JP7 with JAN stamp. All RAYONIC tubes listed below operate on 6.3 volts heater with .6 amp. current.

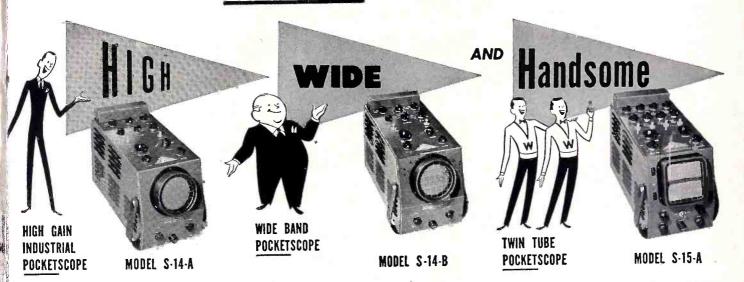


3 MP

TUBE PHYSICAL DATA			TYPICAL VOLTAGES			DEFLECTION			-		
	Face	Length	Bose	Anode # 3	ode #3 Ando #2 A		FACTOR V/IN.		MAX. VOLTS		
	3 inch		Medium	3000	1500		<b>9</b> 710 # [	DI to D2	D3 to D4	Anode #3	Anode #
3JP	Round	10 inches	Diheptal		1500	300 to 515	-22.5 to -67.5	127 to 173	044 100		
			12 Pin	4000	2000	400 10 690	-30 to -90		1110 120	4000	2000
3MP	3 inch	8 inches	Small Duodecal		1000	200 to 350		170 to 230	0 . , 0	4000	2000
	Round	o menes	12 Pin		2000		0.10 = 08	140 to 190	130 to 180		
	11/- 2		Small			400 to 700	10 -120	280 to 380	260. 040		2500
3SP 1½ x 3 9.12 inches	Duodecal		1000	1000 16510 310 -28		10 300					
	Inches .	menes	12 Pin		2000	330 to 620	-28.5 to -67.5	73 to 99	52 to 70		
						55010020	-58 to -135	146 to 198	104 to 140		2750

#### THE WATERMAN LINE-UP

# **POCKETSCOPE**®



WIDE and HANDSOME POCKETSCOPES are tracterized by small size, light weight, and out-sinding electrical performance. All units have freency compensated attenuators as well as non-freency discriminating gain controls. All units have the periodic and trigger sweeps from ½ cycle to KC. The amplifiers are direct coupled thus freency response starts from 0 cycles. No peaking coils used, thus, the transient response is good. Full pansion of trace, both vertical and horizontal, is ilt in. Means for amplitude calibration are proled. DC coupling in POCKETSCOPES provides tusual stability of the trace, regardless of the line ltage changes or variations of impedances in the

input circuit. The HI, WIDE and HANDSOME POCKETSCOPES are the outgrowth of Waterman pioneering of the first commercial miniature oscilloscope, which has proved to be useful and reliable over a period of years. Combination filter and graph screens are used for better visibility, thus traces can be observed even under high ambient light conditions. Binding posts for convenience of connections, with an effective shield, are used. S-14-A has sensitivity of 10 mv/inch with pass band above 200KC. S-14-B has sensitivity of 50 mv/inch with pass band above 1 megacycle. S-15-A is similar to S-14-A except that it has two independent CR Tubes for multi-trace oscilloscope work. Accessories such as carrying cases and probes are available.



S-11-A

The Model S-11-A Industrial & Television <u>POCKETSCOPE</u> is a small, compact, lightweight instrument for observation of repetitive electrical circuit phenomena. The Industrial & Television <u>POCKETSCOPE</u> is a complete cathode ray oscilloscope incor-

prating the cathode ray tube, vertical, horizontal, and intensity amplifiers, linear time base oscillator, lanking, synchronization means and self-contained power supply. The Industrial & Television POCKET-COPE can be used, not only for AC measurements, lit for DC as well, inasmuch as it has vertical and brizontal amplifiers which are capable of reproducing ithfully within -2 db, from 0 to 200KC. The sentivity of the vertical and horizontal amplifiers is high and is in the order of 100 my rms/in.

Model S-12-B RAKSCOPE has the features of S-11-A POCKETSCOPE, plus. The RAKSCOPE is JANized and the government model number is OS-11. The Sweep, from 5



S-12-B

cycles to 50KC is either repetitive or triggered. Vertical and horizontal amplifiers are 50 millivolts rms per inch with band pass from 0 to 200KC. Special calibrating circuitry is provided for frequency comparison. Both the vertical and horizontal amplifiers are identical and use no peaking. The panel is only 7" high and the scope fits standard rack. The functional layout of the control permits ease of operation.



WATERMAN PRODUCTS CO., INC.

PHILADELPHIA 25, PENNA., U.S.A.

CABLE ADDRESS, POKETSCOPE, PHILA.

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# HIGH FREQUENCY

Designers and Manufacturers of High Frequency

#### **BOMBARDERS** or Induction Heaters

2 to 60 KW are considered standard. 80 to 250 KW are custom built. All units are available with stepless control from zero to full power. Frequency is regulated in

most cases from 200 to 450 KC. Custom built bombarders or induction heating units are also made in the megacycle band to customer requirements.



2 KW Induction Heating Unit.



5 & 7 ½ KW Induction Heating Generator.



Standard 40 KW High Frequency Induction Heater with Worktable and Quenching Facilities for Special Application.

#### DIELECTRIC HEATERS

2 to 40 KW are considered standard. 50 to 150 KW are custom built. Stepless control from zero to full power is available. Frequen-

cies on standard equipment in most cases are from 5 to 40 MC. Other frequencies are available.



4 ½ KW Dielectric Pre-Heater Model PH 4 ½.



30 KW Dielectric Custom Built High Frequency Heating Unit.



10 KW Preform Dielectric Heating unit with two timers.

Samples of material or a complete description of parts to be treated, including production expected must be presented so that we may recommend the proper frequency and size unit, for the given job. All experimental work including work coils, jigs and fixtures etc. is made at no charge.

This policy was established by Scientific Electric over 30 years ago. Our demonstration must satisfy our customer at our plant prior to shipment, otherwise there is no charge.





# HIGH VOLTAGE



and High Voltage Equipment . . . . Since 1921

MODEL JT2 SPOT WELDER

with metal framework bench.

#### HIGH VOLTAGE POWER SUPPLIES

1 to 150 K.V.P. is considered standard. Voltages above 150 K.V.P. are custom built. Current is usually selected by the customer's requirements.

High voltage units manufactured by Scientific Electric are used the world over, in universities and industries for research and commercial applications such as in the manufacturing of television tubes, insulation testing of condensers, transformers, cables such as coax or any standard insulated product which must be tested for voltage breakdown. Our High Voltage Power Supplies may be used for Paint Spraying. Usually voltages above 100 K.V.P. are used for this application. In most cases the cost of the unit is offset by the saving of paint within thirty days.



Right: High Voltage Rectifier, 0-40 KV Stepless, 100 MA input 3 phases 220 volts 50-60 cycles. Left: High Voltage Power Supply Stepless 0-20 KV 35 MA, 1 phase 110 volts 50-60 cycles custom built.



#### SPOT WELDERS

Manufactured especially for the Vacuum tube industry. Available with or without timer, transformer or worktable.

Model 172 is complete with 2 K.V.A. 110 volt 50 of 60 Eycle power supply including Power Controls, Fool Pedal, and Electronic Timer. It has a high and tow switch, and control for rapid weld-



MODEL JT2 SEOT

107-119 MONROE STREET GARFIELD, NEW JERSEY

production, or may be used individually. For convenience of operator a fluorescent lamp is mounted on each bench and serves as a work light and pilot for electronic timer. These units are standard. Custom built units can be produced to meet individual requirements. A demonstration at our Garage and plant can be extrapated at your can-

ing of light and heavy parts. Unit mounted ready for operation with metal frame workbeach designed for side by side

field plant can be arranged at your convenience.

#### OUTSTANDING FEATURES OF OUR SPOT WELDING HEAD ARE:

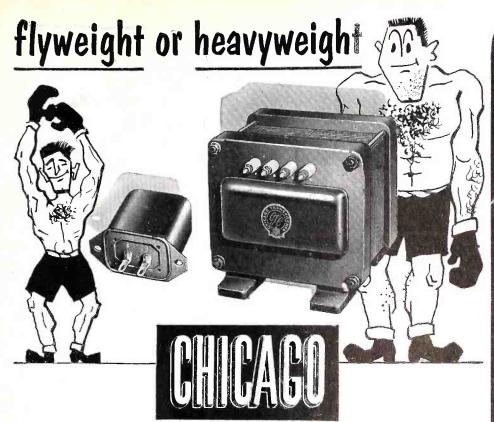
- (1) Micrometer pressure adjustment 1/2 to 9 lbs.
- (2) 30 degrae adjustable base
- (3) Oil-less bearings
- (4) Adjustable master micro switch for timer
- (5) Heavy duty aluminum frame
- (6) Adjustable electrode holder
- (7) Vertical motion eliminates rocker arm, roll
- (8) Sturdy chucks allow quick and simple electrode adjustment
- 19) Narrow width suitable for side by side mounting (3 ½)
   (10) Substantial work area due to compact
- (10) Substantial work area due to compact

#### DIMENSIONS

- 91/2 inches height 31/2 inches width
- 8 1/4 inches threat depth
- 2 % inches clearance between electrodes
  % inch'stroke



ELECTRONICS BUYERS' GUIDE — June, 1952 — MID-MONTH



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#### THERE'S NOTHING TOUGHER THAN THE "SEALED-IN-STEEL" NEW EQUIPMENT LINE

CHICAGO'S one-piece drawn-steel cases are the strongest, toughest, best-looking transformer construction available. The one-piece seamless design (in a choice of 3 mountings) enclosing an electronically perfect unit, provides the best possible electrostatic and magnetic shielding, with complete protection against adverse atmospheric conditions. Whether your transformers must pass the most rigid MIL-T-27 specs, or are intended simply for average applications—play safe—choose CHICAGO "Sealed-in-Steel" transformers.

#### FREE "NEW EQUIPMENT" CATALOG



You'll want the full details on You'll want the full details on CHICAGO'S New Equipment Line—covering the full range of "Sealed-in-Steel" transformers designed for every modern circuit application. Write for your Free copy of this important catalog today or write for portant catalog today, or get it from your electronic parts distributor.

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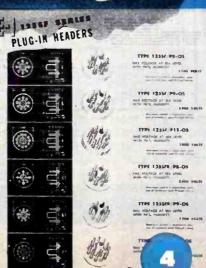
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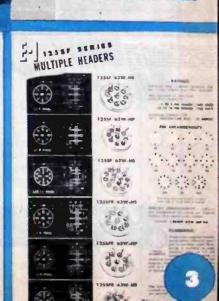
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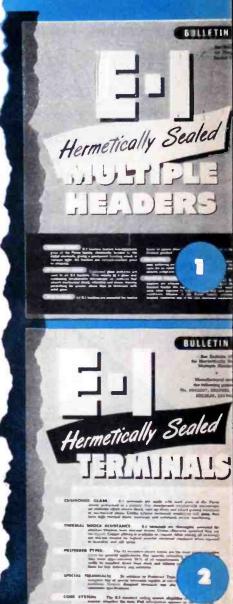
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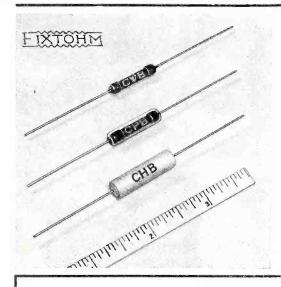








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Three power ratings — 1/2, 1 & 2 watts

All have crystalline carbon film deposited on ceramic core

#### USE "FIXTOHM" BECAUSE . . .

ACCURACY: ± 1.0% standard

STABILITY: ± 0.3% average resistance change

H. F. CHARACTERISTICS ARE EXCELLENT

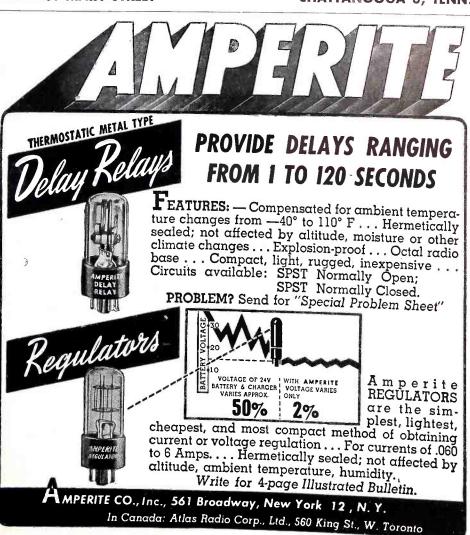
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The SHURFLO Rosin: Speeds up solder flow 25%. Spreads as much as 30% further than ordinary rosin. Has superior wetting and oxide-removing action. Is non-corrosive, non-conductive, safe. Gives no unpleasant odor. Does not carbonize.

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Immediately following the Product Listings in the

#### DIRECTORY SECTION

of this Issue

is a list of more than

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They are intended for your use in determining the manufacturer's name when only

a trade name is known.



We wear

3 hats



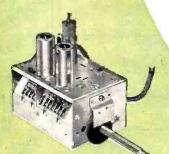
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#### MANUFACTURED TO YOUR SPECIFICATIONS

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# TR, ATR, PRE-TR, HYDROGEN THYRATRONS CRYSTALS AND MICROWAVE COMPONENTS

				TO ANGELOW AND PROPERTY.
	BAND	FREQ.	DESCRIPTION	TYPE
	K BAND	23630-24580 23500-24500 23350-24950	TR, Integral Cavity, Tunable ATR, Fixed-Tuned, Low Q TR, Band Pass	1B26 1B36 BL-11
	X BAND	9300-9450 9050-9600 9050-9600 8750-9300 8600-9650 8600-9050 8490-9600 8490-9600 8490-9600	Cross Guide Duplexer ATR, Fixed-Tuned, Low Q ATR, Fixed-Tuned, Low Q Fast Recovery Time ATR, Fixed-Tuned, Low Q TR, Glass Envelope, Fixed-Tuned ATR, Fixed-Tuned, Low Q TR, Integral Cavity, Tunable TR, Integral Cavity, Tunable TR, Band Pass TR, Integral Cavity, Tunable Reservoirless	BL-3 1B35 6038 ATR388 724B 1B37 1B24A 1B60 1B63A BL-22
	Xb BAND	6200-6700 6000-7100	ATR, Fixed-Tuned, Low Q TR, Integral Cavity, Tunable	1B51 1B50
	S BAND	3550-3700 3400-3550 3300-3700 3250-3400 3100-3650 3000-3100 2900-3000 2870-3230 2800-2900 2750-2850 2700-3400 2700-3300 2700-2800 2650-2950 2600-3000 1215-1355	ATR, Fixed-Tuned, Low Q ATR, Fixed-Tuned, Low Q Pre-TR ATR, Fixed-Tuned, Low Q TR, Band Pass ATR, Fixed-Tuned, Low Q ATR, Fixed-Tuned, Low Q TR, Band Pass ATR, Fixed-Tuned, Low Q TR, Band Pass ATR, Fixed-Tuned, Low Q TR, Glass Envelope, Tunable TR, Glass Envelope, Fixed-Tuned TR, Glass Envelope, Fixed-Tuned ATR, Fixed-Tuned, Low Q Pre-TR TR, Band Pass TR, Band Pass TR, Glass Envelope, Table	1B52 1B53 1B54 1B57 1B55 5793 5792 5853 1B56 ATR387 1B27 1B62 721B 1B44 1B38 1B58 6117
		900-1200 1075-1095	TR, Glass Envelope, Tunable TR, Glass Envelope, Fixed-Tuned TR, Fixed-Tuned, Electrodeless Discharge	BL-25 1B23 1B40
	Ku BAND	16,200-16,800 16,200-16,800	ATR, Fixed-Tuned, Low Q TR, Integral Cavity, Tunable	BL-15 BL-16
	SPARK GAP	MODULATORS		1B41 1B45
0	The same of the sa	risking and a second	The state of the s	V

#### Simplify Your Procurement Problems . . .

Bomac, leading producer of gas switching tubes, offers you a single source for TR, ATR, Pre-TR and Attenuator Tubes, Pressurizing Windows, Hydrogen Thyratrons, and Crystals. Why not simplify your procurement problems? Make Bomac your ONE source for all of your special requirements.



ype	Peak Anode Voltage	Peak Anode Current	Average Anode Current	Peak Trigger Voltage
	ky max.	amps max.	ma max.	volts min
C45	3.0	35	45	175
C35	8.0	90	100	175
C22	16.0	325	200	200



#### RESSURIZING WINDOWS

YPE	FREQUENCY	DESCRIPTION
105	9375	Pressurizing Window RG 51/u Guide
L106	9245	Pressurizing Window RG 52/u Guide
107	9310	Rectangular Window RG 51/u Guide
L114	9310	Pressurizing Window RG 52/u Guide
L112	9080	Pressurizing Window RG 52/u Guide



o meet the growing demand for Germanium and Silicon crystals, Bomac now is in mited quantity production. Availability to industry will be announced at a later late. . . .

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PRODUCTION



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DEPARTMENT C-1
BEVERLY MASSACHUSETTS

# Insulation by IRVINGTON



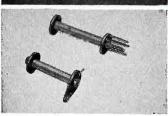
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THE IRVINGTON LINE of insulating tubing includes extruded thermoplastic and varnished types, for all conductor sizes commonly used in electronic wiring. All are characterized by high dielectric and tensile strength, excellent flexibility, smooth surfaces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

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	HIGH-TEMPERATURE		
			IR
	GENERAL-PURPOSE		

Recommended Types	Dielectric Strength* (vpm)	Tensile Strength (psi)	Remarks				
Polyethylene	1350	1600	High resistance to ozone				
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				
Temflex 105	1200	3000	Cont. Oper. at 105°C				
IRV-O-LITE XTE-30	1000	3000	Rubber-like, flexible				
Varnished	IRV-O-VOLT: Tubing glass, varnished insi —cotton, rayon and IRVINGTON: Lacquer and glass tubing. S						
*Dry tost020**							





#### IRVINGTON INSULATING TAPES and YARD GOODS

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	.004020		
COMPACT EQUIPMENT	Varnished silk Varnished rayon Varnished nylon Varnished cambric Varnished paper	.002008 .003008 .003008 .003005 .00075015	1700 · 1100 1200 · 1000 1200 · 1000 1200 2500-500	13 35 25-30 32
HIGH TEMPERATURES	Varnished Fiberglas Silicone Varnished Fiberglas Fibron	.003030 .003025 .008020	1200-600 1500-250 1000-750	70-550 100-525 40-47
GENERAL-PURPOSE	Varnished cambric (straight cut) Varnished cambric (bias cut)	.005015 .005015	1100-1200 1100-1300	38-50 40-47
SPECIAL APPLICATIONS	lvi-Bind (pressure- sensitive backing)	.005012	1050	38-44

STANDARD WIDTHS AND LENGTHS: Straight cut supplied in 25 and 50 yard rolls. Bias cut supplied in 36 and 72 yard rolls. 36" wide or tapes from 1/4" up. Consult our catalog for detailed dimensions. Avg. short-time test

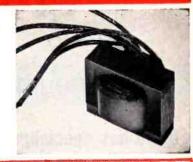
LOOK TO IRVINGTON FOR INSULATION LEADERSHIP



## 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 alkalies. 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)	
	Harvel 512-C	2100	
	Harvel 612-C	2300	
	Harvel 912-C	2200	
INTERNAL BAKING	Irvington 100	2250	
	Irvington 200	2100	
	Irvington 500	2100	
	Harvel 202	2100	
	Harvel 602	2100	
	Irvington 1	2150	
REGULAR BAKING	Irvington 5	2300	
	Irvington 121	2400	
	Irvington 517	2000	
ALD DOVING	Harvel 1301	1650	
AIR DRYING	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, alkalies, water, oils and petroleum products.

#### WIRE MARKERS

Irvington Wire Markers are made in both plastic and varnished-tubing types, 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.

22 Argyle Terrace, Irvington 11, New Jersey

# YOU'LL LIKE USING DIVCO PRODUCTS



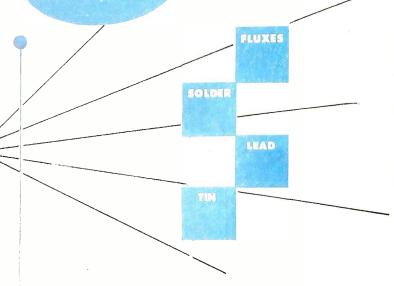
#### Divco has specialized printed circuit and high temperature solders for

COPPER AND SILVER CONDUCTOR PATTERNS SUB-MINIATURE ASSEMBLIES SILVER-PLATED CERAMICS, PLASTICS KOVAR-GLASS TERMINALS HERMETICALLY SEALED UNITS SILVER-FIRED GLASS, CERAMICS, QUARTZ CRYSTALS



#### has other solders for all industry— ALL GRADES AND SIZES

ACID CORE	RIBBON
ANODES	RINGS
BAR	ROSIN CORE
DISCS	SEGMENTS
DROP	SHEET
FLUX CORE	STAMPINGS
FOIL	STRIP
HIGH TEMPERATURE	TAPE
POWDERED	TINNING
PREFORMS	WASHERS
PRINTED CIRCUIT	WIRE





Rosin and any solvent combined by the Divco process produce an homagenized rosin flux which:

- will not precipitate, settle, or crystallize while in use or storage
- confines evaporation to an absolute minimum, guaranteeing a saving of at least 25% in evaporation as compared to any other rosin flux
- can be restored to its original consistency regardless of evaporation<sup>\*</sup>
- gives maximum resistance to corrosion
- possesses high dielectric strength

Divco guarantees that all its rosin fluxes conform to all federal specifications for non-corrosive qualities

#### **DIVIO** ROSIN FLUX REMOVER

- non-toxic
- fire-resistant
- removes residues efficiently
- prevents waste of solvent
- save time and labor

ultra violet (black light) inspection proves that Divco Rosin Flux Remover leaves no trace of residue.

#### Divco Soldering Flux Test Kit

At a very nominal cost, your laboratory or engineering department can solve and determine the answer to any soldering or soldering flux problem. The Divco Soldering Flux Test Kit contains one-ounce test bottles of the complete line of Divco Soldering Fluxes, and of Divco rosin and acid residue flux removers.



Divco imagineering doesn't stop with the products listed above. It begins with your needs, your wants—and ends with their satisfaction. Divco engineering and technical service is available without cost.

#### Something New...Better...and Faster, too!



# 25 ROSIN CORE SOLDER

DIVCO'S X-25 ROSIN CORE SOLDER is named after the

X-factor in it . . . a new, totally different flux ingredient. This X-factor means extra fast and better soldering because it provides flux activity at a temperature even before the solder is completely molten. Result: solder takes to the base metal immediately . . . NO COLD JOINTS, instead, a stronger, surer bond achieved at a lower temperature in less time! Satisfaction is further amplified by its non-corrosiveness and high dielectric properties equal to pure rosin flux.





Divco X-25 is available now, in any size or quantity.

Please write for prices and further information.



DIVCO guarantees that X-25 ROSIN CORE SOLDER conforms to all armed forces and federal specifications for non-corrosive qualities and solder analysis.



# INSUROK PLASTICS



#### LAMINATED **NSUROK**

Available in sheets, rods, tubes, and fabricated parts, in many grades, sizes, and thicknesses. Meets practically any requirement for uniformity, machinability, dielectric, printed circuitry, and physical strength.

#### MOLDED **INSUROK**

Parts molded from specially developed plastics materials as required for your product. Standard materials also used. Produced by compression, transfer, or injection process. Metal inserts molded into position.



#### RICHARDSON OFFERS YOU A Complete Range of TECHNICAL SERVICES

Richardson offers its wide experience in developing special plastics materials for your product. Also, research, design, and extensive engineering services without cost or obligation. We provide molding, laminating, moldedlaminates, and fabrication facilities and techniques. This assures the correct selection of material and process for each application.

MELROSE PARK, ILL., (2767 Lake St., Chicago Phone: MAnsfield 6-8900) CINCINNATI 15, OH10, (67 S. Cooper Ave., Lock-

land)
CLEVELAND 15, OHIO, (315 Plymouth Bldg., 2036

#### RESEARCH

For over one-quarter century, Richardson has pioneered in the development of new plastics and the improvement of old.

#### DESIGN

Experienced engineers analyze your requirements and help you select material, form, and process best suited to your needs.

#### PRODUCTION

Richardson has the plant equipment and know-how to handle even the largest, most difficult molded or laminated job.

#### FABRICATION

Complete facilities for punching or machining parts to your design and in any quantity.

#### SALES OFFICES

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KANSAS CITY 5, MO., (25 East 65th St.) B. H. Williams KIRKWOOD 22, MO., (700 North Woodlawn) F. D. Garza

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#### RICHARDSON COMPANY

2767 Lake Street, Melrose Park, Illinois (Chicago District)





for the largest
selection of
multi-turn
precision
potentiometers

#### advanced engineering! volume production!

HELIPOT is the organization that originated the helical potentiometer—the device that brought to electronic engineering new horizons of precise control by its greater resolution, higher linearity, mechanical precision, and broad range of resistance values. Helipot's policy of constantly working to anticipate the needs of the industry has led to steady advancement in the basic multi-turn principle—and today, Helipots are available in the industry's widest selection of ranges and designs to meet varying requirements.

#### **HELIPOT** offers you...

- Advanced Engineering. Through its years of leadership HELIPOT has built an organization unequalled in the industry—with trained engineers, specially-designed equipment, overall facilities to solve tough potentiometer problems!
- ▶ Volume Production of Special Designs. HELIPOT not only welcomes tough potentiometer problems, but also has expanded facilities to mass-produce special designs to rigid specifications—at economical cost!
- ▶ Versatile Basic Designs. Most of the basic units shown below can be readily adapted to special requirements—ganged assemblies, servo mountings, single or double shaft extensions, taps spot-welded to a single turn of winding at virtually any desired point, and many other individualized features to meet your particular needs!

See the next pages for complete electrical and mechanical data on the following Multi-Turn Helipots . . .



#### MODEL A:

A 10-turn unit, approximately 1¾" diameter with 12 to 14 times the resolution of single-turn units of same diameter. Very versatile—low in price—wide range of applications.\*



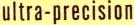
#### MODEL C:

Similar to Model A, but 3 turns of resistance winding instead of 10.\*



#### MODELS B, D, & E:

Larger-diameter (3.5/16") designs. B has 15 turns—D, 25 turns—E, 40 turns, for applications requiring extreme ranges of adjustment and highest possible resolution.\*





#### MODELS AN, BN, & CN:

Similar to Models A, B & C in size and performance but feature precision ball-bearings and extra-close tolerances throughout. Have approximately twice the linearity accuracy of equivalent standard Helipots are ideal servo units.\*

#### miniature



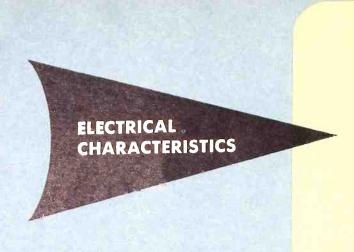
#### MODELS AJ, AJS, AJSP:

Tiny multi-turn Helipots the diameter of a penny, weight 1 oz. All have 18.5" slide wire for high resolution (1/6550—50 K unit). AJ has threaded bushings, sleeve bearings... AJS, servo mountings, sleeve bearings... AJSP, servo mountings, ball bearings. Many other features.\*

THE HELIPOT CORPORATION
SOUTH PASADENA, CALIFORNIA

PASABERA, CALIFORNIA

See next two pages for complete mechanical and electrical details

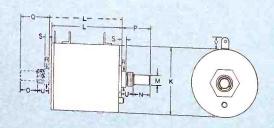


WODEL	A	AJ
HELICAL TURNS	10	10
RESISTANCE RANGE (OHMS)	10 TO 300,000	100 TO 50,000
RESISTANCE TOLERANCE (ST'D)	±5%	±5%
LINEARITY TOLERANCE (ST'D)	±0.5%	±0.5%
BEST LINEARITY TOLERANCE	±.05% (obove 2KΩ)	±.1%
ELECTRICAL ROTATION	3600° +4:	3600° +12
MECHANICAL ROTATION	3600° ±6:	3600° +12
POWER RATING (WATTS) (40° Ambient)	5	2
COIL LENGTH (INCHES)	46.5	18.5
NET WEIGHT (OUNCES)	4	1

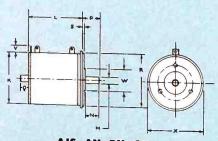
#### Technical Data for **Melipot Petentiometers**

PHYSICAL DIMENSIONS (in Inches)

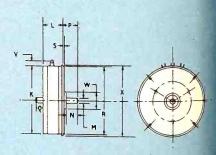
к	BODY DIAMETER	1.812	.750	
L	Body Length (To Front Mtg. Surface)	2	1.375	
M	Shaft Diameter	.2500 +.0000 —.0005	.1247 +.0000 0003	
N	Shaft Extension (Beyond Bushing) Front	.5	.375	
0	Shaft Extension (Beyond Bushing) Rear	.5	.375	
P	Shaft Extension (Beyond Mtg. Surf.) Front	.812	.687	
Q	Shaft Extension (Beyond Mtg. Surf.) Rear	.812	.375	
R	Mounting Shoulder Diameter	.4062 +.0000 0010	.281 +.000 002	
S	Mounting Shoulder Length	.125	.062	
U	Bushing Extension (Beyond Mtg. Surface)	.312	.312	
V	Height of Terminals (Above Body)	.312	.203	_
w	Mounting Shoulder Diameter			
x	Lid Outer Diameter	-	-	
	THREADS	<sup>3</sup> / <sub>8</sub> -32	1/4-32	
	Number of Sections (Max.)	3	1	Ī
	Add to "L" Dimension for each additional Section	-1	0	
	Type Bearing	Sleeve	Sleeve	
	Starting Torque (Oz. In.)	2	.75	
				_



A-AJ-B-C-D-E-L



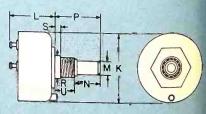
AJS-AN-BN-CN



J-LS-LSP-T

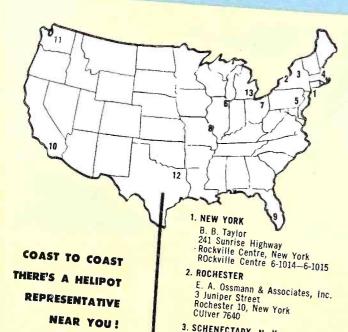
#### NOTES:

- 1. All locating lugs extend 1/16" beyond mounting surface.
- 2. Locating lugs on Models A, C and G are placed on a radius 9/16" from shaft centerline.
- 3. Locating holes on Models B, D, E and L are placed on a radius 17/32" from shaft centerline. 4. Three threaded 8-32 NC-2  $\times$  5/32" deep equally spaced holes are provided on a 1.250
- 5. Three threaded 8-32 NC-2  $\times$  3/16" deep equally spaced holes on a 1.750 B.C. are pro-
- 6. Terminals are marked as follows: C.C.W.—#1 . . . C.W.—#2 . . . Slider—S.
- 7. Tolerances on all decimal dimensions are  $\pm .015^{\prime\prime}$ .
- 8. Tolerances on all fractional dimensions are  $\pm 1/64^{\prime\prime}$ .



152														
A.J	SP	AN	В	BN	С	CN	D	E	G	J	L	LS	LSP	T
ho		10	15	15	3	3	25	40	1	1	1	1	1	1
0,0		100 TO 250,000	50 TO 500,000	50 TO 500,000	5 TO 50,000	30 TO 75,000	100 TO 750,000	200 TO 1,000,000	5 TO 20,000	50 TO 50,000	10 TO 100,000	10 TO 100,000	10 TO 100,000	1000 TO 100,000
-	%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%
0.:	5%	_	±0.5%		±0.5%		±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	% skn)	±.025%	±.025%	±.025%	±.1%	±.05% (obove 30KΩ)	±.025%	±.02%	±.25%	±.15%	±.1% (obove 5KΩ)	±.1% (above 5Ki2)	±.1% (above 5K9)	±.25% (above 5KΩ)
000	-	3600° +1:	5400° +4:		1080° ±4:	1080° ±1:	9000° ±4:	14,400° ±4:	356°±2°	357°±1°	358°±1°	358°±1°	358°±1°	355° +0:
00	+12:	3600° ±1:	5400° +4'.	5400° +1°.	1080° ±6:	1080° +1:	9000° ±4:	14,400° ±1:	360°	360°	360°	360°	360°	360°
12		5	10	10	3	3	15	20	2	5	5	5	5	2
8	.5	46.5	140	135	14	14	234	374	3.1	5.0	8.5	8.5	8.5	2
1		4	13	13	2	2.5	17	21	2	4	8	8	8	.56

1.820	3.312	3.328	1.812	1.820	3.312	3.312	1.312	2	3.000	3.000	3.000	.875
1.969	2.828	2.938	1.141	1.094	4.140	6.015	.891	1.032	.9375	.875	.875	.781
.2500	.2500 + .0000	.2500 +.0000	.2500	.2500	.2500 +.0000	.2500 +.0000 0005	.2500 +.0000 0005	.2500 +.0000 0005	,2497 +.0000 0003	.2497 +.0000 0003	.2497 + .0000 0003	.0780 +.0000 0003
.5	0003	.875	.5	.5	1	1	.5	.5	1	.5	.5	.25
_	.5	_	.5		.5	5	None	.5	.5	.5	.5	.25
.625	1.5	1	.812	.625	1.5	1.5	.875	.625	1.5	.625	.625	.312
	1	_	.812	_	1	1	None	.5	.5	.5	.5	.25
1.875	.5437	.750 +.000	.4062	1.875	.5937 +.0000	.5937 +.0000	.4062 +.0000	1,875	.5937 +.0000 0010	3.000 + .000 001	3.000 +.000 001	.7500 +.0000 0003
.062	.125	.125	.125	.062	.125	.125	.125	.062	.125	.062	.062	.062
0	.5	0	.312	0	.5	.5	.375	0	.5	0	0	0
.281	.265	.281	.312	.281	.265	.265	0	.250	.203	.203	.203	.156
750			-	.750 +.000		-		.750 +.000 001		.750 + .000 —.001	.750 +.000 001	=
2	_	3.5	-	2				2		3.125	3.125	.875
Flange	1/2-32	Flange	3/8-32	Flange	1/2-32	1/2-32	3/8-32	Flange	1/2-32	Flange	Flange	Flange
2	3	3	3	2	1	1	1	6	8	8	8	4
15/8	Perito	21/2		1	0	0	0	11/16	1/2	1/2	1/2	1/2
Ball Bearings	Sleeve	Ball Bearings	Sleeve	Ball Bearings	Sleeve	Sleeve	Sleeve	Ball Bearings	Sleeve	Sleeve	Ball Bearings	Ball Bearings
1.0	2.75	2	1.75	1.0	3.5	4.5	.75	1.0	1.75	1.75	1.50	,005 Min. ,015 Std.
	1.969 2.500 + .0003 5.5625625062 0 2.81 7.50 + .000 2 Flange 2 1.5/8 Boll Bearings	1.969 2.828  2500 2500 + 00003  .5 1 5  .625 1.5  - 1  1.875 + 0000 .062 .125  0 .5  .281 .265  750 + 0000 - 0000  Flange ½-32  2 3  15%  Boll Bearings Sleeve	1.969 2.828 2.938  2.500	1.969 2.828 2.938 1.141  2.500	1.969 2.828 2.938 1.141 1.094  2.500 2.500 2.500 2.500 2.500 2.000 2.500 2.000  1.000 1.00	1.969 2.828 2.938 1.141 1.094 4.140  2.500	1.969 2.828 2.938 1.141 1.094 4.140 6.015  2.500	1.820	1.820 3.312 3.328 1.812 1.020 5.512 5.012 1.032  1.969 2.828 2.938 1.141 1.094 4.140 6.015 8.91 1.032  2.500	1.820 3.312 3.328 1.812 1.820 5.512 5.51 1.032 .9375  1.969 2.828 2.938 1.141 1.094 4.140 6.015 .891 1.032 .9375  1.2500	1.969 2.828 2.938 1.141 1.094 4.140 6.015 8.91 1.032 9.375 8.75   2.500	1.820 3.312 3.328 1.812 1.820 3.312 3.312 1.820 3.312 3.312 1.820 3.312 3.312 3.322 1.812 1.820 3.312 3.312 3.322 1.812 1.820 3.312



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Cossor (Canada) Ltd. Mr. Fred Bates 648 Yonge St. Toronto, Ontario, Canada



# come to Helipot for the largest selection of single turn precision potentiometers

The same engineering know-how and precision manufacturing facilities that have made Helipot the world's largest manufacturer of multi-turn potentiometers, have also established its leadership in the design and production of high precision single-turn potentiometers. These single-turn units are built with the same infinite care... on the same types of specially-designed equipment... by the same highly trained personnel that have made Helipot multi-turn potentiometers the world's standard. Result—a wide selection of single-turn potentiometers, available in volume, built to the highest-possible standards—at mass-production economies!

Most of the units shown at right are readily adaptable to special requirements—servo mountings, ball or sleeve bearings, ganged assemblies, single or double shaft extensions, taps spot-welded to a *single* turn of winding at virtually any desired point, and many other optional features to meet the needs of *your* applications.

So, no matter what your requirement in precision potentiometers, bring it to Helipot!

# Duodials

for
every
application

Duodial turns-indicating knob-dials are ideal for Helipots and other multi-turn applications. Available in a wide range of sizes and turns ratios...



### MODEL RA:

The beautiful new 10 turn Precision Duodial (1-13/16" dia.) with a "feel" and appearance that add distinction to the finest instrument panels. Features excellent readability, positive locking lever, easy assembly. Available in 10:1 ratio only.



### MODEL R:

Standard 2" Duodial in 10:1, 15:1, 25:1, 40:1 turns ratios for various Helipot ranges. Locking device, if desired.



### MODEL W:

Large 434" Duodial for primary control applications. Easy to adjust and read. Finger hole for rapid rotation. Available in turns ratios of 10:1, 15:1, 25:1, 40:1.





A high-precision single-turn unit with continuous mechanical rotation and minimum electrical dead space. Model L has bushing mounting, sleeve bearings . . LS, servo mounting, sleeve bearings . . . LSP servo mounting, ball bearings. All are gangable to 8 sections, sections phaseable after assembly to within ±1°. Many other features.\*

### MODEL J (2" DIA.):

The first production designed potentiometer with ball bearings as a standard feature—also versatile three-way servo mounting. Individual sections can be easily ganged and independently phased by the user after installation without external brackets or clamps. Many other unique features.\*

### MODEL G (1 5/16" DIA.):

A compact, single-turn precision potentiometer—low in price, extra rugged. Developed initially for remote positioning and indicating in aircraft applications—now also used for general instrumentation and servo mechanisms. Continuous 360° rotation. In certain resistance values is excellent for high temperature applications—at ambient temperatures as high as 165°C. under certain conditions.\*



### miniature

### MODEL T "TINYTORQUE" (7/8" DIA.):



A miniature ultra-low-torque unit for guided missiles and aviation electronics. Features shielded ball bearings, highest possible precision and quality, long life, rugged dependability. Length only 25/32"—weight only 0.56 oz.—starting torque only 0.005 oz. in., when specified—negligible running torque. Sliders phaseable to within 3°. On vibration tests units have successfully withstood frequencies 0 to 2000 c.p.s. in 3 planes, accelerations up to 20 G's for periods to 1 hr.\*

\*See preceding pages for complete electrical and mechanical data.

THE LABORATORY HELIPOT

A 10 turn Helipot,
"R" Duodial and 3way binding posts
combined in a handsome walnut-cased
unit ideal for laboratory and instruc-

tion purposes. Simplifies making and changing experimental circuits. More compact and 5 times faster to set than decade boxes. Linearity 0.1%, Power Rating 5 watts, Standard Resistance Ranges 100 to 100,000 ohms—others on order.

See preceding page for nearest representative

THE Helipot CORPORATION

Centralab introduced carbon controls to the radio industry 25 years ago! Today, there's no substitute for Centralab control research and development.

BLUE SHAFT RADIOHMS

# Centralab

### Division of GLOBE-UNION INC.

934 East Keefe Avenue Milwaukee 1, Wisconsin

A new line of modern carbon type controls, \$\frac{1}{8}"\ diameter. Distinctive blue shafts. Switch types are factory assembled and tested, for smoothest action and instant usefulness. Rating, \$\frac{1}{2}\$ watt. Standard shafts, \$3"\ universal fluted full length mill. Type BSK units have special 2\frac{1}{8}"\ split knurl shafts. Switch have special 2\frac{1}{8}"\ split knurl shafts. Switch sare universal DPST, easily wired for SPST and 3-wire usage.

### MODEL N RADIOHMS STANDARD 1 32 " SINGLE CONTROLS

Popular, medium size control of the carbon type. Diameter 1-3/32 inch. Plain, no switch construction. Switches are available separately and can be attached easily. Rating ½ watt. Standard shafts 3" long, universal fluted full length mill.

ull	length	mill.		
Co	ıt.	Ohms Max.		List
N	٥.	Resis.	Taper	Price
	158	1000	C1	\$1.25
N	106	5000	C1	1.25
	-107	10000	C1	1.25
N	112	20000	C6	1.25
N.	113	25000	C1 ,	1.25
N	-114	50000	C1	1.25
N-	-115	5 <b>0</b> 000	C2	1.25
	-116	100000	C1	1.25
	-117	100000	C2	1.25
	-102	250000	$C_2$	1.25
	-118	500000	C1	1.25
	-103	500000	C2	1.00
	-120	500000	C13	1.85
	-149	500000	C11	1.85
	-104	1 Megohm	C2	1.00
	-150	1 Megohm	C12	1.85
	-121	1 Megohm	C13	1.85
	-155	2 Megohms	C2	1.25
	-151	2 Megohms	C15	1.85
	-152	2 Megohms	C12	1.85
	-122	2 Megohms	C13	1.85
	-153	2 Megohms	C11	1.85
	-177	5 Megohms	C1	1.25
Ν	-178	10 Megohms	C1	1.25

### MODEL NK SINGLE CONTROLS SPLIT KNURL SHAFTS -WITHOUT SWITCHES

Cat.	Ohms Max.		List
No.	Resis.	Taper	Price
NK-140	500,000	C2	\$1.10
NK-141	1 Megohin	C2	1.10

### SWITCHES FOR MODELS N, NK AND AN CONTROLS

N, NK AND AN CONTROLS
These switch units replace covers on controls and when attached are both firmly seated and positive in action.
RATING — 3 amperes, 125 volts a.c.; 1 ampere, 250 volts a.c. Approved by Underwriters' Laboratories.

Cat.		List
No.	Switch Action	Price
K-155	Single pole, single throw	\$ .50
K-156	Single pole, double throw	.65
K-157	Double pole, single throw	.65
K-158	Four point	,65
K-169	Single pole, single throw,	. 65
	dummy lug	

# ADASHAFT RADIOHMS BUY CONTROLS WITHOUT SHAFTS — ADD A SHAFT

CONTROLS



Built in popular Model N construction, the basic control unit is furnished without a shaft. Select the required shaft from wide assortment, as listed. This new idea in controls offers flexibility and economy. By a unique mechanical arrangement, shafts can be almost instantly locked into the control. Adashaft controls can be converted to the switch type by adding switches as listed in column to the left. Rating, ½ watt. BE SURE TO ORDER SHAFTS SEPARATILY.

Cat.	Ohms	F	List
No.	Resis.	Taper	Price
AN-5	1000	C1	\$1.10
AN-6	5000	CI	1.10
AN-7	2500	Č1	1.10
AN-10	5000	čī	1.10
AN-11	5000	Č2	1.10
AN-12	5000	C1 C1 C2 C5	1.10
AN-13	6500	C1	1.10
AN-14	10,000	C1	1.10
AN-22	20,000	C1	1.10
AN-23	20,000	C5	1.10
AN-26	25,000	C1	1.10
AN-27	25,000	C5	1.10
AN-31	50,000	C1	1.10
AN-32	50,000	<b>U2</b>	1.10
AN-40	100,000	C1	1.10
AN-41	100,000	C2	1.10
AN-50	250,000	C1	1.10
AN-51	250.000	C2	1.10
AN-52	250,000	C5	1.10
AN-59	500,000	C1	1.10
AN-60	500,000	C2	.95
AN-61	500,000	C5	1.10
ANT-66	500,000	C12	1.70
AN-68	1 megohm	C5	1.10
AN-69	1 megohm		1.10
AN-70	1 megohm		.95
ANT-73	1 megohm	C13	1.70
AN-75	2 megohms	C1	1.10
AN-76	2 megohms	C2	1.10
AN-77	2 megohms	C5	1.10
ANT-78	2 megohms	C11	1.70
ANT-80	2 megohms	C13	1.70
AN-83	2.5 megohms	C1	1.10
AN-84	3 megohms		1.10
AN-86	4 megohms		1.10
AN-87	5 megohms		1.10
AN-98	10 megohms	C1	1.10

### ADACHAET CHAFTS

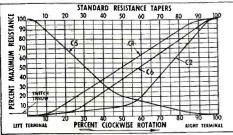
			ADASHAFI	SUME	,		
Order se	parately	as required.	They fit A	dashaft	basic control	ls readily.	
•0		-(=====================================	Cat. N	٥.	Description	n List	Price
	AK-)	AX 3	AK-1	slot, len	gth %" from	n screwdriver n bushing	\$ .15
	AK.	4	A TZ 9	1.9/16//	with .078"	Slot.	.20
	TD.		AK-3	3" Univ	ersal Fluted	Mill	.15
A)	•		AK-4	3%" SI	olit Knurl		.25 .55 .65
	3		AK-5	3" Auto	Туре		.55
		777	AK-6	6" Auto	Type		.65
-	AK-A	- Contract				.216x4-5/16"	.30
	Mr.v		AK-16			for 1/4" and	
Manage To The State of the Stat				1/4 " or	1/4" and 3/10	6"	.40
	AX-		AK-18	Coupler	- Insulating	Auto Type	
200	0 7	B ⊊⊒(⊛)		Slotted			.30
AK-I	AK	AX-16	AK-19	Insulati	ng Nylon, 2	-1/16" from	~~
	AX.	19		bushing	, with screw-	driver slot.	.55

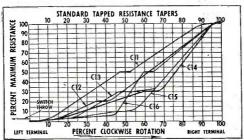
# HANDY ADASHAFT KIT HANDY ADASHAFT 'KIT — In hinged lid plastic box. 8½" x 4½" x 1½", are the following: Controls: 6 AN-60 ½ meg.; 3 AN-70 1 meg.; 1 ANT-66 ½ meg. tapped. Switches: 4 K-155 SPST; 1 K-157 DPST. Shafts: 7 AK-4, 3 AK-3, 2 AK-1, 1 AK-2, 1 AK-5, 1 AK-10 Couplers: 2 AK-16. To order, specify CAT. NO. AN-100 KIT. List Price - - \$17.50

### CENTRALAB TV REPLACEMENTS

Custom Controls — for exact replacements — are listed in Centralab Special Control Bulletin. Also available: Centralab TV Control Guide — 25c.

and instant	usefulness. Rati	ng, ½ watt. fluted full have special es are univ SPST and 3	Standard length m	shafts, 3" ill. Type E	SK units	
		have special	21/8" split	knurl shafts ST. easily	wired for	1
المالية المالية	G ( N	SPST and 3	-wire usag	ge. List	List	n
Cat. No.	Cat. No. Switch	Ohms Max.	Taper	Price	Switch Type	t
Plain B-4	Type B-4 -S	Resis. 500	C1	Plain \$1.25 1.25	\$1.75 1.75	f
B-5 B-6	B-5 -S B-6 -S B-7 -S	1,000 2,000 2,500	C1 C1 C1	1.25	1.75 1.75	
B-7 B-8	B-7 -S B-8 -S B-10-S	3,000	C1 C1	1.25 1.25 1.25	1.75 1.75	
B-10 B-11	B-10-S B-11-S B-12-S	5,000 5,000	C1 C2	1.25 1.25	1.75 1.75	
B-12 B-14	B-12-8 B-14-8 B-15-8	5,000 10,000 10,000	C5 C1 C2	1.25 1.25	1.75 1.75	
B-15 B-16	B-16-S B-20-S	10,000 10,000 15,000	C6 C6	$\frac{1.25}{1.25}$	1.75 1.75	
B-20 B-22 B-24	B-22-S B-24-S	20,000 20,000	C1 C6	1.25 1.25	1.75 1.75	
B-26 B-27	B-26-S B-27-S B-28-S	25,000 25,000	C1 C5	$1.25 \\ 1.25$	1.75 1.75	,
B-28 B-31	B-31-S	25.000	C6 C1	$1.25 \\ 1.25$	1.75 1.75 1.75	1
B-32 B-35	B-32-S B-35-S	50,000 50,000 75,000	$\tilde{C}_{1}^{2}$	$1.25 \\ 1.25$	1.75 1.75 1.75	1
B-40 B-41	B-40-S B-41-S	100,000 100,000 150,000	Č1 C2 C2	1.25 1.25	1.75	1
B-44 B-46	B-44-S B-46-S	200,000	Cl	1.25 $1.25$ $1.25$	1.75 1.75 1.75	1
B-50 B-51	B-50-S B-51-S	250,000 250,000	C1 C2 C5	1.25 1.25	1.75 1.75	3
B-52 BT-53	B-52-S BT-53-S	250,000 250,000 250,000	C5 C11 C13	1.85 1.85	2.35 2.35	
BT-55 BT-57 B-59	BT-55-S BT-57-S B-59-S	350,000 500,000	Cl	$\frac{1.85}{1.25}$	2.35 1.75	
B-60 B-61	B-59-S B-60-S B-61-S	500,000 500,000	CO	$1.00 \\ 1.25$	1.50 1.75	
BT-65 BT-66	BT-65-S	500,000 500,000	C5 C11 C12 C13	$\frac{1.85}{1.85}$	2.35 2.35	ĺ.
BT-67 B-68	BT-66-S BT-67-S B-68-S	500,000 1 Megohm	Co	$\frac{1.85}{1.25}$	2.35 1.75 1.75	
B-69 B-70	B-69-S B-70-S	1 Megohm 1 Megohm	C1 C2	$1.25 \\ 1.00 \\ 1.85$	1.50 2.35	
BT-71 BT-72	BT-71-S BT-72-S	1 Megohm 1 Megohm 1 Megohm	Č11 C12 C13	1.85 1.85	2.35 2.35	
BT-73 BT-74 B-75	BT-72-S BT-73-S BT-74-S B-75-S	1 Megohm 2 Megohms	C16 C1	1.85 1.25	2.35 1.75	
B-76 B-77	B-76-S B-77-S	2 Megohms	C2	$^{1.25}_{1.25}$	$\frac{1.75}{1.75}$	
BT-78 BT-79	BT-78-S	2 Megohms 2 Megohms	C11 C12 C13	$\frac{1.85}{1.85}$	2.35 2.35	
BT-80 BT-81	BT-79-S BT-80-S BT-81-S	2 Megohms 2 Megohms	C15	$\frac{1.85}{1.85}$	2.35 2.35	
BT-82 B-83	BT-82-S B-83-S	2 Megohms 2.5 Megohms	C16 C1	1.85 1.25 1.25	2.35 1.75 1.75	
B-84 B-85	B-84-S B-85-S B-86-S	3 Megohms 3 Megohms 4 Megohms	C1 C2 C1	$1.25 \\ 1.25 \\ 1.25$	1.75 1.75	
B-86 B-87 B-98	B-87-S B-98-S	5 Megohms 10 Megohms	CI	$1.25 \\ 1.25$	1.75 1.75	
	MODEL BSK BSK-60-S	with Split Knur 500,000		21/8" long 1.10	1.60	
BSK-60 BSK-70 BTSK-66	RSK-70-S	1 Megohm 500,000	C2 C12	$\frac{1.10}{1.85}$	1.60 2.35	l
BTSK -66 BTSK -72	BTSK -66-S BTSK -72-S	1 Megohm MODE	L BB TWI	N RADIOHM	15	
	1 1/1	Two B Radio	ohms mou which rot	nted in tar ates both s	ndem on a ections. No	١
		single shaft switch types. sal fluted full	Rating ½ length mi	watt. Shaft,	3" univer-	
BB-100 BB-101	10,000 10,000	50,000 50,000	C4 C2 C2	C3 C1 C2	\$2.50 2.50 2.50	
BB-102 BB-103	100,000 <b>250</b> ,000	100,000 250,000	C2 C2 C2	$C_2$	2.50 2.50	
BB-104	500,000 DY PLASTI-PAKS	500,000		- Contains		
MODELS E	AND BSK CON	TROLS B-7	0-S switch er. LIST	n controls, 1 PRICE	megohm, C2	
The widely	PLASTIC BOXES used half mego	hm and BP	-5 PAK -	Contains controls, 50	12 Cat. No.	
one megohm	controls of C2 to	c boxes.	taper, wit T PRICE	n split knuri	- \$13.20.	١
no extra ch	$\frac{1}{4} \times \frac{1}{4}$ " deep. harge for this co	nvenient BP	-6 PAK - K-70 plai	<ul> <li>Contains</li> <li>controls,</li> </ul>	1 megonin,	l
container		(10)	taper, wit	th knurl sha	- \$13.20.	
B-60 plain c	- Contains 12 (controls, 500,000 o	\$12.00. BS		— Contains Switch Type		1
BP-2 PAK B-70 plain	- Contains 12 Controls, 1 mego	at. No.   500	,000 ohms irl shafts.	LIST PRIC	With split E - \$19.20.	
			-8 PAK -	- Contains	Controls 1	ŀ
C2 taper. L	ch controls, 500,00 IST PRICE	- \$18.00   sha	its. List	taper, with Price	- \$19.20.	l
H 100 10	STANDARD RES	ISTANCE TAPERS 0 60 70 80	90 100	Fr. ,	STANDA 10 20	RE 3
100 NA 100		70 70 80		90 100		=





MODEL V WIREWOUND CONTROLS - 3 WATT - LINEAR 1-7/16" diam. x 9/16" depth. 3" mill shafts. Switches available. 3" fluted

Cat. No. (	Ohm	s List	Cat. No.	Ohms	List
V-100	2	\$1.85	V-121	100	\$1.85
V-102	4	1.85	V-123	200	1.85
V-104	6	1.85	V-125	300	1.85
V-106	8	1.85	V-126	400	1.85
V-108	10	1.85	V-127	500	1.85
V-109	15	1.85	V-128	750	1.85
V-110	20	1.85	V-129	1000	1.85
V-111	25	1.85	V-131	2000	1.85
V-112	30	1.85	V-133	3000	1.85
V-114	40	1.85	V-134	4000	1.85
V-116	50	1.85	V-135	5000	1.88
V-117	60	1.85	V-136	7500	1.88
V-118	75	1.85	V-137	10,000	1.88
Cat.	M		V SWIT	CHES	List Price
K-10 S	Sing.	le pole	, single	throw	\$ .60
K-11 S	Sing	le pole	, double	e throw	.75
K-12 1	Doul	ole pol	e, single	e throw	.75

# **SWITCHES**

# Centralab

Division of GLOBE-UNION INC.

934 East Keefe Avenue

Milwaukee 1, Wisconsin ROTARY SWITCH HARDWARE
SHIELD—Cadmium plate .035" steel
shield, for insertion between switch
sections to reduce coupling effects.
Use with 1400 and 2500 series switches.
CAT. NO. P-200 Inter-section Shield.
List \$ .15.
INDEX ASSEMBLIES



Series 1400 ofters compact design and quality construction. Laminated phenolic insulation. Mfg. bushing %" x 32 thread, %" long. Shaft, 14" long. Index, positive, 30°. Adjustable stop. Itevisions are easily made, if later required, due to availability of all parts separately. See listing under hardware. Packaged with mfg. nut, lookwasher and 1½" black bar knob. Poles

Cot. per Tot. Posi- List

Cat.		Tot.	Posi-	List			
No.	Sec.	Sec.	tions	Price			
	SHORT	ING	CONTACTS	;			
(make before break)							
1400	1	1		\$1.25			
1402	1	1	2 to 11	1.50			
1404	$\frac{1}{2}$	1	2 to 6 2 to 11 2 to 5 2 to 3 2 to 11 2 to 5 2 to 0 2 to 11 2 to 5 2 to 11 2 to 5 2 to 11 2 to 5 2 to 11 2 to 5 2 to 11	1.50 1.75 1.75 2.00 2.25 2.75 2.75 2.75 3.00 3.25 3.50 3.75 4.50			
1406	3	1	2 to 3	1.75			
1408	4	1 1 1 2 2 2 2 2 2 2 3 3 3	2	1.75			
1410 1412	1 2 3 4	2	2 to 6	2.00			
1412	1	2	2 to 11	2.25			
1414 1416 1418 1420	2	2	2 to 5	2.50			
1416	3	2	2 to 3	2.75			
1418	4	2	2	2.75			
1420	1 1	3	2 to 6	2.75			
1422	1	3	2 to 11	3.00			
1124	2	3	2 to 5	3.25			
1424 1426	1	4	2 to 6	3.50			
1428	1 2	4	2 to 11	3.75			
1430		4	2 to 5	4.50			
	NO	N-SI	2 to 5				
	(brea	k be	fore make)				
1401	1	1	2 to 6	1.25			
1403	1 2 3 4	1	2 to 11	1.50			
1405	2	1,	2 to 5	1.50			
1407	3	111222223334	2 to 3	1.75			
1409	4	1	2	1.75			
1411	1	2	2 to 6	2.00			
1413	1	2	2 to 11	2.25			
1415	1 1 2 3 4 1	2	2 to 5	2.50			
1417	3	2	2 to 3	2.75			
1419	4	2	2	2.75			
1421 1423 1425 1427	1	3	2 to 6	2.75			
1423	1	3	2 to 11	3.00			
1425	.2	3	2 to 5	3.25			
1427	1	4	2 to 6	3.50			
14:29	1	4	2 to 11	1.50 1.50 1.75 1.75 2.00 2.25 2.75 2.75 2.75 3.00 3.25 3.50 3.75 4.50			
1431	2	-4	2 to 5	4.50			
	PHEN	OLIC	2 to 6 2 to 11 2 to 5 2 to 3 2 to 6 2 to 11 2 to 5 2 to 6 2 to 11 2 to 5 2 to 6 2 to 11 2 to 5 2 to 6 2 to 11 2 to 5 8 C TIONS				
Cat.	Cat.						

	10	140	JOEKIL	2	
Cat.	Cat.				
No.	No.				
Short-	Non-		Posi-		List
ing	Short.	Poles	tions		Price
B	H	1	2 to 6		,50
В	J	1	2 to 11		.75
Ď	K	1 2 3 4	2 to 5		.75
Ð	L	3	2 to 3		1.00
E	M	4	2		1.00
EE			2 to 3		1.50
F	1	1	2 to 5		.75
	Unuse	d_cont	acts on	one	
	side	of con	nmon c	on -	
G	nected	and a	shorted	out.	
G		1	2 to 1	)	1.00
	All un	used c	ontacts o	on-	
2.7	nected	and s	shorted	out.	
Ŋ	Combi	ne N	and P	for	.75
P	resista	nce de	cade sw	itch	.75
	Specia	l secti	ion for	Ca.	./)
Q	pacita	nce de	cade sw	itch	75
				· oon	.75
	242	ar.	A.D.		



ROTARY SELECTOR SWITCHES

STEATITE INSULATION

2500 Series Switches have highest quality Steatite insulation and meet critical requirements of r.f. circuit applications. Mtg. bushing, %" x 32 thread, %" long. Shaft. 17" long. Index. positive, 30°. Adjustable stop. Parts, including sections, also available separately. See listings below. Poles

Cot. per Iot. Page. List.

Cat. No.		Tot. Sec.	Posi- tions	List
	SHOR	TING	CONTAC	Price
0.00	lmai	e be	ore break	)
2500 2502 2504 2506 2510 2512 2514 2516 2520 2522	1 1 2 3 1 1 2 3 1	1 1 1 2 2 2 2 3 3 3	2 to 6 2 to 11 2 to 5 2 to 3 2 to 6 2 to 11 2 to 5 2 to 3 2 to 6 2 to 11	\$2.25 2.25 2.25 2.25 3.50 3.50 3.50 5.00 5.00
2524	2	3	2 to 5	5.00

NON-S	HORTI	NG (	break befo	re make)
2501	1	1	2 to 6	2.25
25 03	ī	ī	2 to 11	2.25
2505	2	ī	2 to 5	2.25
2507	3	î	2 to 3	2.25
2511	ĭ	2	2 to 6	3.50
2513	î	2	2 to 11	3.50
2515	2	2	2 to 5	3,50
2517	3	2	2 to 3	3.50
2521	ĭ	3	2 to 6	5.00
2523	1	3	2 to 11	5.00
2525	2	3	2 to 5	5.00
	-	-		
STEATI	TE SEC	COLT	<b>NS FOR 250</b>	OSERIES

Cat. No. Short-Cat. No. Non. Post-Short. Poles tions

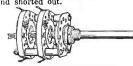
X 1 2 to 6

Y 1 2 to 11

RR 2 2 to 5

SS 3 2 to 3

Z 4 2 Price \$1.25 1.25 1.25 1.25 1.25 1.25 Y Z 4 2 to 10 1.25 GG 1 2 to 10 1.25 With GG, unused contacts connected and shorted out.



HAM TYPE SWITCHES

HAM TYPE SWITCHES

Heavier than normal Steatite insulation. Use with tubes operating up to
1000 voits and inputs up to 150 watts.

Non-shorting, 90° positive index. Mig.
bushing %" x 32 thread, %" long.
Shart, 1%" long.

Foles

Cat. per Tot. Posi- List

per	Tot.	Posi-	List
Sec.	Sec.	tions	Price
1	1	2 to 4	\$2,25
1	2	2 to 4	3.50
1		2 to 4	4.75
1		2 to 4	6.00
1	5	2 to 4	7.25
ATE	STEA	TITE SI	ECTIONS
ished	with	4 fibre	cushion
CAT	'. No.	XX 1 po	le 2 to 4
s Non	-short	ing \$1.25.	
	Sec.  1 1 1 1 ATE aished CAT	Sec. Sec.  1	Sec. Sec. tions 1 1 2 to 4 1 2 2 to 4 1 3 2 to 4 1 4 2 to 4

TIE BOLT NUTS AND LOCKWASHERS — 3/16" hex. nut 3/32" thick, No. 5-40 thread, cadmium plated steel. Lockwashers — split ring, steel, cadmium plated. Packaged 12 per envelope\*.

Nut—Cat. No. P-147 .15 per Doz. Lockwasher—Cat No. P-148 .15 per Doz. DIAL PLATES AND KNOBS — Packaged singly.\*

_	DIAL PLATES	AND	KNOR	5 — Packaged singly.*	
P-116 P-117 P-118 P-173		Price Each .20 .20 .20 .20	Cat. No. P-119 P-120 P-193 P-194	Description	Pric Eac .20 .20 .15 .20
	quantities	••			

### LEVER ACTION SWITCHES



Coil spring index design of very long life. Coil spring easily re-placed without removing switch. Mfg. plates avail-able. Black knob is standard.

Cat. Tot. Posi-	Type	List
No. Polestion	Index	Price
	CONTACTS fore break)	

1452	2	3	Positive	\$1,25
1453	2	3	Spring Ret.	1.25
1456	4	2	Spring Ret.	1.25
1459	4	2	Positive	1.25
1466	2	3	Pos. Spr. Ret.	1.25

### NON-SHORTING (break before make)

1454	2	3	Positive	1.25
1455	2	3	Spring Ret.	1.25
1457	4	2	Spring Ret.	1.25
1458	4	2	Positive	1,25
1467	2	3	Pos. Spr. Ret.	1.25

### MOUNTING PLATES FOR ABOVE

	THE PLA		
Provides es. Blac	%" spacij k crackle i	ng between	switch-
No.	Number Switches	Length	List Price
P-1755	1	3/4"	\$ .35
P-1756	2	11/2"	.40
P-1757	3	21/4"	.50
P-1758	4	3 "	.60
P-1759	5	23/ //	.00

### UNIVERSAL FLAT SWITCHES

INDEX ASSEMBLIES
INDEX ASSEMBLIES
Individually cartoned, all hardware
and shaft included, except Basic Index 1435W — as supplied in No.
1500 Kit.
Cot. No. Description List
P-121 For 1 or 2 sec. switches 1.25
P-122 For 3 or 4 sec. switches 1.25
P-123 For 5 to 6 sec. switches 2.25
1435W Basic Index only
HARDWARE AND ACCESSORIES

1435W Basic Index only 1.10

HARDWARE AND ACCESSORIES

SPACERS—Cadmium plated seamless
brass tubing. 133" I.D., .187" O. D.,
Chamfered edges.

Packaged 12 per envelope\*.

Price Price Price
Cot. Per Cot. Per
No. Lgth. Doz. No. Lgth. Doz.
P-124 ½" .15 P-126 ½" .30
P-125 %" .30 P-127 ¾" .50

DETACHABLE FLAT SHAFTS
.064" x ½" Cadmium plated steel.
Packaged singly\*.



Compact, Requires only %" behind panel. Laminated phenolic insulation. 4 pole. 2 position, non-shorting. CAT. NO. 1450 with positive index. List \$1.00. CAT. NO. 1451 — similar to 1450, but with spring return index.

23 POSITION SELECTOR SWITCH



Long life, single pole, 23 position, shorting type. Double wipe contacts. 15° positive index. CAT. NO. 1443 — 23 Position Selector Switch. List Price \$3.25.

### ROTARY SWITCH KIT



A 4 drawer cabinet holds 33 standard rotary switch plen-olic sections (1400 series). 16 index assemblies and all necessary parts which will produce the following, or variations which may meet a sudden requirement: two tion, four 2 section, six 1 section, one condenser decade switch of 2 sections, and one resistor decade switch of 1 section. Refills can be ordered from the Hardware list on this page, CAT. NO. 1500 — Complete Rotary Selector Switch Kit.

Centralab offers a complete line of switches to meet nearly every low-power and medium duty requirement.



An outstanding medium duty switch of heavy Steatite insulation. Rating 750 watts. Voltage breakdown, 3000 RMS volts to ground. Mtg. bushing %x32 thread, %" long. Shaft, 1%" long. Index, 20° double roller, non-stalling. Adjustable stops.

Poles
Cat. per Iot. P.

	10167					
Cat.	per	Tot.	Posi-	List		
No.	Sec.	Sec.	tions	Price		
SHORTING CONTACTS						
	(mak	e be	fore brea	k)		
JV900	00 1	1	2 to 17			
JV900	)2 3	1	2 to 5	12.00		
JV900	4 1	2	2 to 17	21,00		
JV900	6 3	2	2 to 5	21.00		
JV900	08 1	3	2 to 17	30.00		
JV901	0 3	3	2 to 5	30.00		
JV901	2 1	2 2 3 3 4 4 5 5 6	2 to 17	39.00		
JV901		4	2 to 5	39.00		
JV901	6 1	5	2 to 17	48.00		
JV901		5	2 to 5	48.00		
JV902	0 1		2 to 17	57.00		
NON-SH		NG (	break be	fore make)		
JV900	1	1	2 to 17	12.00		
JV900 JV900	3 15 1	1	2 to 5	12.00		
JV900	5 1	2	2 to 17	21.00		
JV900	7 3	2 2 3 3	2 to 5	21.00		
JV900	9 1	3	2 to 17	30.00		
JV901	1 3 3	3	2 to 5	30.00		
JV901	3 1	4	2 to 17	39.00		
JV901	5 3	4	2 to 5	39.00		
JV901	7 1	4 5 5 6	2 to 17	48.00		
JV901		5	2 to 5	48.00		
JV902	1 1	6	2 to 17	57.00		
SECTIO	NS F	OR A	ABOVE S	WITCHES		

Cat.
No.
Type fions Price
KV -8 Shorting 2 to 17 \$9.00
KV -9 Shorting 2 to 5 9.00
KVN-8 Non-short. 2 to 17 9.00
KVN-9 Non-short. 2 to 5 9.00
INDEX ASSEMBLY FOR ABOVE
Includes flat shaft, tie rods, spacers, lockwashers, adjustable stop pins and bar knob.
CAT. NO. KV-7 Power Switch Index.
List Price \$6.00.

### SMALL GENERAL PURPOSE SWITCHES



1460
TYPE 1460 — Single pole, 2 position, shorting contacts, positive index. SPST or SPDT.
CAT. NO. 1460 - - List \$ .75
TYPE 1461 — Single pole, 3 position, or SPDT, CAT. NO. 1460 - - List \$ .75 TYPE 1461 — Single pole, 3 position, shorting, positive index. CAT. NO. 1461 - - List \$ .75 TYPE 1462—Double pole, 2 position, shorting, positive index. SPST, SPDT, DPST or DPDT, CAT. NO. 1462 - - - List \$ .75



Cat.





1463

TYPE 1463 — Single pole, 2 position, non-shorting contacts, spring return index.

CAT. NO. 1463 - - - List \$ .75

TYPE 1464—Double pole, 2 position, non-shorting, spring return index. Use as SPST SPDT, or DPST.

CAT. NO. 1464 - - - List \$1.00

TYPE 1465 — Single pole, 4 position, shorting, positive index, with SPST AC line switch attached. Selector switch has 3 active positions and "off".

CAT. NO. 1465 - - - List \$1.25







1473 1483

TYPE 1473 — Double pole, 3 position, shorting, positive index.
CAT. NO. 1473 — - List \$1.00
TYPE 1483 — Single pole, 3 position, shorting, positive index.
CAT. NO. 1483 — - List \$.75
TYPES 1470 and 1471 — Momentary open or closed push switches. Rating 1 amp. at 110 v.a.c. CAT. NO. 1470
— Momentary open — List \$ .40.
CAT. NO. 1471 — Momentary closed
— List \$ .40.

Centralab offers the widest variety of ceramic capacitors on the market today for all ranges of voltage and frequency—for any application in circuitry.

# Centralab

### Division of GLOBE-UNION INC.

934 East Keefe Avenue Milwaukee 1, Wisconsin

Centralab introduced ceramic capacitors and has constantly devoted more research and larger laboratory and production facilities to this field, than can be said of any other firm. Ceramics are known as the most permanent type of capacitors.

BC HI-KAP TUBULARS



For bypass, coupling and general use. Tolerance ± 20% through 2200 mmf.; higher cap. Guaranteed Minimum Values (GMV). 85° C. plus operation. Tropicalized. 1000 volts d.c. test; 600 volts d.c. work-

	est; 600 v	olts d	c. work
ing. Minin	num orde	r qua	
Cat.	Cap.	Size	List
No.	MMF.		Price
D6-100	10	Α	\$.25
D6-120	12	Α	.25
D6-150	15	Ā	.25
D6-180	18 22 25 27 33 39 47 50	A A A A A	.25
D6-220	22	Ą	.25
D6-250	25	Α	.25
D6-270	27	Ą	.25
D6-330	33	Ą	.25
D6-390	39	A	.25
D6-470	47	A	.25
D6-500	50	Α	.25
D6-560	56	A	.25
D6-680	68	Ą	.25
D6-750	75	A	.25
D6-101	100	A	.25
D6-121	120	Ā	.25
D6-151	150	A	.25
D6-181	180	A A A	.25
D6-201	200	Α	.25
D6-221	220	A	.25
D6-251	250	Α	.25
D6-271	270	Α	.25
D6-301	220 250 270 300	Α	.25
D6-331	330	A	.25
D6-391	390	Α	.25
D6-401	400	$\mathbf{B}$	.25
D6-471	470	В	.25
D6-501	500	В	.25
D6-561	560	В	\$.25 .25 .25 .25 .25 .25 .25 .25 .25 .25
D6-601	600	В	.25
D6-681	680	В	.25
D6-751	750	В	.25

D6-102

D6-122 D6-152 D6-182 D6-202

D6-222

D6-252 D6-252 D6-272 D6-302 D6-332 D6-402 D6-472

D6-502

D6-682

06-103	10,000	D	.25
	Body Dimer	nsions	
Size	Diam.		Length
Α	.230"		.475"
В	.230"		.750"
C	.255"		.885"
Ď	.310"		1.180"
	DISC HI-F	(APS	

1,200 1,500 1,800 2,000

2,200 2,500 2,700

3,000 3,300 4,000 4,700

5,000

5,600

BBBBBBBBBCCCCD

Fit narrow spaces. Tolerances GMV except Cat. No. DD-2-502 is -20% + 80%. 1000 d.c. test; 600 volts d.c. working. Min. order quantity, 5. Cap. Diam. Thick. List

No.	MFD.	"	"	Price
TYP	E DD-S	INGLE	DISCS	
DD-471	.00047	1/4	.156	\$.25
DD-801	.0008	1/4	.156	.25
DD-102	.001	3/8	.156	.25
DD-152	.0015	3/8	.156	.25
DD-202	.002	76	.156	.25
DD-502	.005	38	.156	.25
DD-103	.01	5/8	.156	.25
TYPE	DD-2-	- DUA	L DISC	5
DD-2-102	2x.00	1 3/8	.156	.40
DD-2-152	2x.00	15 %	.156	.40
DD-2-502	2x.00	5 5/8	.156	.45

1		, I		•		
TYPE	DD-3*	-SHIEL	DED	DUAL	DISCS	
DD-3-	102	2x.001	3/8	.225		
DD-3-	152	2x.0015	3/8	.225		
DD-3-	202	2x.002	30	.225	.45	
DD-3-	-502	2x.005	10	.225	.50	
DD-3-	103	2x.01	5/8	.225	.50	

TYPE DF FLAT-PLATE HI-KAPS\* 

\*Packaged singly. TC TEMPERATURE COMPENSATING TUBULARS



TCZ units are negative-positive-zero (NPO) type. TCN units are temperature compensating, N750 type, giving a negative change of 750 parts per million per degree C. Packaged singly, including instructions. 1200 volts d.c. test; 600 volts d.c. working.

Cap. Tol. Size List MMF. MMF. Price Cat. No. TCZ NEGATIVE-POSITIVE-ZERO (NPO)

TCZ-.5 TCZ-.68

.5 ± .25 A .68 ± .25 A

TCZ-1 TCZ-1.5 TCZ-2.2 TCZ-3.3 TCZ-4.7 TCZ-6.8 TCZ-10 TCZ-12 TCZ-15 TCZ-18 TCZ-20	1. 1.5 2.2 3.3 4.7 6.8 10. 12. 15. 18. 20.	士士士士士士士士士士士士士士士士士士士士士士士士士士士士士士士士士士士士士	A A A A A A A A A	.75 .75 .75 .60 .60 .60 .60
TCZ-22 TCZ-24 TCZ-27 TCZ-30 TCZ-33 TCZ-36 TCZ-47 TCZ-51 TCZ-56 TCZ-68 TCZ-68 TCZ-75 TCZ-100 TCZ-110 TCZ-110 TCZ-120 TCZ-120 TCZ-120 TCZ-150 TCZ-120 TCZ-160	22. 24. 27. 30. 33. 36. 43. 47. 56. 68. 75. 82. 110. 1120. 130. 150. 160. 180. 220. 240.	Tol. 2½½½½½½½½½½½½½½½½½½½½½½½½½½½½½½½½½½½½	AABBBBBBBBBCCCCCCCCCDDDDDEEEE	.50 .50 .50 .50 .50 .50 .50 .50 .50 .50

TCZ-270 270. TCZ-300 300. ±5 ±5 E TCN NEG. TEMP. UNITS (N750)
Tol. MMF.

TCN-10 TCN-12 TCN-15	10. 12. 15.	±.5 ±.5 ±.5	A A A	\$.60 .60
TCN-18 TCN-20	18. 20.	±.5 ±.5 Tol. %	A A	.60
TCN-22 TCN-24 TCN-27 TCN-30 TCN-33 TCN-36 TCN-39 TCN-43 TCN-47 TCN-51 TCN-51 TCN-62	22. 24. 27. 30. 33. 36. 39. 43. 47. 51. 56. 62. 68.	±2½ ±2½ ±2½ ±2½ ±2½ ±2½ ±2½ ±2½	A A A A A A A A A A B	.50 .50 .50 .50 .50 .50 .50 .50 .50

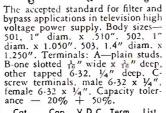
TCN-75	75.	$\pm 2\frac{1}{2}$	В	.50
TCN-82	82.	$\pm 2\frac{1}{2}$	В	.50
TCN-91	91.	$\pm 2\frac{1}{2}$	В	.50
TCN-100	100.	$\pm 2\frac{1}{2}$	В	.50
TCN-110	110.	± 5	В	.50
TCN-120	120.	+ 5	В	.50
TCN-130	130.	± 5	В	.50
TCN-150	150.	±5	В	.50
TCN-160	160.	± 5	В	.50
TCN-180	180.	± 5	Č	.50
TCN-200	200.	±5 ±5	Č	.50
TCN-220	220.	土 5	Č	.50
TCN-240	240.	土5 土5	Č	.50
TCN-270	270.	± 5	Č	.50
TCN-300	300.	± 5	Č	.50
TCN-330	330.	± 5	C	.50
TCN-360	360.	土 5 土 5	D	.50
TCN-390	390.	± 5	D	.50
TCN-430	430.	<u>+ 5</u>	D	.50
TCN-470	470.	± 5	Ď	.50
TCN-510	510.	± 5	Ď	.50
TCN-560	560.	王 5	Ē	.50
TCN-620	620.	± 5	Ē	.50
TCN-680	680.	王 5	Ē	.50
TCN-750	750.	.±5.	E	.50

	Body Dimensi	ons
Size	Diam.	Length
A	.200"	.400"
В	.200"	.690"
Ċ	.225"	.860"
Ď	.285"	1.165"
E	.285"	1.625"

TV HI-VO-KAPS







Cat.	Cap.	V.D.C. 1	Term,	List
No.	MMF.	Working		Price
TV1-501	500	10,000	Α	\$1.75
TV2-501	500	10,000	В	1.75
TV3-501	500	10,000	C	1.75
TV1-502	500	20,000	Α	2.25
TV2-502	500	20.000	В	2.25
TV3-502	500	20,000	C	2.25
TV1-503	500	30,000	Α	4.50
	T1/4	CERABATA	_	

6000 VOLT REPLACEMENT TUBULAR



Used in capacity deflection circuits in electrostatic TV sets, also in voltage divider circuits in electrodynamic TV sets. Molded casing assures adequate external insulation. Tolerance GMV, Body size 3/4"

diam. x 2<sup>3</sup>/<sub>4</sub>".
Cot. Cop. V.D.C.
No. MFD. Working
TV6-502 .005 6000

CERAMIC MIN-KAPS
Tiny flat-plate capacitors, size 14"
x 32" x 34". Tolerance — 20%
+ 80%. Space savers for low voltage applications. 5 per package.

Cat.	Cap.	V.D.C.	List
No.	MFD.	Working	Price
DM-20	.0002	150	\$ .35
DM-50	.0005	150	.35
DM-10	2 .001	150	.35
DM-20	,002	150	.45
DM-50	2 .005	150	.45
DM-10	.01	150	.65
FT	FEED-THRO	UGH HI-KA	APS

For single hole mounting where

capacity ground to chassis or shield is desired. 1000 volts d.c. test, 600 volts d.c. working. Packaged singly.
Cat. Cap. Tol. List
No. MMF. Price Price \$1.00 FT-500 500 ±20%

# CERAMIC CAPACITORS

FT-1000 1000 ±20% FT 1500 1500 -20% +50% 1. FT 1500 1500 -20% +50% 1. HIGH ACCURACY CAPACITORS



Precision ceramic ca-pacitors for applica-tions involving rigid frequency control. Ex-cellent as prime or secondary Standards.

secondary standards.

\$\frac{1}{3}\tilde{''}\ \ \text{diameter. Metal} \\
\text{case grounded, with} \\
\text{mtg. stud \$\frac{1}{3}\tilde{''}\ \ \text{long 6-32 thread.} \\
\text{Other terminal opposite end, plain} \\
\text{stud \$V\_4''\ \ \text{long.} \ \text{Tolerance} \pm 1\tilde{''}. \\
\text{Cot. Cop. V.D.C. I tist} \\
\text{No. MMF With } \\
\text{With } \\
\text{Vis.} \\
\text{Price} Cap. MMF. 500 Wkg. 500 500 No. 950-501 Price \$40.00 500 8" \$40.00 500 18" 40.00 500 18" 40.00 1000 950-102 950-202 2000

### TRANSMITTING CAPACITORS



Type 851 ceramic capacitors are high voltage units, held to ±10% tolerance. Size 1½" diam. x 1½". End terminal plates are center tapped 10.32.

Cot. Cop. V.C.D. Temp. List No. MMF. Wkg. COFF. Price 851-25Z 25 15,000 NPO 10.00 851-100N 100 15,000 NPO 10.00 851-200N 200 7,500 N750 10.00 851-200N 200 7,500 N750 10.00 Type 850S high voltage ceramic capacitors are

Type 850S high voltage ceramic capacitors are ± 10% tolerance, in cases with centered hex studs, one each end, projecting ½", tapped 6-32, ½4" deep.

Cot. Cop. V.C.D. Temp.
No. MMF. Wkg. COEF.
850S-25Z 25 7500 NPO
850S-50Z 50 7500 NPO
850S-50N 50 7500 N750
850S-10N 100 5000 N750
SMALL HIGH VOLTAGE UN List 3.00 3.00

SMALL HIGH VOLTAGE UNITS

SMALL HIGH VOLTAGE UNITS
The three series which follow are exceedingly compact ceramic capacitors, similar in appearance to type 850S above. Mounting is with axial screw type terminals, tapped 2-56. Tolerance ± 10%. Sizes: 853, 16" diam. x ½". 854, 16" diam. x ½". 854, 16" diam. x 16" 855, 4" diam. x 3/8".

Cat. Cap. V.C.D. Temp. List No. MMF. Wkg. COEF. Price 853A-10Z 10 5000 NPO \$3.00 853A-20Z 20 5000 NPO 3.00 853A-20Z 20 5000 NPO 3.00 853A-40N 40 5000 N750 3.00 854A-5Z 5 5000 NPO 3.00 854A-20N 20 5000 NPO 3.00 855A-5Z 5 5000 NPO 3.00 855A-5Z 5 5000 NPO 3.00 855A-10N 10 5000 N750 3.00 R55A-10N 10 5000 N750 3.00 NPO 3.00 855A-10N 10 5000 N750 3.00 NPO 3.00 855A-10N 10 5000 N750 3.00 Types 853 854 and 855 also available with axial leads 114" leads 855A-10N 10 5000 18750 5.00 Types 853, 854 and 855 also available with axial leads, 1½" long, in place of screw terminals. For lead types, use same cat, nos., omitting "A". Same list prices. ting

CERAMIC TRIMMERS



Type 820, at left 33" x 1/8". Cat. Cap. Range List No. MMF. Price 820-A 2.6-6. \$ .75 820-B 5.-20. .75 820-C 7.-35. .75 Type 822, at right, 37" x 1½". Nos. ending in Z. zero temp. cocf. (NPO); ending in N. neg. temp. cocf. . Range MMF. List 2.-7.5 \$1.50 2.5-13. 1.50 No. MMF. Price

Range MMF. 2. - 7.5 2.5-13. 4.5-25. Cat. No. 822-CZ 822-BZ 822-AZ 822-CN 822-BN 4.5-23. 1.50 7. -45. 1.50 7. -50. 1.50 Type 823, left, 11/4" x 18". Neg. temp. coef. 822-AN



Cat. Range List No. MMF. Price 823-EN 8. - 25. \$2.50 823-DN 8. - 50. 2.50 823-BN 10.-100. 2.50 2.50 2.50 10,-100. 20,-125.

### ELECTRONIC CIRCUITS

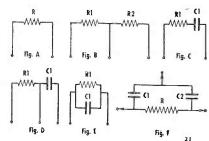
For the first time, Centralab's famous Printed Electronic Circuits (P.E.C.) are now made available as stock items. P.E.C. units, in simplest form for application as components, consist of resistance materials and pure metallic silver fired to sturdy Ceramic-X plates, including integral "printed" circuit connections, brought out to convenient external leads which are mechanically anchored to the plate. The complete unit is protected with a moisture-proof phenolic coating. The result is a combination of resistors and capacitors of ultra compactness and permanence. No other modern development in electronic circuitry offers so many advantages in low powered applications as regards small size, low cost assembly and utmost reliability.



### RESISTOR AND RESIS.-CAP. UNITS

Plate size,  $\frac{1}{3}\frac{7}{2}$ " x  $\frac{7}{3}$ " x  $\frac{7}{6}$ 4" thick, max. Capacitors, 150 v.d.c.w. Resistors,  $\frac{1}{2}$ 6 watt.

No. Dwg.	Consists of	List Price
PC-21 B PC-30 C PC-33 D	2 meg. Resis. ½ meg.; 110,000 ohms R-240,000 ohms. C-1000 mmf. R-1 meg. C-1000 mmf. R-100,000 ohms. C-100 mmf.	\$ .35 .50 .50 .50



### FILPEC BALANCED DIODE LOAD FILTER

Plate size,  $\frac{17}{32}$ " x  $\frac{3}{32}$ " x  $\frac{7}{64}$ " thick max. Capacitors, 100 v.d.c w. Resistors, 14 weeks

		wat	τ.
Cat. No. I			List Price
PC-50	F	C1 = 100  mmf. $C2 = 100  mmf$ .	\$ .60
PC-51	F	R=47,000 ohms C1=150 mmf. C2=150 mmf, R=47,000 ohms	.60

### TELEVISION H-PADS FOR ATTENUATION OF SIGNAL STRENGTH

These handy Centralab P.E.C. units are specially designed for use in television antenna installations where signal strength needs attenuation to secure optimum performance. The proper H-Pad, in many installations, will match the signal strength to the requirements of the receiver. This can prevent overloading, can eliminate tearing of the image, and improve both audio and video results. They are especially valuable where the television set is located too close to the broadcast station. In connection with a switching arrangement, they are helpful to balance signals from stations which, because of high power or location, are too strong in relation to other stations. H-pads also are useful in matching impedance between the antenna and the receiver. These handy Centralab P.E.C. ...

The H-Pad has four terminals, and is for installation in series with the standard 300 ohm antenna. Full directions are included.

SIZE —  $1\frac{1}{4}$ " x  $\frac{13}{18}$ " x  $\frac{3}{18}$ " thick.

TERMINALS — Solder terminals, 32" long.

PACKAGED — Singly in envelopes. In sets of four, in a plastic box.

Cat. No. Typ PCH-10 H-P PCH-20 H-P PCH-30 H-P PCH-40 H-P PCH-100 SET Of one each of the	ad 10 db. ad 20 db. ad 30 db.	List Price \$ .80 .80 .80
box	above, in plastic	3.00

# Centralab

### Division of GLOBE-UNION INC.

934 East Keefe Avenue Milwaukee I, Wisconsin

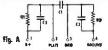
TRIODE COUPLATES P.E.C. INTERSTAGE COUPLING PLATES MIDGET NO. 2 COUPLATE



Plate size, 18" x 18" x 15" thick max. Capacitors, 450 v.d.c.w. Resistors, 16 watts.

Cat. No. PC-70 MIDGET #2 COUPLATE Consisting of (See Fig. A) List Price C1=.005 mfd, C2 and C3=250 mmf. R1=500,000 ohms. R2=500,000 ohms.

Cat. No. PC-71 MIDGET #2 COUPLATE C1=.005 mfd. C2 and C3=250 mmf. R1=250,000 ohms. R2=500,000 ohms.

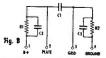


### STANDARD TRIODE COUPLATE

Plate size,  $1\frac{3}{32}$ " x  $\frac{13}{10}$ " x  $\frac{7}{64}$ " thick, max. Capacitors, 450 v.d.c.w. Resistors,  $\frac{1}{10}$  watt.

Cat. No. PC-80 STANDARD COUPLATE Consisting of (See Fig. B) C1=.01 mfd. C2 and C3=250 mmf. R1=500,000 ohms. R2=500,000 ohms. List Price \$ .75

Cat. No. PC-81 STANDARD COUPLATE C1=.01 mfd. C2 and C3=250 mmf. R1=250,000 ohms. R2=500,000 ohms.



### PENTODE COUPLATES

Cat. No. PC-90 PENTODE COUPLATE Plate size, 111" x 1/8" x .045" thick max. Capacitors, 450 v.d.c.w. Resistors, 1/6 watt

Consisting of (See Fig. C) List Price C1=.005 mfd. C2=50 mmf. C3=2000 mmf. R1=4.7 megohms. R2=1 megohm. R3=2.2 megohms. \$ .90

Cat. No. PC-91 PENTODE COUPLATE

C1=.005 mfd. C2=100 mmf. C3=.005 mfd. R1=4.7 megohms. R2=1 megohm. R3=2.2 megohms. .90 1



### Fig. C 18 81 ...

Cat. No.

PC-200

PC-201

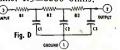
Due to great saving in assembly costs, this Centralab printed circuit is being used widely

Centralab Printed Electronic Circuits — no other electronic development offers such tremendous time, material and cost saving advantages in low-power applications.

in television vertical integrator networks. Two forms are available. Either one has only three external leads. Size, PC-100 13½" x 18" x 18" x 1½" x thick max. PC-101, 1½" x 1½" x 1½" x 1½" thick max. Capacitors, 450 v.d.c.w. Resistor, ½ watt.

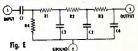
Cat. No. PC-100 VERTICAL INTEGRATOR

Consisting of (See Fig. D)
C1=.002 mfd, C2=.005 mfd,
C3=.005 mfd, R1=22000 ohms,
R2=8200 ohms, R3=8200 ohms, \$1.10

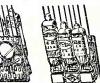


### Cat. No. PC-101 VERTICAL INTEGRATOR

Consisting of (See Fig. E) C1=.01 mfd. C2=.002 mfd. C3=.005 mfd. C4=.005 mfd. R1=22000 ohms. R2=8200 ohms. R3=8200 ohms. R4=22000 ohms. List Price



### AMPEC COMPLETE SPEECH AMPLIFIER

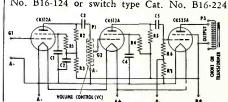


CRL List Price

\$3.40

4.25

There's never been an electronic device like Centralab's Ampec. In the compact unit — permanently bonded to a master plate—are all the components of an audio amplifier—tube sockets, capacitors, resistors, wiring—a three tube, three stage speech amplifier, similar Centralab units are widely used in hearing aids, for the most trouble-free performance ever attained. Ampec has other interesting applications, as mike preamplifier, etc.
Size, 1¼" x 1½" x .340" over tube sockets. Capacitors, 100 v.d.c.w. Resistors, ½ watt. Recommended tube complement, T-1 and T-2 (see dwg.) Raytheon type CK512AX; T-3, Raytheon type CK525AX. Gain frequency performance—A voltage 1.2; input voltage, 1 millivolt; B voltage 22. 50,000 ohm load. At 1000 cycles per second, the amplification factor is 4000. Volume control (VC in dwg.) not furnished. The ideal control is Centralab Cat. No. B16-124 or switch type Cat. No. B16-224.

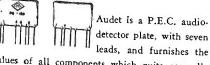


Consisting of List Price AMPEC Complete Three Stage Speech Amplifier, including \$15.00 three built-in sockets, less tubes. Same as PC-200, but furnished complete with tubes, two CK512AX and one CK525AX. AMPEC 26,00

TUBES - Listed separately as a matter of convenience. Cat. No.

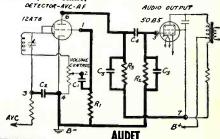
CK512AX Raytheon Subminiature Voltage Amplifier Pentode Tube CK525AX Raytheon Subminiature Output Pentode Tube

AUDET OUTPUT STAGE FOR AC-DC RADIO RECEIVERS



values of all components which quite generally comprise the output stage of AC-DC radio receivers. Where there is trouble with old style components in this part of the set, it is easy to replace the entire audio-detector stage with Audet. Plate size, 1 8" x 7/8" x 1/8" thick max. Capacitors, 450 v.d.c.w. Resistors, 1/2 watt.

Constisting of (See drawing)
C1=.002 mfd, C2= 220 mmf.
C3 and C5=220 mmf, C4=.005 mfd. List Price \$1.00 R1=6.8 megohms. R2=470,000 ohms. R3=470,000 ohms. *cetector-avc-af* 





reasons why

gineers everywhere select RESTO above all others equipment has won the acclaim of engineers and broadcasters across the country. Each of these precision instruments has been designed to fill a specific need. Each of them is an outstanding example of the careful and painstaking skill that goes into the creation of PRESTO equipment. For further specifications and information concerning these instruments, as well as the wide variety of others offered by PRESTO to meet your specialized requirements, contact your nearest PRESTO representative or write direct.





Rack-mounted recorder with  $10\frac{1}{2}$ " reel capacity. Has solenoid actuated brakes on a three-motor drive system. Torque motors make tension clutches unnecessary. Fast forward and rewind speeds. Three heads for erase, record, reproduce.

### PRESTO PORTABLE RC-10/14

The ideal super-quality portable unit. Basically the same as the model RC-10/24. Rotary deck type selector control. Speeds of 7½"/sec, and 15"/sec. giving wide frequency response.

### PRESTO PORTABLE PT-920

PRESTO'S new addition to the tape family. Succeeds the popular PT-900—and costs less. Exceedingly compact with 10 watt amplifier, 2 speakers and amplifier in one case. Fast forward and rewind speeds, 3 motors, no friction clutch or tension adjustments.



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 7½"/sec. and 15"/sec. Plugs into standard studio speech input equipment; no preamplifier required.



PRESTO STUDIO CONSOLE 8 D-G

Designed to cut the finest instantaneous and master recordings. Has radial cantilevered overhead requiring no turntable contact. 1-D cutting head. Direct gear drive and twin motors. Selection of 8 different feed pitches in each direction, including 250 lpi microgroove.

### PRESTO PORTABLE 6-N

World favorite! Unusual reliability under all recording conditions. Low mechanical noise level. Speed accuracy excellent at 78 and 33½ rpm. Equipped with 1-D cutting head. Microgroove attachment available at extra cost.

### **RECORDING AMPLIFIERS**

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.

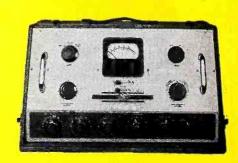
### PRESTO PORTABLE 90-B

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 33½ rpm, phono, NAB playback and automatic .3 microphone input with mixer and master gain control.













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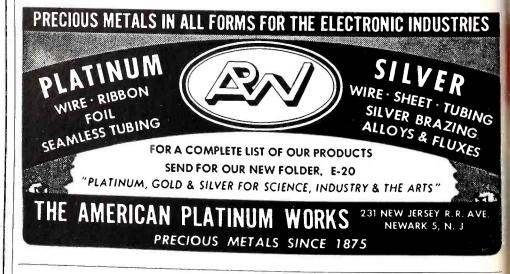
Because of their high Q, great inductance stability, and extremely low pick-up from external fields toroidal coils are highly desirable for such applications as wave filters, equalizers, and similar circuits. We supply these networks built to meet your circuit specifications or we will design and build such networks to meet your performance specifications.

Important! Send us your specific requirements.

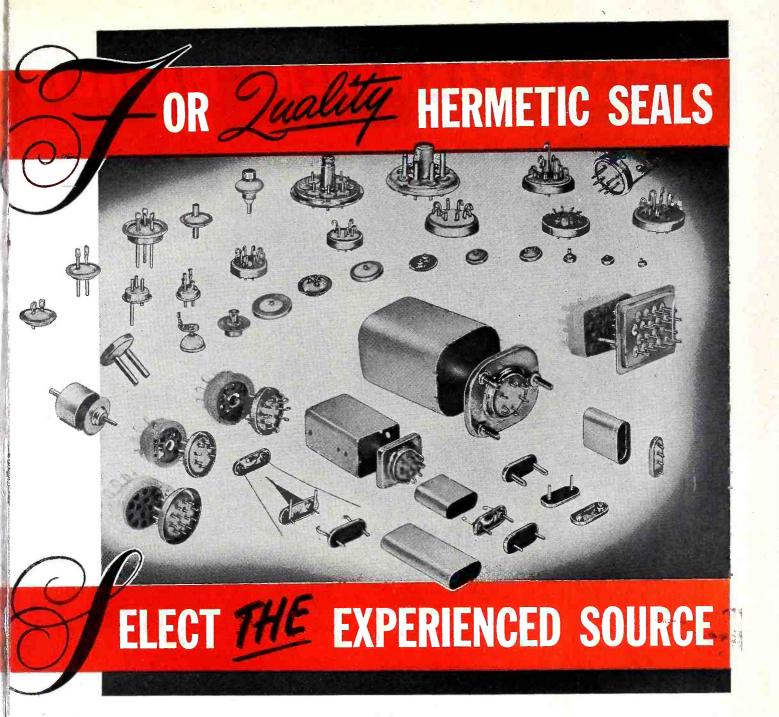
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### RESISTORS

The extensive range of Ohmite types and sizes makes possible an almost endless variety of standard resistors to meet your needs. The Ohmite line includes more than 60 core sizes, in a wide range of wattage and resistance values. There are also 18 types of resistor terminals available. Included in the standard Ohmite line are fixed, adjustable, tapped, non-inductive, and precision resistors. Specially developed vitreous enamel provides years of unfailing performance. Resistors meeting Joint Army-Navy Specification JAN-R-26A are also available.

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Ohmite tap switches are supplied in five standard models, rated at 10, 15, 25, 50, and 100 amperes, a.c. They combine high current capacity and a large number of taps with unusual compactness. Their sturdy, one-piece ceramic bodies provide permanent non-arcing insulation. Their heavy silver-to-silver contacts have a self-cleaning action and provide continuous, dependable contact with low resistance. Ohmite tap switches are supplied in enclosed or open, shorting or non-shorting types.

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Ohmite offers an extensive line of standard precision, non-inductive resistors in  $\frac{1}{2}$ - and 1-watt sizes, in the standard type, vitreous-enameled type, or hermetically sealed in glass. They have an accuracy of  $\pm 1\%$ . Ohmite non-inductive vitreous-enameled resistors are also available in standard 50-, 100-, and 160-watt sizes in a wide range of resistance values. In addition, Ohmite provides radio-frequency plate chokes, power line chokes, and dummy antennas.

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CONNECTORS	DESCRIPTION	Types Available	CONNECTORS	DESCRIPTION	Types Available
SERIES A	LIGHTWEIGHT AIRCRAFT RECTANGULAR Polarized. Rack, Panel or Cable Mounted—with Hood or Clamp and Cable Strain Relief.	Receptacle Plug A7S A7P A10S A10P A15S A15P A18S A18P (Figures in above Code Nos. indicate number of contacts.)	SERIES R	WATER TIGHT AND PRESSURE-TIGHT Center Lock Screw with Balo facilitates engage- ment and disengagement and prevents accidental disconnection. Cable Entry with Strain Relief can be oriented in any desired position.	Receptacle Plug R4S R4P R9S R9P R14S R14P MR30S-PR MR30P-PR (Figures in above Code Nos. indicate number of contacts.)
SERIES SA	LIGHTWEIGHT AIRCRAFT RECTANGULAR—SMALL Polarized. Rack, Panel or Cable Mounted—with Hood or Clamp and Cable Strain Relief.	Receptacle Plug SA7S SA7P SA10S SA10P SA15S SA18P SA18S SA18P (Figures in above Code Nos. indicate number of contacts.)	SERIES 200-900 Mounted in A-N Shells	HIGH VOLTAGE HEAVY DUTY PRESSURE-TIGHT Center (H.V.) contacts separated by deep molded barriers and removable in the field for soldering wire leads. Other contacts for lower voltages. Neoprene Ring Scaled Contacts and Inserts for Pressure Tight Sealing in A-N Shells.	Receptacle Plug 202 201 202B 201B 202B-PR * 201B-PR 302 * 301 422 * 421 451 * 450 456 455 456-PR * 455-PR 902 * 901 *Pressure Tight Scaled in A-N Shells
ERIES M	MINIATURE  For Aircraft, Instruments and Portable Equipment  Light Weight, Polarized, Locking Ring, Panel or Cable Mounted with Hood and Cable Strain Relief.	Receptacle Plug SM2S SM2P M4S M4P M5S M5P PM6S PM6P M7S M7P M9S M9P M12S M12P (Figures in above Code Nos. indicate number of contacts.)	SERIES HM	HERMETIC PLUG (Round Hole)  Each special contact fused in glass into special baso plate provided for soldering into a round hole in an hermetically sealed housing or bulkhead, Used with Standard "M" Receptacle.	Plug (Used with HM5P Standard HM7P M5S or M7S Recep'ts)
SERIES MRE	MINIATURE RECTANGULAR  For Aircraft, Instruments and Portable Equipment Light Weight, Polarized, Self-Aligning with special Guide Pins, Rack, Pancl, or Cable Mounted with Hood and Cable Strain Relief.	Receptacle Plug MRE75 MRE87 MRE85 MRE8P MRE95 MRE9P MRE12-25 MRE12-2P MRE145 MRE14P MRE185 MRE209 MRE205 MRE20P MRE215 MRE21P MRE215 MRE34P MRE415 MRE34P MRE415 MRE41P MRE505 MRE50P MRE755 MRE75P	SERIES	HERMETIC PLUG (Rectangular Hole) Each special contact fused in glass into special baso plate provided for soldering into a rectangular hole in an hermetically sealed housing or bulkhead. Used with Standard MRE Receptacle.	Plug (Used with HMRE7P Standard HMRE9P MRE HMRE14P Recep'ts) HMRE20P HMRE21P HMRE34P HMRE34P HMRE34P HMRE34P HMRE30P
SERIES SMRE	MINIATURE RECTANGULAR—SMALL 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 SMRE78 8MRE7P SMRE14S SMRE14F SMRE20S SMRE20P SMRE265 SMRE26P SMRE29S SMRE29S SMRE29S SMRE29T (Other sizes to meet your requirements)	SERIES CR	MINIATURE  PRESSURE-TIGHT  This connector is typical of several recent designs requiring a miniature connector (1" dia. x 1%" [gth.) in an aluminum die cast shell. It is sealed with neoprene gaskets around the inserts and around each contact for pressure-tight construction.	Receptacle Plug (Panel) (Cable) CR5-2P-R CR5-2S-R (5 contacts #20 AWG) (2 #18 AWG)

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Spring Loaded Contacts ease in separation. Self-Aligning with Special Guide Pins. Rack, Panel or Cable Mounted with Hood and Cable Strain Relief.

Plug Receptacle QRE6S QRE12S QRE18S QRE24S QRE34S QRE34S QRE208S QRE6P QRE12P QRE18P QRE24P QRE34P QRE308P

(Figures in above Code Nos. indicate number of contacts.)

Threaded Inser Turret Top >> hreaded Stud Stand Off

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T	e	ľ	m		m	a	
_		_		_		1,110	

← Bifurcated Top ← Feed
Through

nais	Bifurcated	Turret	Threaded
Threaded	750 756 773	760 780	860 863
Insert _	753 770 776	763 783	861
Threaded	754 775	764 784	798
Stud	755	765 785	850
Rivet	751	761 767	
End	752	762	
Threaded Stud Miniature		MTS7 MTS12	
Feed Through		FT9 FT5	

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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. 81/2" 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 re-lay panels swing out for maintenance.



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Full studio flexibility any-where. Control can view, preview, fade, dissolve, etc. Views any of 5 inputs, 2 remotes, outgoing line. Twin fade levers.



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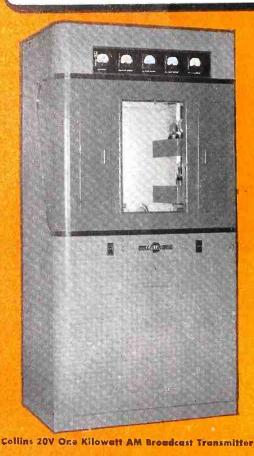
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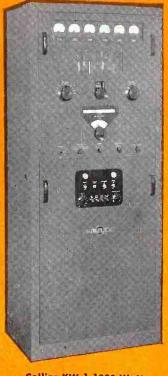
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Collins KW-1 1000 Watt **Amateur Transmitter** 





**Collins 32V-3 Amateur Transmitter** 

### **BROADCAST TRANSMITTERS**

### AM

300J	•	,¥	*		*	$\overline{\mathcal{R}}$				250/100	watts
20V	٠		•	٠	•	•	36	•	*	1000/500	
21E	*		٠	6	•	•	•	•		5000/1000	
21M	•	×		٠	•	×	<b></b>	•	•	10,000/5000	watts

### FM

watts	250						*	٠	ń			731A .
watts	1000			:8								732A .
watts	3000											733A .
watts	5000	•	•	y <b>0</b> )	•	ė			•		*	737A.
watte	10.000						*	•		٠		734A.

### SPEECH EQUIPMENT AND ACCESSORIES

Collins has everything for AM and FM broadcasting, and is often called on to equip complete stations. The Collins Broadcast Speech Equipment and Accessories book is a standard cast speech Equipment and Accessories book is a standard reference work of 65 pages, which should be kept in the files of all engineers in the broadcast field. It pictures and describes a wide variety of high quality speech input consoles, remote equipment, rack mounted audio units, test and control apparatus content designed agricultural transfer and control apparatus content designed agricultural transfer and control apparatus content agreement transfer and content agreement and content agreement and content agreement and content agreement agreement and content agreement agreement and content agreement agre ratus, custom designed equipment, transducers, power supplies, meter and jack panels, terminal boards, cabinets — everything which conceivably could be needed in building a new station or modernizing an old one. If you haven't a copy of this book, your nearest Collins office will be glad to supply it.

### AMATEUR EQUIPMENT

75A-2 double conversion superheterodyne receiver — most advanced design throughout; covers 160, 80, 40, 20, 15, 11 and 10 meter bands; permeability tuned; crystal controlled h-f oscillator; dial calibrated directly in frequency; extremely high selectivity constitutes and tuning accuracy; high signal selectivity, sensitivity, stability, and tuning accuracy; high signal to noise ratio; 50 db image rejection on all bands; automatic noise limiter; amplified, delayed AVC with quick recovery; miniature tubes; price, less speaker \$420.00 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; exciter single control low pass filter for bandwidth limitation; exciter, single control tuning; single bandswitch for entire transmitter; tuning dial similar to 75A-2; output 50 ohms (2.5 to 1 standing wave ratio); PA tubes conservatively rated at one kilowatt.

32V-3 transmitter — 150 watts input CW, 120 watts phone; Collins 70E-8A VFO controlled, bandswitching, gang tuned; designed for maximum reduction of TVI by means of added transport in the uncertainty of the production of the production of the uncertainty of th 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

# AIRBORNE COMMUNICATION AND NAVIGATION EQUIPMENT

8S-4 Twenty channel remote controlled aircraft transmittereceiver. Frequency range 2.0—18.5 mc. 100 watts output om power amplifier, A1 and A3 emission.

1R-3 VHF receiver which, with instruments shown at right, huips an airplane for navigational use of the omnidirectional unge.

7J-2 VHF navigation antenna for use with the 51R-3 naviation receiver. Drag, 2.63 pounds at 250 m.p.h.

7L VHF aircraft communication transmitter. Frequency ange 118-136 mc. 180 crystal controlled channels. Power atput, 5 to 8 watts into 52 ohms.

7R-1 VHF communication antenna, made expressly for use 7ith the Collins 51R-17L two-way communications system.

1V-1 UHF Glide slope receiver for aircraft. 329 to 335 ac. Twenty channels.

7P Glide slope antenna. Mounts on nose of aircraft, and rovides greatly improved pickup and receiver performance.

7M VHF aircraft communication transmitter. Frequency ange 118-136 mc. 360 crystal controlled channels. Power utput, 25 watts into 52 ohms. Full ATR size.

### REQUENCY SHIFT, RECEPTION, TRANSMISSION

The Collins 716A-2 frequency shift receiving terminal is ingineered for applications where extreme reliability is required in the reception and conversion of single channel or nultiplex printer transmissions. The Collins 706A-2 converter is designed to operate from the output of two Collins 51N-5 communication receivers arranged for diversity reception of frequency shift signals.

The Collins 709D-1 frequency shift keyer is a simple dependable unit for adapting existing communication transmiters to frequency shift operation.

# GROUND STATION COMMUNICATION EQUIPMENT

205E Transmitter. 50 kilowatts CW or FSK. Continuously tuned by servos over the entire range of 4-26 mc.

205D Transmitter. 15 kilowatts CW or FSK. Continuously uned by servos over the entire range of 4-26 mc.

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 tailored requirements.

16F-14 Autotune transmitter. Frequency range 2-20 mc. 300 watts phone. 500 watts CW.

30K-4 Transmitter. Two channels, each pretuned to any frequency between 2 and 30 mc. 300 watts CW. 250 watts phone.

32RA-9 Transmitter. Four channels, each pretuned to any frequency between 1.5 and 15 mc. 75 watts CW. 50 watts phone.

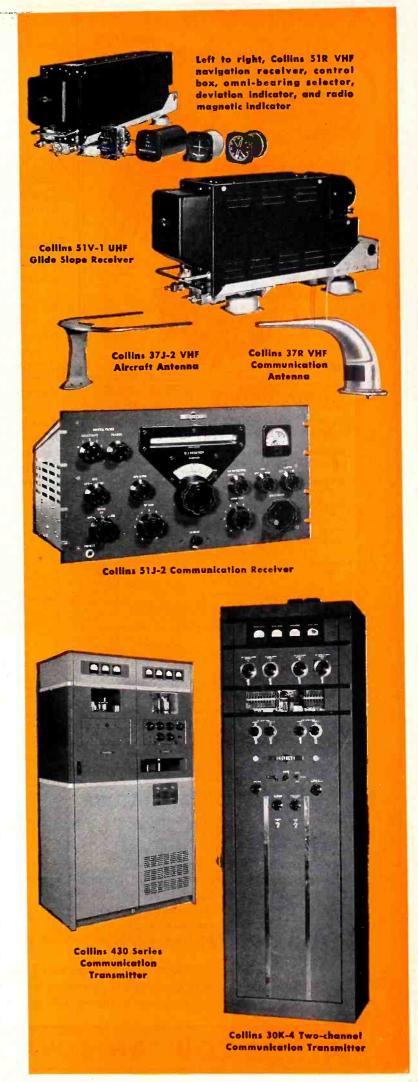
51J-3 Receiver, providing continuous coverage from 500 kc to 30 mc, with very high stability and tuning accuracy.

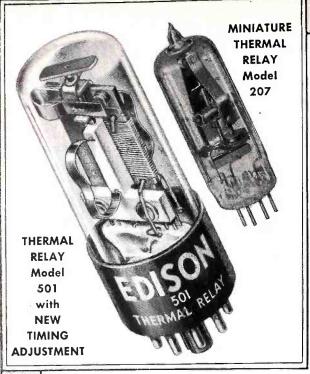
51M-6 VHF rack mounting receiver. Single channel, pretuned to any frequency between 118 and 136 mc.

51N-2 Receiver, single channel, for A1, A2, and A3 reception, pretuned to any frequency between 2 and 24 mc.

242F VHF Transmitter. Rack mounted, providing single frequency operation between 118.0 and 136.0 mcs. 50 watts power into 52 ohms.

51N-5 CW receiver. Single channel, pretuned to any frequency between 2 and 24 mc.



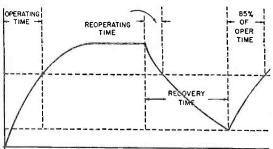


### TIMING VALUES

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. SATU-RATED 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: 21/4" 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 volt-

age and 25° C

Recovery Time  $\pm 20\%$  at nom voltage and 25°C Heater voltage  $\pm 10\%$ . Contact operation will be positive but some variation in timing will occur.

# 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

Diameter: 11/4" Weight: 11/2 to 21/4 ounces Seated Height: 31/4"

Heater Input: 5 watts nominal Contacts: SPST N/O

**Tolerances:** Reoperating time  $\pm 20\%$ Recovery time ±20%

Heater voltage ±10%. Contact operation will be positive but some variation in timing will occur. Ambient: At -60 or  $+85^{\circ}$  C timing may vary an

additional 10% over 25°C tolerances.

### STANDARD TYPES

TYPE I	NUMBERS ATER VOL	TAGES		ATING ME		RATING IE**	CONTACT RATING
117V.	26.5V.	6.3V.	Nom. Sec.	Tol. Sec. ±	Instant. Sec. ± 20%	Saturated Sec. ± 20%	XXX
B2050 B2101	B2051 B2011	B2052 B2021	2 5	0.5	3,5 5	45 50	3.0 AMP
B2102 B2103 B2104	B2012 B2013 B2014	B2022 B2023 B2024	10 20 30	3 5	2,5 6.5 4.5	50 95 45 30	150 v. D.C. or
82105 82131 82106	B2015 B2034 B2016	B2025 B2037 B2026	45 60 75	7 9 12	3.5 1.5	40 35 20	250 v. A.C.
B21 40 B2107	B2041 B2017	B2042 B2027	90	14	75 35	110 70	3,0
B2132 B2108	B2035 B2018	B2038 B2028	120 150	18 23 27	30 65	60 175	AMP 450 v. D.C. or
B2133 B2109 B2110	B2036 B2019 B2020	B2039 B2029 B2030	180 210 300	32 45	40 35 55	135 125 185	450 v. A.C.

\*\* At Nominal Voltage and 25° C.

xxx Contacts—silver, normally open. Tungsten available for 6 amp. rating.

Nominal T	YPE NUMBER Heater	R Voltage	OPER A TIM		OPERATING		
115.	27.5∨	6.3	Nom. Sec.	Tol. Sec.	Inst. Sec.	Sat. Sec.	
B-5200 B-5201 B-5202 B-5203 B-5204 B-5205 B-5206 B-5206 B-5208 B-5209	B-5210 B-5211 B-5212 B-5213 B-5214 B-5215 B-5216 B-5217 B-5218 B-5219	B-5220 B-5221 B-5222 B-5223 B-5224 B-5225 B-5226 B-5227 B-5228 B-5229	5 10 20 30 45 60 75 90 105 120	1 2 3 5 7 9 12 14 16 18	14 7 22 17 11 33 26 20 18 16,5	15.5 10 38 30 20 57 38 25 16	

### YOU CAN ALWAYS RELY ON EDISON

# EDISON

### Sealed **THERMOSTATS**

dison Sealed Thermostats are single-pole, single- throw (norally open or closed), temperature operated electric switches, ermetically sealed in an inert, arc-quenching gas.

### BASIC ADVANTAGES

SEALED ASSEMBLY — Operation not affected by any form of dust, moisre, grease, oil, dirt, corrosion — or time. Operate safely in explosive

CLOSE DIFFERENTIAL—Operation without snap action eliminates meanical inertia, resulting in practically zero temperature differential—in the cases less than 0.1°C.

RESPOND TO ALL TYPES OF HEAT - Radiant energy passes freely rough glass envelope, and conducted or convected heat is rapidly transitted to bimetal contact arm by the encased gas.

RUGGED AND DURABLE - Withstand shock up to 50G. Provide long pendable service without change of original control point in locomotive d car wheel bearings, embossing presses, heavy machinery. Many ve given current breaks every few seconds over years of operation 5. MINIMUM VIBRATION EFFECTS—Unaffectthout any apparent wear.

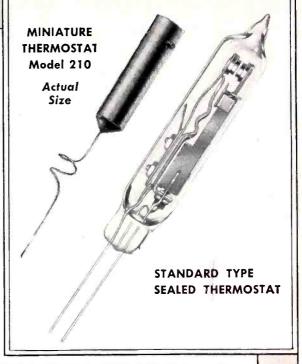
		STANDAR	D TYPES	
	S1-1A	S1-2A	D1-2A or 2B	D8-2A or 28
EATURES	Most sensitive and accurate Edison thermostat. For highest precision sets within ±0.5°C of specified control point and holds it within ±0.2°C of set temperature at ⅓a ampload when properly applied.	Lowest priced sealed Thermostat. Carries highest rating of Underwriters' Lab. for sensitivity and dependability when mounted for fire alarm service.	Primarily designed for low woltage, low current applications, continuous duty. Platinum contacts.	The General pur- pose Edison ther- mostat.
URPOSE	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 un- der 2 amperes.	General control use. Continuous operation for years without change in operat ing temperature.
TYPICAL APPLI- ATIONS	Radio crystal ovens, fine in- struments, air conditioning, rail- way car tempera- ture control.	Diesel engine bearings and ra- diators, motor windings, railway wheel bearings, converter ovens, etc.	Crystal ovens — temperature con- trol of electronic measuring equip- ment.	Radio transmit- ters, transform- ers, ovens, air ducts, etc.

### MINIATURE THERMOSTAT - Model 210

djustable • Dust and moisture-proof • Suitable for long conistent service • Bimetal and contact spring firmly secured in eramic bushing • Bimetal cannot be overstressed.

### **SPECIFICATIONS**

	6-125 volts, a.c. 1 amp at 115 volts a.c.; .5 amp at 115 volts d.c.	Case  Nickel plated brass Weight
		Diameter
	(Factory preset) ince ±5° F	Length
djustable	±60° F from c	original setting
	id or flexible—Length $2\frac{1}{2}$ " seconds (lag factor) in agite	ited water bath



ed by vibration up to .031" amplitude, at frequencies from 0 to 60 cps. Will operate satisfactorily in any position—either fixed or changing.

### Specifications—standard types

Specifications for Edison Sealed Thermostats, unmounted

Catalog No.*	\$1—1 A	\$1-9A	D1-2A D1-2B	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	±0.5° C	±2.5° C	±2.5° C	±2.5° C

'A" designates both leads from one end.

from each end.

\*\* When ordering please specify voltage.

† One ampere in alarm service. "B" designates one lead

### OTHER EDISON INSTRUMENT DIV. PRODUCTS

AIRCRAFT FIRE DETECTION TEMPERATURE MONITORS **ELECTRICAL RESISTANCE BULBS** SENSITIVE D.C. RELAYS AIRCRAFT TEMPERATURE INDICATORS & ENGINE GAGES



INSTRUMENT DIVISION

81 Lakeside Ave . West Orange, N. J.

FIELD OFFICES

Dayton, Ohio

Chicago, Illinois

Glendale, California

Ft. Worth, Texas

ontacts.....N/O or N/C Platinum-Iridium



# BOND WIRE RESISTORS!

Bond resistors are made to all standard tolerances and are wound in a wide range of alloys to meet requirements for varying resistance values.

QUALITY
COILS
BUILT TO

CUSTOMER SPECIFICATIONS

Bond coil facilities are available for making the following custom-built coils:

Toroidal-

Industrial-

Solenoid-

Bobbin-

Radio-

Television

Here are resistors with the minute perfection of the snowflake . . . including the smallest resistors ever made . . . yet they have the stamina to withstand the most severe conditions of temperature, voltage, humidity and corrosion.

Bond resistors are insurance for better products, of more dependable performance. Bonddesigned automatic machines eliminate the possibility of injury to wire during winding. Work stresses are removed and the tendency to shelf and operational drift minimized by a process of normalizing involving severe temperature cycling. A specially prepared double coating\* of baking varnish gives maximum resistance to moisture, oils, alkalies, acids. A third coating over the label gives added protection against abrasion, thermal shock, fungus and corrosion.

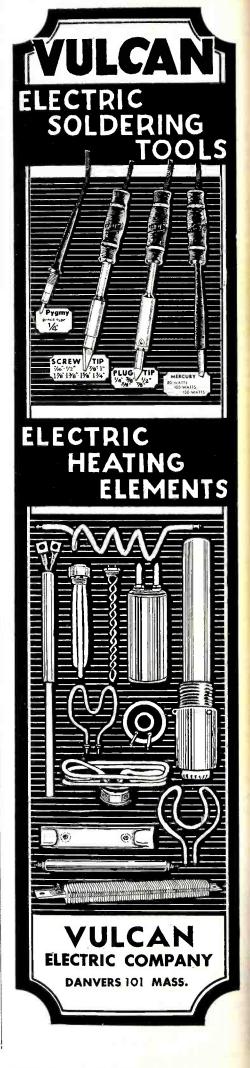
A product is only as good as its parts. Build added quality into your products by using Bond resistors. At little or no extra cost, you get the benefit of knowhow and manufacturing refinements available nowhere else. Send today for free catalog and engineering bulletin.

Bond |

ELECTRONICS CORPORATION

60 Springfield Avenue-Springfield, N. J.

\*All Bond Resistors are impregnated to meet Jan-R-93 specifications.





# \*ANSONIA\* R AILGERII



# RADIO HOOKUP WIRES AND CABLES...

Available in these Types ---> for your D.O. Work



### HOOKUP WIRES

Glass Br	aided o	r Nylon	Jacketed	Plain, Gl	ass Brai	ded or	Nylon J	acketed
WL	3/5	(1)	22	SRIR,	SRHV	3/5	(1)	22
WL	3/5	(7)	22	SRIR,	SRHV	3/5	(7)	22
WL	1	(1)	20	SRIR,	SRHV	1	(1)	20
WL	1	(7)	20	SRIR,	SRHV	1	(7)	20
WL	1 1/2	(1)	18	SRIR,	SRHV	1 1/2	(1)	18
WL	1 1/2	(7)	18	SRIR,	SRHV	1 1/2	(7)	18
WL	2 1/2	(1)	16	SRIR,	SRHV	2 1/2	(1)	16
WL	2 1/2	(7)	16	SRIR,	SRHV	2 1/2	(7)	16
WL	2 1/2	(19)	16	SRIR,	SRHV	2 1/2	(19)	16
WL	4	(1)	14	SRIR,	SRHV	4	(1)	1.4
WL	4	(19)	14	SRIR,	SRHV	4	(19)	14
WL	6	(19)	12	SRIR,	SRHV	6	(19)	12
WL	9	(37)	10	SRIR,	SRHV	9	(37)	10

### CUSTOM DESIGNED CABLES

for

Sonar • Telephone • Radar Control • Airborne

Available in these Types for commercial uses, subject to government restrictions.



### APPLIANCE WIRING MATERIAL

Sizes 24 thru 8 solid or stranded for service at 80°C, 90°C, and 105°C, both 1/64 and 1/32 wall thicknesses for 300 and 600V service respectively.

### CUSTOM DESIGNED CABLES

for

Television Camera Cables
Control Cables

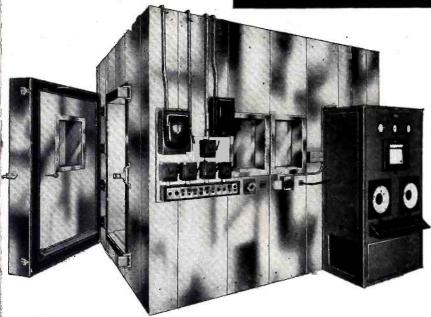
Interconnecting Cables
Carrier Frequency Cables

# THE ANSONIA ELECTRICAL COMPANY

SUMMIDIARY OF NOMA ELECTRIC CORPORATION ANSONIA, CONNECTICUT

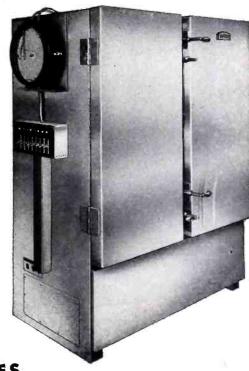
Tel. Ansonia 4-3306

## Environmental Test Equipment



### VALK-IN ROOMS

wser Walk-In Rooms are available with UNLIMITED altitude ulation, temperature range from  $-100^{\circ}$  to  $+200^{\circ}$ F., and ative humidity from 20% to 95%. With sectionalized panel astruction any size or shape room can be manufactured for fall assembly in the field. Smaller sizes are preassembled at the tory. Special accessories and instrumentation can be enginered 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°F. to +185°F. (Dry Bulb).



### -SERIES

Pase new Units are ideal for all types of processing requiring said extraction of heat. The wide range of temperatures down to 50°F, also allows complete testing of products under conditions extreme cold. In addition, storage of products is singularly sective because of the close control tolerance and dependability tured in all Bowser units. Other applications for which these its are well suited are stabilization of metals, aging of metals, spansion fitting, conditioning for tensile tests etc.

--- Write for more information NOW ----



### U-SERIES

These units are designed specifically for production processing of aircraft instruments, accessories and equipment. Temperature ranges from  $+158^{\circ}$ F. to  $-80^{\circ}$ F. Relative humidity simulation from 20% to 95% and altitude simulation to 55,000 feet are provided.

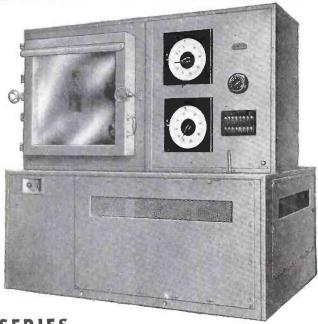
# BOWSER

TECHNICAL REFRIGERATION

DIVISION BOWSER INC.

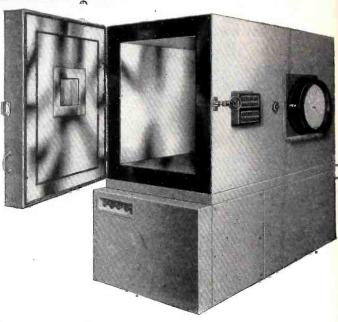
TERRYVILLE • CONN.

# Environmental Test Equipment



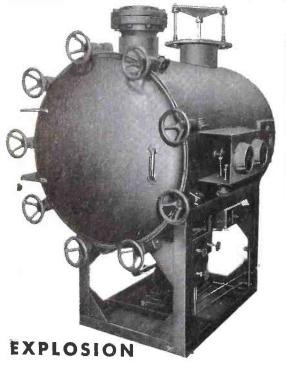
### L-SERIES

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.



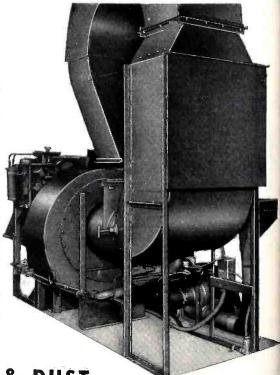
### S.SERIES

These units will automatically maintain temperature conditions within a range from  $-85^{\circ}\text{F}$ . to  $+185^{\circ}\text{F}$ . In addition, units which incorporate humidity conditions will provide humidity from 20% to 95% between  $+35^{\circ}\text{F}$ . and  $+180^{\circ}\text{F}$ . Dry and wet bulb temperature ranges can be extended to meet other requirements.



### Special Engineering

Bowser Technical Refrigeration maintains a complete engineering staff to solve special test problems for the aircraft All test chambers industry. 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

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 80,000 feet. Safety devices and automatic fuel metering enable this equipment to be installed and operated indoors.

# BOWSER

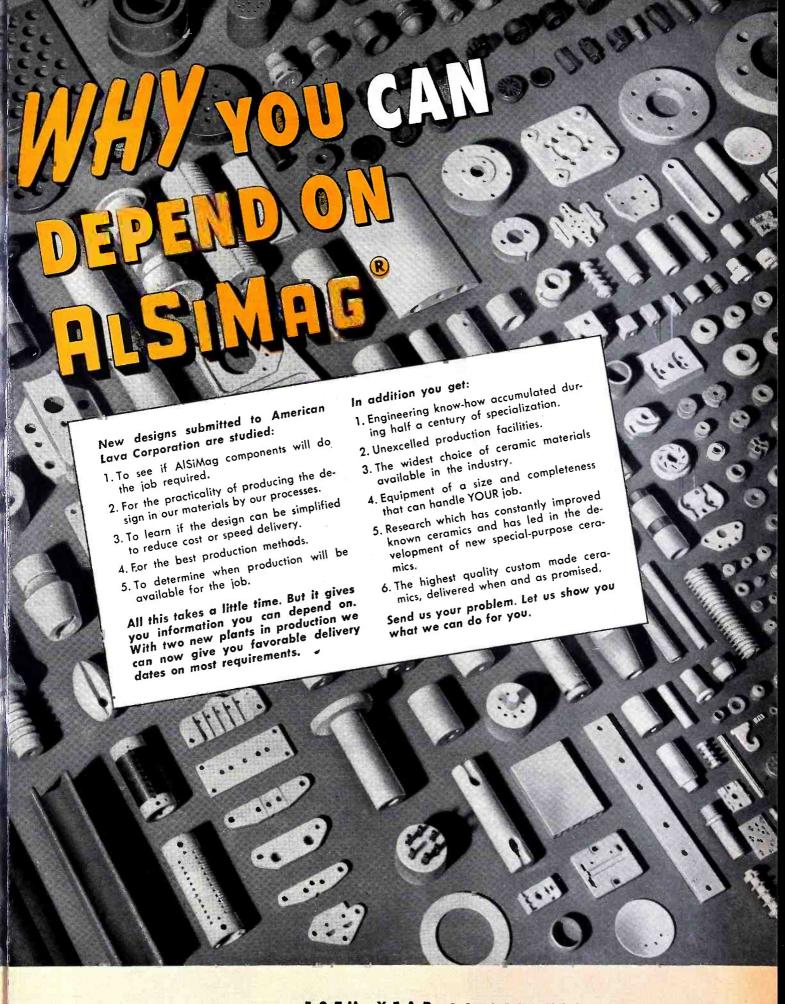
TECHNICAL REFRIGERATION

DIVISION BOWSER INC.

TERRYVILLE • CONN.

Sand and dust chamber to meet all MIL, JAN, USAF, AN and other test specifications for aircraft components. Provides testing facilities in air-suspended sand and dust at air velocities at 100 and 2300 feet per minute. Accurate temperature control of the air is provided by automatic heating and refrigeration equipment.

Write for more information NOW ====



SOTH YEAR OF CERAMIC LEADERSHIP

# AMERICAN LAVA CORPORATION

CHATTANOOGA 5, TENNESSEE

EES: METROPOLITAN AREA: 671 Broad St., Newark, N. J., Mitchell 2-8159 PHILADELPHIA, 1649 North Broad St., Stevenson 4-2823 UWEST: John A. Green Co., 6815 Oriole Drive, Dallas 9, Dixon 9918 NEW ENGLAND, 1374 Massachusetts Ave., Cambridge, Mass., Kirkland 7-4498 NGELES, 232 South Hill St., Mutual 9076 CHICAGO, 228 North LaSalle St., Central 6-1721 St. LOUIS, 1123 Washington Ave., Garfield 4959

Hydrogen Thyratrons

ELECTRICAL DATA\*



TYPE VC-1257 Hydrogen filled, zero bias thyratron with hydrogen generator for generation of pulse power up to 40 megawatts.



TYPE 5948/1754

Hydrogen filled, zero bias thyratron with hydrogen reservoir for generation of peak pulse power up to 12.5 megawatts.



Voltage

TYPE 5949/1907

Hydrogen filled, zero bias thyratron with hydrogen reservoir for generation of peak pulse power up to 6.25 megawatts.

Туре	VC-1258	5949/1907	5948/1754	VC-1
Maximum Peak Forward Anode Potential	1000 volts	25000 volts	25000 volts	381 V*
Maximum Peak Anode Current	20 amps	500 amps	1000 amps	200 amp
Maximum Average Anode Current	0.05 amps	0.50 amps	1.0 amps	2,0 amp
Maximum Heating Factor (epy x prr x ib)	1.0x108	6.25×10 <sup>9</sup>	9.0x10 <sup>9</sup>	
Nominal Filament Power	4.5 watts	95 watts	190 watts	230 wall
Hydrogen Reservoir	No	Yes	Yes	Yes

More detailed information on electrical and mechanical data will be supplied on request.



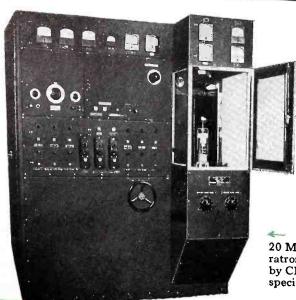
TYPE VC-1258

Zero bias miniature hydrogen thyratron 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 thyratron 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.

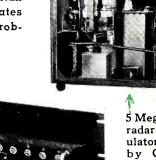
# Custom-built Electronic Equipment



CHATHAM specializes in the development, design, and construction of custombuilt 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.

20 Megawatt Hydrogen Thyratron Test Equipment built by CHATHAM to customers specifications.



5 Megawatt radar modulator built by CHA-THAM to rigid government standards.

# REQUIPMENT

**Electronic Tubes** 

### Ruggedized Type Tubes

The following tubes are JAN approved and can be supplied promptly, usually direct from stock: 5R4WGY 2D21W 6AL5W OC3W 6H6WGT OD3W 25Z6WGT 2050W

### 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 1846 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 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 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 amp.

### TYPE 394-A THYRATRON

A Mercury vapor and Argon filled thyratron 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  $-75^{\circ}$ C to  $+90^{\circ}$ C. Filament 2.5 volts, 5.0 amps... Inverse peak plate voltage 10,000, average anode current .25 amp.

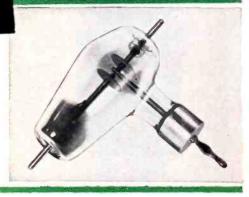


# Chatham Vacuum Switches

### 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,  $\alpha c$ , rms-10 amp,  $\alpha c$ , rms; 1,000,000 operations life at 10,000 v,  $\alpha c$ , rms-2 amp,  $\alpha c$ , rms; 500,000,000 operations life at 10,000 v,  $\alpha c$ , rms-0.1 amp,  $\alpha c$ , rms.





### 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.



YPE 1S22 (illusad) is a mechan-

y actuated,

e-pole, doublery, glass vacuum

ch. This and

rlied.

types can be

### CHATHAM ELECTRONICS CORP.

475 WASHINGTON STREET . NEWARK 2, NEW JERSEY

# THEY'RE NEW... AND THEY'RE THOMPSON TOO!





Model CA-26, 1P6T, 115 volt, 60 cycle, AC motor-actuated Coaxial Switch for use with RG-9/U cable.

### **COAXIAL SWITCHES**

designed, engineered, manufactured ...

# by Thompson



Model CA-36, 1P3T manually-actuated RG-17/U Coaxial Switch with electrical and mechanical interlock.



Model CA-31, 2P2T Sensing or Lobing Switch, 115 volt, 380-1000 cycle AC motor actuator. Switching speed, 15—35 Rev/sec. For use with RG-58/U cable.

EVERY INCREASE in the scope and tempo of electronics creates new and stringent demands. Keeping abreast through development and manufacture of a reliable line of special-purpose electronic equipment is the business of Thompson experimental laboratories and manufacturing plants.

Like many other Thompson electronic developments, the three new coaxial switches illustrated were designed, engineered and manufactured to meet the rigid requirements of modern microwave components and accessories. Complete technical information is, of course, available upon request.

Whatever your problems may be—in coaxial switches, antennae, specialized test equipment or wave guide and coaxial components and accessories-Thompson's experienceproved research, development and production facilities at both Cleveland and Columbus, Ohio are at your service.



ELECTRONICS DIVISION • 2196 CLARKWOOD RD. • CLEVELAND 3, OHIO

# THE TOWER OF STRENGTH

# SUPERIOR CONSTRUCTION FEATURES GIVE HIGHEST SAFETY FACTOR OF ANY TOWER IN ITS PRICE CLASS

RE-ASSEMBLED SECTIONS FOR FAST, INEXPENSIVE INSTALLATION

The VEE-D-X tower is designed for use at any height from 10 to 130 feet, depending on load. It is self-supporting up to 20 feet. To facilitate erection of the tower, the base mount is hinged so that several sections may be assembled on the ground and swung into position. The VEE-D-X tower may be ordered by separate components or as a complete package for a specific height.

- Rugged, all-welded construction diagonally laced with angle iron for maximum rigidity.
- Can be erected on ground or on flat or peaked roof.
- Patented plate spaced at two foot intervals prevents twisting and affords rigidity found in no other tower.
- Safe and easy to climb.
- Light weight tubular steel . . . 20 foot section 80 lbs.
- All tower components are manufactured of #1020 structural steel, hot dipped galvanized after welding.

### ANTENNA LOADING SPECIFICATIONS

Basis: 150 lbs. without ice

300 lbs, with ice

(A) Towers 110 mph w 85 mph wi	ithout ice	(B) Towers 90 to 130 feet 90 mph without ice 70 mph with \(\frac{1}{2}\)" ice			
op of Tower to op of Antenna Feet	Surface Area Exposed Sq. Feet	Top of Tower to Top of Antenna Feet	Surface Area Exposed Sq. Feet		
10	6.3	10	8.5		
8	6.5	8	<b>8.</b> 7		
6	6.7	6	9		
4	6.9	4	9.3		
2	7.2	2	9.6		
0	7.4	0	9.9		

### GINEERING DATA

OADING CONDITIONS:

Case 1. No ice and 120 mph wind Case 2.  $\frac{3}{4}$ " ice and 75 mph wind

VIND LOADING DATA:

Case 1. p = 44.3 lb./sq. ft. for tubes

p = 59 lb./sq. ft. for angles

Case 2. p = 17.3 lb./sq. ft. (all sections considered cylindrical)

3. DISCUSSION OF SAFETY FACTOR:

At Proportional Limit: M = 36,200 in lbs. F = 28,400 p.s.i.

At Failure: M = 52,100 in lbs. F = 40,900 p.s.i.

Designed For: M = 24,500 in lbs. F = 19,300 p.s.i.

Safety Factor For Proportional Limit:

(S.F.) prop =  $\frac{36.2}{24.5} = \frac{28.4}{19.3} = 1.47$ 

For Collapse:

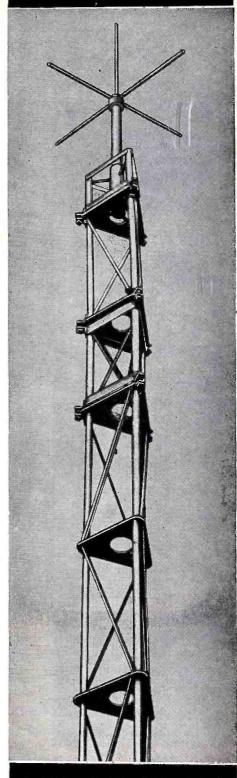
(S.F.) collapse =  $\frac{52.1}{24.5} = \frac{40.9}{19.3} = 2.12$ 

For complete information write —

LaPOINTE-PLASCOMOLD CORPORATION, WINDSOR LOCKS, CONNECTICUT

# VEE-D-X SECTIONAL TOWER

FOR COMMUNICATIONS
TELEVISION — FM
LIGHTING





BUILDERS OF THE WORLD'S MOST POWERFUL ANTENNA SYSTEMS

# Tailor-Made Fasteners in Volume Quantities



### RADIO VIBRATOR FASTENERS

Snaps Radio Condenser securely to metal chassis, eliminates vibration. Removable for replacement or adjustment. Made to fit a variety of round or square condenser cans.



### RADIO SPACER SLEEVES

For use in the assembly of radios. Made in a number of lengths and diameters for accurate spacing of plates, for the separation of chassis from mountings.



Snap-in types for miniature or candelabra lamps. Single or double contact, for indexing or non-indexing. Snaps out for easy replacement of bulb. In most cases, can be furnished with latex rubber gasket.



### VIBRATOR GROUNDING **FASTENERS**

Holds 11/2" dia. beaded or nonbeaded vibrator in any position to radio chassis. Vibrator Can grounded to frame. Holding prongs designed to hold several types of Cans.



### TEENUTS

Threaded bushings combining the functions of a nut and a washer. Can be used on TV cabinets, phonograph mountings etc. Provides a steel thread in wood or plywood. Thread size 6-32 to 1/2-20.



### MOULDING FASTENERS

Used to attach external and internal metal mouldings to all types of electrical appliances. Ease of attachment saves valuable assembly time, speeds production, reduces costs.



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

Snap-in Vent Plugs for electrical appliances. Easily inserted by hand. Attractive. Hold fast by spring action. Removable. Permit two-way ventilation. Variety of 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.



## UNITED-CARR

FASTENER CORP.

CAMBRIDGE 42, MASSACHUSETTS



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 unequaled background of technical knowledge which may well be applicable to your special needs.

# Ucinite Electrical Assemblies



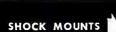
### LAMP SOCKETS

Miniature and candelabra bayonet sockets — insulated and non-insulated. Also special vibration resistant screw shell candelabra socket — brackets and wiring to customers specifications.



### BANANA PINS

Four sizes of plugs with onepiece beryllium copper springs. Adaptable mounting ends in threaded, staking, or solder lug types. Similar Mating Jacks also available.



ered in several sizes—ckets and durometer of ber bushings can be varied. In threaded Teenuts or plain hings. Insulated versions if ded.



### ANODE CONNECTORS

Plug button contacts for positive, firm connections. Corona resistant neoprene or silicon shields in straight or right angle types. Wiring to customers 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.



type switches manufacd as a licensee. Variety of ry and push-button asblies to specifications.



### SNAP SWITCHES

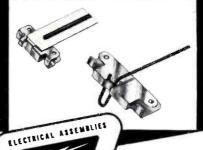
Precision, momentary contact push-button switches. Small and dependable. Several circuit arrangements. Water tight version shown.





### 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.



me production in Metal tripings. Years of engineern and tooling skill available colve your particular prob-



# ne UCINITE Company

DIVISION OF UNITED-CARR FASTENER CORP.

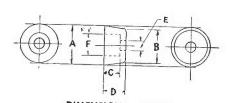
Newtonville 60, Massachusetts

With years of specialized experience in the electronics field and
ence in the electronics field and
complete facilities for the volume
complete facilities for the volume
stampings as well as the
production of small metal stampings as well as the
production of small metal stampings as well as the
special components,
and complete the stamping of supply you with special

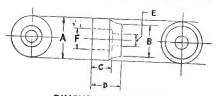
production of small metal stampings as well assembly of metal to plastic and ceramic components, assembly of metal to plastic and ceramic components, with special assembly of metal to plastic and ceramic components, assembly you with special Ucinite is fully equipped to supply you with special Ucinite is fully equipped to supply you with special designed, assembled, assembled, designed, and marked to your specifications. For complete wired and marked to your specifications. For complete design, engineering and production service, call your nearest Ucinite field engineer.



You can specify LOUTHAN low-loss Steatite products with complete confidence in the high quality and dimensional accuracy of the parts. Made to exacting standards, Louthan Steatite

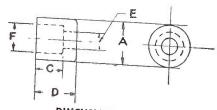


		DIMENS	IONS	INCHES		
Die No.	A	В	С	D	E	F
5861	1/2	3/8	1/8	1/4	.140	.250
5877	1/2	3/8	1/4	3/8	.140	.250
5919	3/4	9/16	3/8	9/16	7/32	15/32
5896	7/8	3/4	.385	1/2	.200	.500



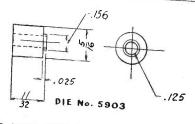
DIMENSIONS—INCHES

Die No.	A	B	C	D	E	F
5895	1/2	3/8	.130	1/4	.140	.250
5904	1/2	3/8	.255	3/8	.140	.250



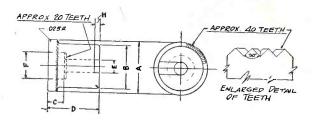
DIMENSIONS-INCHES

A	С	D	F	
3/8	.130	1/,	140	P
		/4	.140	.250
78	.255	3/8	.140	.250
	A 3/8 3/8		/4	3/9 255 3/



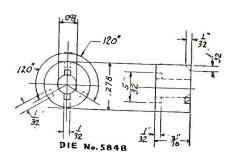
insulations have the mechanical and electrical characteristics needed for electronics applications and other electrical service. They are formed to meet your needs and made to close tolerances. Surfaces are smooth, hard, clean and non-absorbent.

Write for Catalog 49-E, describing Louthan Insulations.



### DIMENSIONS—INCHES

					•		
Die No.	A	В	C	D	E	F	н
5846	.375	5/16	3/32	3/16	.091	275	1/00
5850	.375	5/16	7/64			.375	1/32
	3/10	0 7/04	23/04	.089	.184	1/32	



### LOUTHAN STEATITE TUBES

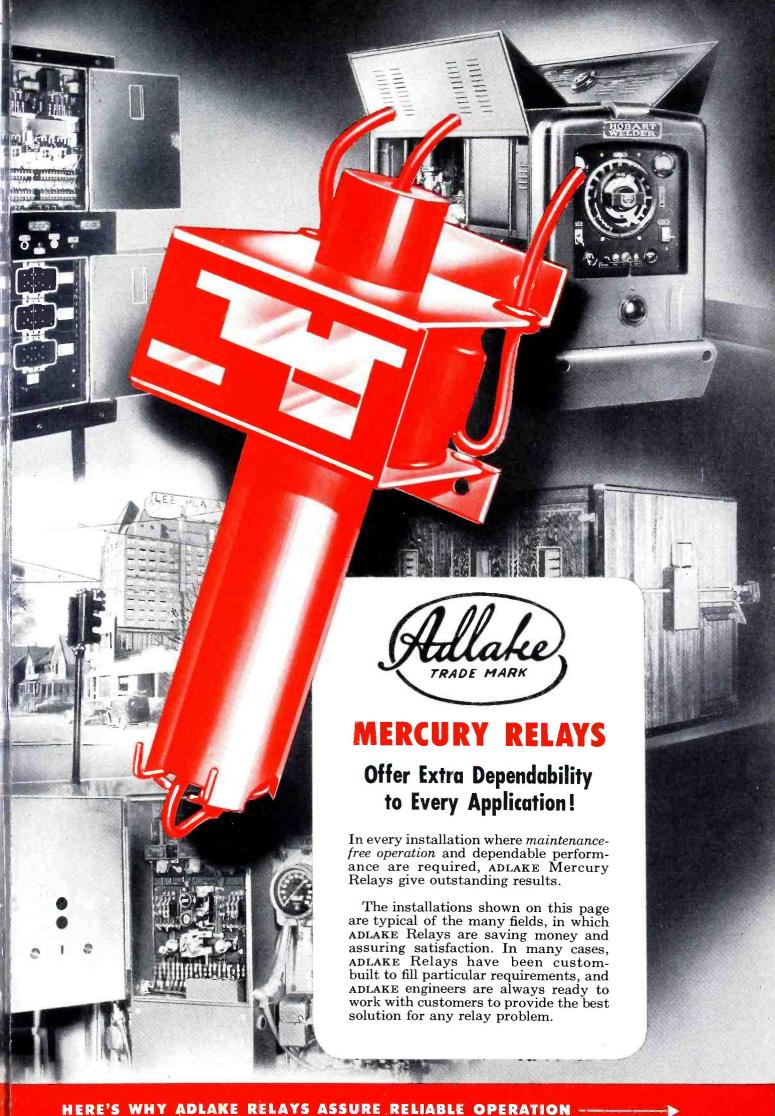
STANDARD SIZES-INCHES

(Tubes cut to length as specified)

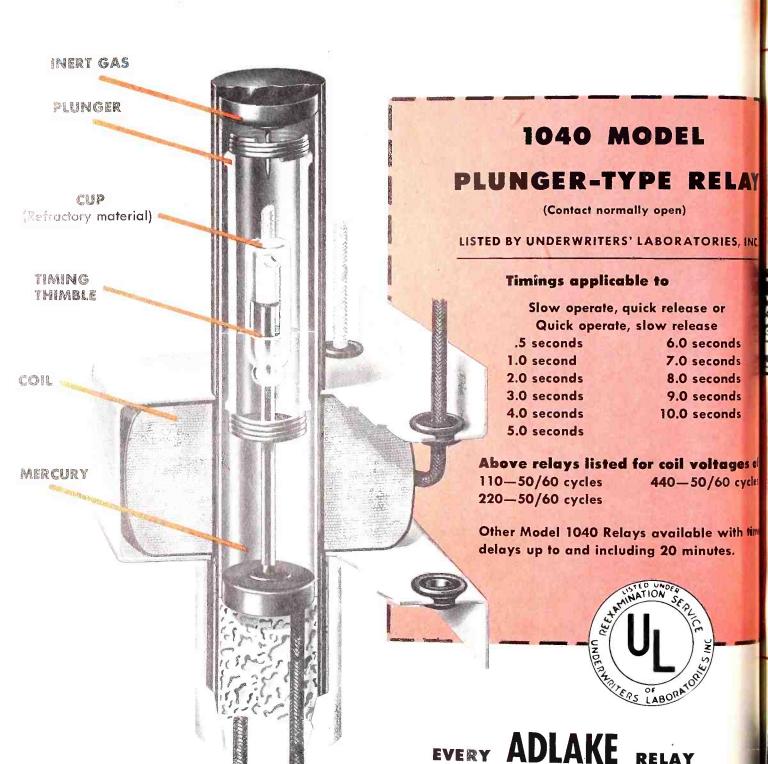
		a.u. as shect	nea <i>)</i>	
O.D.	I.D.	O.D.	I.D.	O.D.
3/16	1/4	1/2		15/16
1/4	5/16			1
5/16	5/16	9/16		1.035
5/16	3/8	9/16		1 1/16
3/8	3/8			1 1/16
7/16	7/16			11/8
7/16	1/2	3/4	1 3/16	15/8
	3/16  1/4  5/16  5/16  5/16  3/8  7/16	O.D. I.D.  3/16	O.D. I.D. O.D.  3/16	3/16

# THE LOUTHAN MANUFACTURING COMPANY • EAST LIVERPOOL, OHIO A Subsidiary of Harbison-Walker Refractories Company

EXCLUSIVE REPRESENTATIVES: H. B. Zeiger—369 Lexington Avenue, New York 17, New York • Glenn Garner Company—1829 Civic Opera Bldg., Chicago 6, Illinois • Braun Corporation—2260 E. 15th Street, Los Angeles 21, California • Canadian Refractories Limited -Canada Cement Bidg., Montreal 2, Quebec • Albert Doerr Company—Apartado Postal 427, Mexico, D.F., Mexico



# OPERATION OF ADLAKE MERCURY RELAY



When relay is energized, coil pulls plunger down. Mercury enters thimble, gradually displacing inert gas, which escapes through ceramic plug. When thimble has been filled, mercury-to-mercury contact is established.

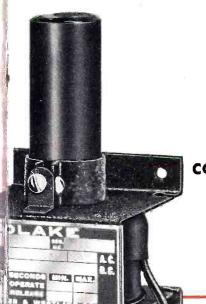
Hermetically Sealed—Dust, dirt, moisture, oxidation and temperature changes can't interfere with operation

**OFFERS THESE ADVANTAGES** 

Silent and Chatterless • Absolutely Safe • Requires No Maintenant

Positive Action—Mercury-to-mercury contact prevents burning pitting and sticking

# OTHER POPULAR MODELS from the broad Adlake line



### 1101 MODEL

### Companion to 1040 model

Available with same time delay features

CONTACTS RATED TO 15 AMPERES, NON-INDUCTIVE, 110V., 60 CY.

Complete Rating Available on Request

# 1140 MODEL

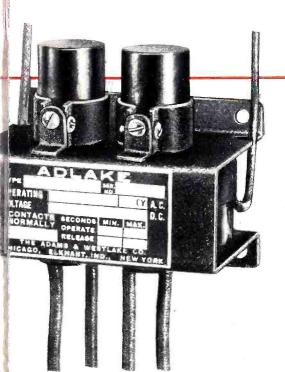
"Mighty Midget"

ELIMINATES USUAL GLASS ENVELOPE BREAKAGE

METAL ENCLOSED CONTACT ENTIRELY

Conservatively Rated at 30 Amperes

Coils available for 440V., 60 Cy.



### 1123 MODEL

Available with Load Contacts Up To 50 Ampere Capacity, or

Available with Time Delay Contacts Up To and Including 20 Minutes

Coils available for 440V 60 Cy.

# ADLAKE Custom-Built ASSEMBLIES

The Adams & Westlake Company's Engineering Department is completely equipped to serve your special needs. ADLAKE service includes developing and building complete control systems, custombuilt terminal boxes, junction boxes, similar special assemblies

WHATEVER YOUR PARTICULAR RELAY PROBLEM MAY BE,

PLEASE FEEL FREE TO PRESENT IT TO US.



### **General Offices:**

and Plants 1 and 2
Elkhart, Indiana

Comprising approximately ten acres of floor sport this efficient modern factory is at your service

# Representatives and

Sales Offices

### **BOSTON 11**

Leo C. Pelkus & Company 683 Atlantic Avenue Liberty 2-1970

### CHICAGO 2

The Adams & Westlake Company 319 W. Ontario St. Superior 7-0016

### LOS ANGELES 22

A. W. Nash Company 2112 S. Atlantic Blvd. Angelus 9-7304

### **NEW YORK 5**

The Adams & Westlake Co 50 Church St. Cortland 7-0073

### PHILADELPHIA 44

W. Henry Cordray 18 W. Chelton Ave. Victor 8-0447

### SEATTLE 2

C. B. Parsons & Co. 119 Belmont Ave., North Minor 3800

# THE Adams & Westlake COMPANY

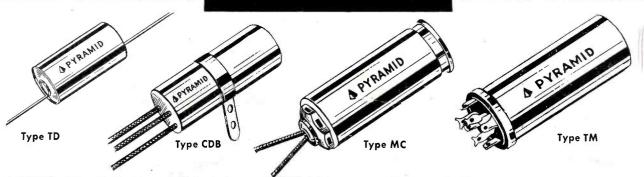
Established 1857 ELKHART, INDIANA Now York Chicago

Manufacturers of ADLAKE Hermetically Sealed Mercury Relays

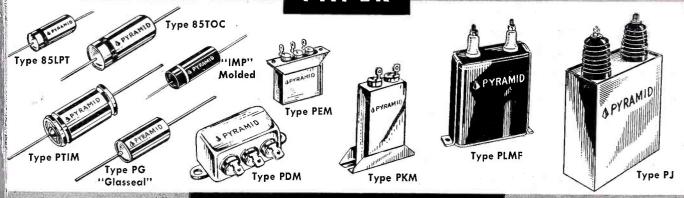
# PYRAMID long-life CAPACITORS

The units illustrated are but a small indication of the wide variety of capacitor styles manufactured in Pyramid's large, modern plant.

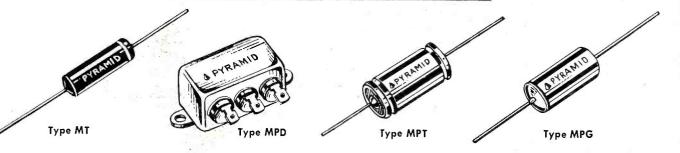




#### **PAPER**



#### METALLIZED PAPER



For more complete information as to sizes, performance data, samples, etc., your letterhead inquiry is invited. Write to:

Department EBG52



### PYRAMID ELECTRIC COMPANY

1445 HUDSON BOULEVARD • NORTH BERGEN, N. J., U.S.A.

# Good names to know for metals 8- alloys

FILAMENT BASE METALS:
SYLVALOY
COSANIC
TENSITE

CARBONIZED NICKEL:

ADIOCARB

DUOCARB

POLICARB

GRID WIRE:

MANGRID

#### - BACKED BY YEARS OF SPECIALIZED PRODUCTION

Since the inception of AC fadio, Wilbur B. Driver Company has pioneered in the development and production of filament alloys, carbonized nickel and grid wire. Thus it is a logical conclusion that Wilbur B. Driver Company is the dependable source of supply for radio and electronic requirements... the choice when materials must be held to exacting and precise specifications.

it's WILBUR B. DRIVER for Critical Tube Alloy Requirements?

#### WILBUR B. DRIVER COMPANY

150 RIVERSIDE AVENUE, NEWARK 4, NEW JERSEY



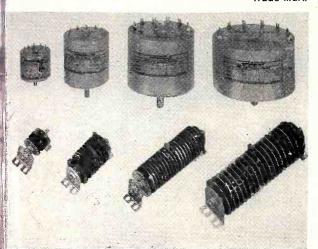


#### magnetic amplifiers and alloys

#### magnetic amplifiers

Vestinghouse Magamp\* is essentially a variable nlance device consisting of saturable reactors and um rectifiers designed to operate as a unit. The mp is employed by inserting the unit between a of power and a load in a series circuit. The 3700 magnetic amplifier is featured, however, if the Ird series will not meet your requirements, other s can be engineered to meet your needs.

\*Trade-mark



#### magamp\* applications

speed control, welding control, automatic battery r, aircraft voltage regulator, central station voltgulators, photocell amplifier, thermocouple amauto pilot amplifiers and modulators, relay ement, isolation metering of d-c voltages and

OPERATING CHARACTERISTICS OF 3700 SERIES MAGNETIC AMPLIFIERS					
Amplifier Type Number	3704	3708	3712	3716	3720
Type of Circuit	Doubler	Doubler	Double	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 Freq. Phase	6.3 60 1	12.6 60 1	30 60 1	115 60 1	230 60 1
Max. Figure of Merit, Mu(3)	170	310	410	1000 //	200
Mu for 3 cy. Response (3)	80	130	150	200	
Time Delay: (4) Constant k <sub>1</sub> : Inherent Delay Cons. k <sub>2</sub>		3.7 x 10-3 1.6	6.8 x 10-3 1.9	7.5 x 10-3 2.4	3.5 x 10-3
Output Current: (5) Rated Max. Power Output	0.150a. 0. <b>0</b> 16a.				
Load Resistance: Rated Max. Power Output Max. Power Gain	200 200	100 100	20 28 40	130 60 175	175 35 250
Rectifiers: Self-Sat, Recommended Complementary	2-1N38's 4-1N38's	1D12HA1 1D41HA1	2D18HW1		13D118HW1
Weight of Reactor Assem.		0.20 lbs.	0.85 lbs.		7.0 lbs.
Size of Assem: Dia. Height	1 1/4 "	1 1/2 "	21/4"	31/4"	4 2½"×2 units

Power output at top of linear region of control curve.
 Control ampere-turns from cutoff to top of linear region of control curve.
 The figure of merit, Mu, 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).

trequency (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  $\binom{N^2}{R}$  for control circuit A) plus  $\binom{N^2}{R}$  for control circuit B) plus  $\frac{N^2}{R}$  for control circuit C) .

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.



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

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

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.

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.

Hiperco® - An iron-cobalt alloy containing  $\frac{1}{3}$  cobalt,  $\frac{2}{3}$  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.

Other alloys that serve a wide range of functions are Kovar®, Puron\*, Cupaloy\*, K-24-B®, Refractaloy® and Discaloy®. These are used for electrodes, contacts, for scaling glass and metal, for tube lead-in wires, and for high strength at elevated temperatures.

For further information, write to Special Alloys Sales, East Pittsburgh.

\*Trade-mark

YOU CAN BE SURE...IF IT'S

P.O. BOX 5578, PITTSBURGH 30, PA.





#### instruments

#### THE MOST COMPLETE LINE IN THE INDUSTRY

In the complete line of Westinghouse electrical instruments, you're sure to find the right answer to your measuring requirements. Moreover, you'll get a wider selection for specific applications, whether it be a-c or d-c current and voltage, single or polyphase circuits, watts or vars, frequency or power factor.

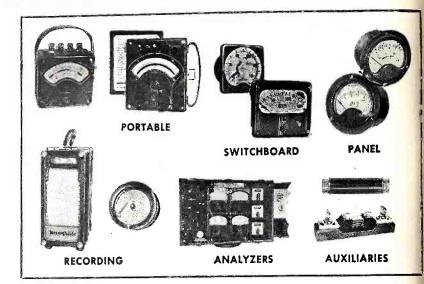
For laboratories, production lines, field service or military operations - whether the requirement is for recording or indicating - for portable or permanent application - Westinghouse instruments give you lasting accuracy.

Every Westinghouse instrument is built to meet the performance requirements of the American Standards Association.

P-5 VOLTMETER

DOUBLE RANGE

VOLTMETER



#### instruments

#### portable instruments

#### TYPE P-5 LINE (Accuracy 1/2 %)

The Type P-5 series of Westinghouse instruments can 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 P	7-5 FOR ALTERNATING CURRENT	TYPE PX-5 F	OR DIRECT CURRENT
Ammeters	05 to 0-200	Ammeters	005 to 0-50
Milliammeters	0-10 to 0-750	Milliammeters	003 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		003 to 0-30 amps
Wattmeters	0-20 to 0-30,000	Millivoltmeters	0-2 to 0-2,000
		Voltmeters	0-1 to 0-1500

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

#### TYPE P-4 LINE (Accuracy 34 %)

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. 41/2" x 41/2" x 2".

#### FULL SCALE RANGE OF STANDARD RATINGS

	Y-4 FOR IG CURRENT	AMMETERS MILLIAMMETERS VOLTMETERS	0-5	TO 0-50 TO 0-750 TO 0-750
TYPE PX-4 FOR DIRECT CURRENT (Also Radio-fre- quency and Recti- fier Types)	Ammeters Radio frequency Milliammeters Radio frequency Rectifier type Microammeters Rectifier type	025 to 0-300 05 to 0-20 0-1 to 0-3,000 0-75 to 0-800 0-1.5 to 0-20 0-25 to 0-1,000 0-500	Voltmeters Rectifier type Millivoltmeters Volt-Ammeters	0-1 to 0-750 05 to 0-150 0-2 to 0-100 0-1.5 to 0-150 volts 015 to 0-60 ampered

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

#### YOU CAN BE SURE

P.O. BOX 5578, PITTSBURGH 30, PA.





P-4 TRIPLE RANGE





#### instruments

#### 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 or 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 51/4" x 41/4" x 21/2"; both hinged cover and open-faced models are pocket size.

#### **FULL SCALE RANGE OF STANDARD RATINGS**

#### TYPE PA-14 FOR ALTERNATING CURRENT TYPE PX-14 FOR DIRECT CURRENT

Voltmeters Ammeters Milliammeters	0-1.5 to 0-750 05 to 0-50 0-5 to 0-500	Voltmeters Millivoltmeters Ammeters Milliammeters	075 to 0-800 0-10 to 0-5,000 05 to 0-50 0-1 to 0-2,000
Also available in rectif	ier and thermocouple types.	Microammeters	0-20 to 0-5,000

(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 1½ lbs. D-C instruments from 1½ to 2 lbs. POCKET SIZE: A-C - 414" x  $3\frac{1}{4}$ " x  $2\frac{5}{16}$ "; D-C - 414" x  $3\frac{1}{4}$ " x  $1\frac{3}{4}$ ".

#### **FULL SCALE RANGE OF STANDARD RATINGS**

#### TYPE PA-12 FOR ALTERNATING CURRENT

TYPE PX-12 FOR DIRECT CURRENT

Self Contained Current-From 5 milliamperes	"Self Contained Current — From 20 microamperes
to 50 amperes	to 50 amperes
Self Contained Voltage — From 1.5 volts to	Self Contained Voltage — From 10 millivolts
300 volts Also available in rectifier types.	to 800 volts

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

#### switchboard instruments.

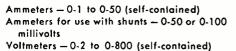
#### 24-LINE (Accuracy 1%)

41/2" 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 requirements, 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 ALTERNATING CURRENT



Milliammeters — 0-1 to 0-500 Wattmeters - 120 or 240 volts, 0-50 or 0-100 milli-

volts for external shunts, (25 line only)

P.O. BOX 5578, PITTSBURGH 30, PA.

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

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



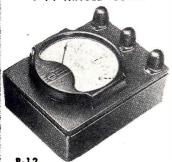




VOLT-AMMETER

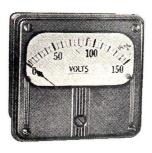


P-14 HINGED COVER



VOLTMETER

AMMETER



K-25 VOLTMETER



#### instruments

#### 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  $\frac{3}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{6}$ 6" per hour or per minute. An electronic-type recorder is also available in the G-40 line for the recording of low-energy values.

#### TYPE A ROUND CHARTER 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 convenient instrument for miscellaneous 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.

(For Complete Ordering Information, See Catalog Section 43-400)



**SWITCHBOARD** RECORDER

N-35

**FLUSH** 

MOUNTING

#### panel instruments

#### 33-LINE (Accuracy 2%)

2½" Class - Scale Lengths, 1.5" to 1.8". Five flush mounting types of cases are available: the American War 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%)

31/2" Class-Scale Lengths, 2.06" to 2.4". Available as a complete line in five types of cases and mounting covering all 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%)

41/2" Class - Scale Lengths, 2.8" to 3.2". The largest of the miniature panel instru ments. 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.

## N-37 **FLUSH** MOUNTING

N-33

**FLUSH** 

MOUNTING



CURRENT TRANSFORMER

TUBULAR RESISTOR

PORTABLE

SHUNT

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

DIRECT CURRENT		Milliammeters	
Ammeters	0-1 to 0-50	(For frequencies of 15	
Milliammeters	0-1 to 0-800	to 500 cps)	0-5 to 0-500
Microammeters	0-20 to 0-800	Rectifier	0-1 to 0-10
Voltmeters	0-1 to 0-800	Radio Frequency	0-10 to 0-800
Millivoltmeters	0-10 to 0-500	Microammeters	V 10 10 0 000
ALTERNATING CURRENT Ammeters (For frequencies of		Rectifier Voltmeters	0-100 to 0-500
15 to 500 cps)	0-1 to 0-50	(For frequencies of 25 to 125 cps)	0-1.5 to 0-800
Radio Frequency	0-1 to 0-20	Rectifier	0-3 to 0-300
(For Complete Ordering I	nformation,	DB Meters	0-0 10 0-000
See Catalog Section 43-3		Rectifier	Standard Scales

#### 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 milliampere instruments. Resistance values 14, 1/2, 3/4 or 1 megohm are standard, and combinations of these are used to form the 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

PORTABLE POTENTIAL AND CURRENT TRANSFORMERS: For measuring electrical quantities greater than the self-contained ranges for which the instruments are rated, these portable potential and current transformers offer a convenient and accurate means of increasing the usefulness of an instrument. (For Complete Ordering Information, See Catalog Section 43-800)



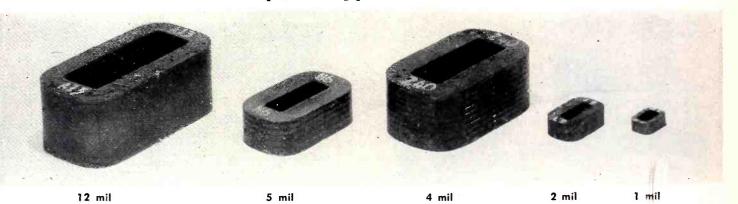


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#### transformer cores

#### Hipersil® type c cores



Hipersil Type C core was originally developed by stinghouse to use oriented silicon steel to full advange. Since its introduction 14 years ago continual developments have been made in the product to insure better formance. Along with the great improvements in the gnetic materials themselves toward lower core loss and ther permeability, have been improvements in construction as a lower loss etched butt joint and the more tent grooved core construction for greater stability in insformer operation.

#### mil

60 cycle applications, 12 mil cores (formerly called gauge) furnish the best transformer core for 60 cycle bboard and land-based military applications as well as tustrial. These cores effect economy of assembly as well the advantages of small size and weight. 12 Mil Cores... uest DB. 44-035, Sec. 1.

#### -iI

\$400 cycle applications, these cores have been standard

for airborne electronic applications for the past 8 years. 5 Mil Cores . . . Request DB. 44-035, Sec. 2.

#### 4 mil

For 400 cycle transformers where the cores are worked at high inductions (these cores are tested at 17.6 Kg. prior to shipment) these cores with extra low exciting current, give the smallest possible 400 cycle transformers. 4 Mil Cores . . . Request DB. 44-035, pages 25 & 26.

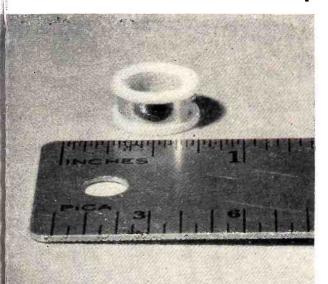
#### 2 mil

For pulse transformer applications down to  $\frac{1}{4}\mu$  sec. these cores have been standard for the past 9 years. 2 Mil Cores . . . Request DB. 44-035, Sec. 3.

#### 1 mil

For pulse transformer applications  $\frac{1}{4}u$  sec. and below and for IF transformers these cores give the advantage of low-cost assembly as well as high performance. 1 Mil Cores... Available in same size as 2 Mil.

#### hiperthin cores



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

These cores are available in various types of materials such as HIPERSIL® (3% silicon iron), HIPERNIK® (50% ironnickel), ORTHONIK (50% ironnickel, rectangular hysteresis loop) and 4-79 Permalloy, all in thicknesses of 1 mil, ½ mil, ¼ mil and ⅙ mil. Standard spool sizes are shown and number of turns of magnetic material can be varied to suit application.

I. D.	I.D.	O. D.	STRIP
SPOOL	CORE	SPOOL	WIDTH
3/16	1/4	5/16	1/8
3/16		3/8	1/4
1/4 3/8	5/16 7/16	3/8 1/2	√2 √8 √8
1/2	9/16	21/ <sub>32</sub>	1/8
3/4	13/16	29/ <sub>32</sub>	1/8
1	1 1/4	1 1/2	1/4

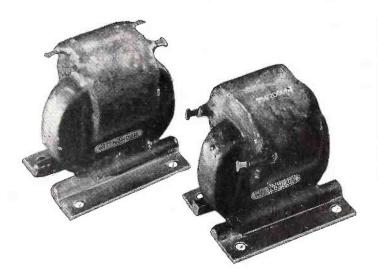
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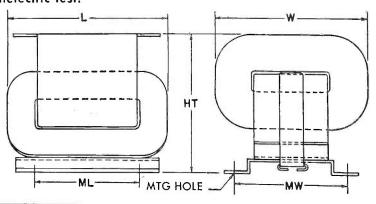
#### Fosterite® treated transformers



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 SUPPLY COMPONENTS AVAILABLE ON STANDARD PARTS filament • plate • power • filter choke

Standard transformer sizes, single phase, designed for operation at 380-420 cycles, in 80°C ambient, with 45°c rise and up to 3000 volts rms dielectric test.



Size	Ove	erall Dimensi	ons	Mounting Dimensions		sions	Total
No.*	L	W	Height	ML	MW	Mtg Hole	Wt (Lbs
3011	1 1/2	19/16	1 5/8		1.1/		
3021	1 5/8	19/16	13/4		11/8	.141	1/4 5/16 3/8
3032	2	111/16	21/8		11/8	.141	3/16
3043	2	113/16	2 1/8		11/4 17/ <sub>16</sub>	5/32	3/8
3054	25/16	2 /10	25/16	111/16	17/16	5/32	1/2
3064	27/16	21/8	27/16	111/16	17/16	5/32	1/2 5/8 1 3/1 6
3075	21/2	21/2	211/16	21/8		5/32	13/16
3085	2 5/8	21/2	213/16	2 1/8	13/4	5/32	1 1/8
3096	2 5/8 2 1 3/16	25/8	213/16	219/64	13/4	5/32	13/8
3107	213/16	215/16	3 /18	25/8	155/64	3/16	1 5/8
3117	31/8	31/16	31/4	25/8	21/8	3/16	15/8
3128	3 5/8	37/16	35/8	3	21/8	3/16	21/2
3138	35/8	39/14	35%	3	27/16	1/4	31/2
3149	41/8	39/16	4 1/8	35/16	27/16	1/4 1/4	41/4

Individual transformer performance requirements will determine the size.



### low power pulse transformers

These pulse transformers are designed for use in low 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.

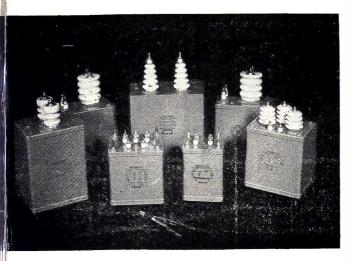
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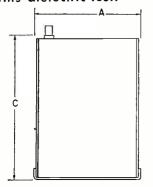
#### hermetically sealed transformers

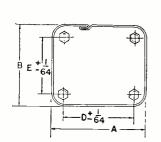


Hermetically sealed transformers assure maximum protection against humidity, immersion and temperature extremes. Higher voltage ratings are possible with hermetically sealed transformers. For very high voltage, cases are oil filled. Westinghouse solder sealed bushings are featured. Core and coil sub-assemblies are fastened to the mounting studs to insure high mechanical strength and resistance to shock.

#### POWER SUPPLY COMPONENTS AVAILABLE ON STANDARD PARTS\* filament · plate · power · filter reactor

andard transformer sizes, single phase, designed for operaon at 60 cycles, in a 65° c ambient with a 40° c rise, up to 2500 olt rms dielectric test.



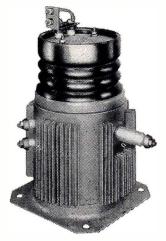


ize	0	verall Dimension	ıs	Mounting D	Dimensions
o.†	Α	В	С	D	E
EA	115/16	113/16	23/4	1,3/8	111/4
FA	25/16	21/16	31/8	111/16	17/16
ЭВ	23/4	23/8	213/16	21/8	13/4
3A	23/4	2 3/8	313/16	21/8	1 3/4 1 55/64
нB	3//16	2 <sup>5</sup> /8	33/16	219/64	155/64
HA ,	31/16 31/16	2 5/8	41/4	21/8 219/64 219/64	1 39/64
JB	3%16	31/16	37/8	l 25%, ∣	21/8
IA .	39/16	31/16	4 1/8	25/8 3 3	21/8
KB	3 15/16	33/8	45/16	3	$2^{7/16}$
(A	315/16	3 3/8	51/4 41/2	3	27/16
LB	45/16	311/16	41/2	35/16	211/16
.A	4 <sup>5</sup> /16	311/16	59/16	35/16	211/16
ИB	411/16	4	415/16	311/16	3
۸A	411/16	4	6	311/16	3
ЧB	51/16	45/16	5½	41/16	3 <sup>5</sup> /16 3 <sup>5</sup> /16
1A	51/16	45/16	613/16	4 <sup>1</sup> / <sub>16</sub>	33/16

All stud dimensions conform to Mil-T-27 specifications.

hese transformers are designed to meet the requirements of Government specifition MIL-T-27, Grade I.

individual transformer performance requirements will determine the size.



pulse transformers

high power: Oil-filled output pulse transformers for peak voltage ratings 7 Kv and higher, and pulse widths from ¼ to 10 microseconds are available in a few standard ratings and are also designed to customer specifications.

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.

#### charging reactors



Used between D-C power supply and Pulseforming network in high power pulse modulators.

Types, based on circuit operation, are resonant, hold-off diode, and linear.

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... Temperature coefficient measurements are carefully computed.

... Resistive stability is determined on equipment that will detect changes of 1 part in a million.

... Each resistor goes through 5 cycles of temperature changes from  $-55^{\circ}$ C to  $+85^{\circ}$ C. This temperature cycling ages "CARB-OHMS" and stabilizes resistance.

... After sealing, "CARB-OHM" resistors are tested to determine the integrity of the hermetic seal.

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- ... Uncontaminated environment is then sealed into the meter by means of glass-to-metal hermetic sealing. All meters are tested to determine the integrity of the hermetic seal.

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CORPORATION

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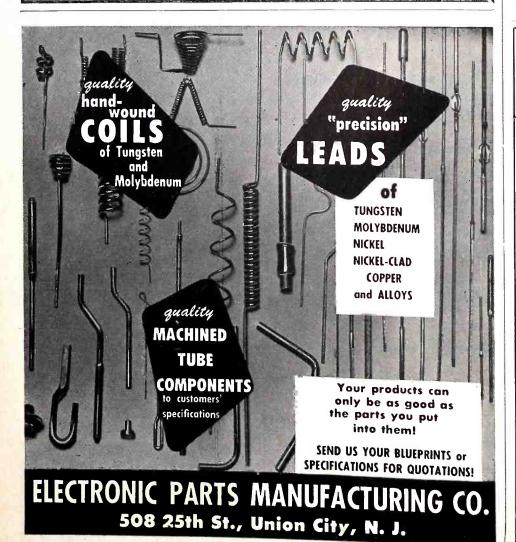
Property	Poly- styrene	Poly- ethylene	Teflon	Synthetic D	Synthetic E
Capacity	.001 up	.001 up	.001 up	.01 up	.01 up
Voltage	100 up	2000 up	300 up	200 up	600 up
Power Factor	.01%	.01%	.01%	0.5%	0.5%
I. R	106 meg/mf	104 meg/mf	106 meg/mf	106 meg/mf	104 meg/m
Max. Op. Temp.	90°C	60°C	125°C	125°C	100°C
Soakage	.02%	.02%	.02%	1.0%	4.0%
Temp. Coef.	-100 ppm/°C	_500 ppm/°C	-100 ppm/°C	+500 ppm/°C	+500 ppm/°C
Bulk at lowest voltage given .	5 in <sup>3</sup> /mf	36 in <sup>3</sup> /mf	10 in³/mf	1.2 in <sup>3</sup> /mf	3.5 in <sup>3</sup> /mf

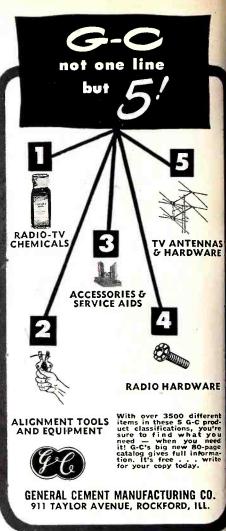
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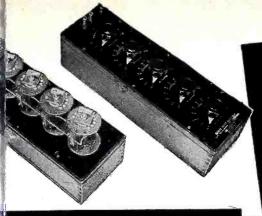
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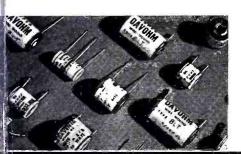
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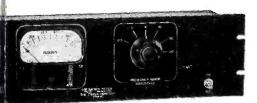
ECISION WIRE WOUND RESISTORS



UME LEVEL INDICATOR SERIES 910-911



RE ATTENUATION BOX TYPE 650



FREQUENCY METER TYPE 838A



CAIN CET TYPE 114

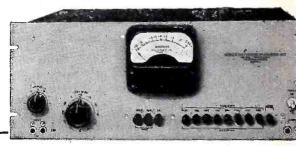
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Shown on this page is only a small part of the Daven line. When writing for more complete information on the units illustrated, please identify by name and model number.

OUTPUT POWER METER
TYPE OP-962



DISTORTION & NOISE METER TYPE 35-A



Precision equipment demands the finest components. Always specify DAVEN Attenuators.



# HEAD CUSTOM



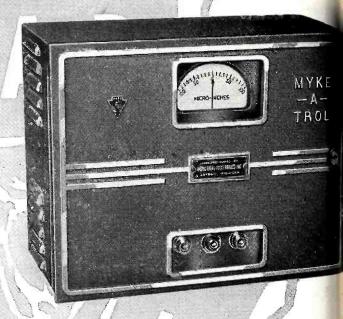
#### DYNA-MYKE, MODEL 129-C

A One Package Control System for Both Differential
Transformers and Strain Gages

The Dyna-Myke is a high speed precision micrometer capable of indicating displacements as small as one micro-linch at frequencies as high as 1000 cps. Static displacements are indicated directly on its 4½-inch mid-zero meter. For dynamic measurements, sufficient output power is available for driving pen motor or galvanometer recorders, or the output may be observed on an oscilloscope. On-off control as a function of displacement may be had by using the output to operate a differential relay. Proportional control or remote indication may be had by driving a servo motor. Its phase sensitive demodulator provides for measurement and control plus or minus from zero or any mean position.

A built-in system of calibration provides for an overall check of the functioning of the instrument at any time irrespective of the position of the sensing element.

Basic engineering phenomena such as force, torque, strain, vibration, acceleration, temperature, pressure, thickness and surface finish may be indicated and recorded. A wide selection of pickups using both differential transformers and strain gages are available.



#### MYKE-A-TROL, MODEL 137

An Industrial Instrument for Reducing Manpower-Eliminating Scrap

The MYKE-A-TROL is a complete one-package instrum for the measurement and control of many manufacture operations. Its sensing and memory features, using a differential transformers or strain gages, completely rep the factor of human error and provide for automatic insp tion and control during processes of manufacture, or automatic inspection after manufacture.

Its full scale displacement range of plus or minus .1 into plus or minus 100 microinches is adequate for just any industrial application. In fact, its high degree accuracy can be used to compensate for the inaccurate of many machine tool and processing operations.

The MYKE-A-TROL is built for continuous operation its own provisions for line voltage regulation. Its shape mounted case provides for permanent installation dire on the machine it is controlling, if desired. After the interest ment has been properly adjusted and put in operation can be locked to prevent tampering.

To provide control as a function of displacement it control two power relays which can be adjusted to operate all desired control points on any of the four sensitivity rand these relays can be made to operate on plus and mitolerances, two successive plus tolerances or two sessive minus tolerances by internal switching.

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# ULT INSTRUMENTS



METER, Model 144

with the DYNA-MYKE indi-lights the peak amplitude as fast as. I millisecond. ay be institutaneous or a ure may be used to maintain t-in power relays provide trol to any plus or minus shed by DYNA-MYKE.



CALI-POWER DC, Model 145

A precision source of calibrated DC voltage. Provides 10 watts of power in full scale ranges of 10 millivolts to 100 volts. Like Model 132 AC used for driving and calibrating amplifiers, voltmeters, resistance bridges, transducers, penmotors. galvanometers, etc.



BALANCE BOX, Model 204

Model 204 provides for balancing and calibrating up to four channels of either two or four element bridges, balancing up to four differential Lansformers, balancing two differential transformers for zero suppression of one with the other for scale expansion, and adding three additional channels from as many other Balance Boxes as desired. A switch selects any one of the four channels and feed the signal into the DYNA-MYKE, MYKE-A-TROL, UNI-BRIDGE, or CALI-BRIDGE.



CONTROL BOX, Model 166

control box, model too halancing and calibrating attain gages for use with DYNA-MYKE, MYKE-A-TROL, UNI-BRIDGE, or CALI-BRIDGE. II accommediates two differential transformings where it is desirable to suppress zero on one with the other for scale expansion, of it may be used for multi-channel operation in conjunction with selector awitch Model 172.



-BRIDGE, Model 128

DC power supply and bridge tem. Contains micro-ammeter, and calibrating circuits, out-ad chopper.



CALI-BRIDGE, Model 134

Combines CALI-POWER DC with the UNI-BRIDGE. A more versatile instrument for signal calibration, as well as bridge control purposes.



SELECTOR SWITCH, Model 172

This switch box controls up to ten chan-nels, of measurement when used in nels of measurement when used in conjunction with Control Boxes, Model 166 and one DYNA-MYKE, MYKE-A-TROL. UNI-BRIDGE or CALI-BRIDGE.



GAGE HEAD, Model 194

May be hand held or mounted for vibra-tion measurement, or used as a dis-placement pickup with a linear range of plus or minus . I inch. It is designed for use with DYNA-MYKE or MYKE-A-TROL.



CALI-POWER AC, Model 132

recision source of calibrated AC Le. Provides 10 watts of power in full e ranges of 1 millivolt to 100 volts.



GAGE HEAD, Model 100-B

Designed for use as a comparitor type indicator or surface finish analyzer. May be used with DYNA-MYKE or MYKE-A-TROL.



PRESSURE PICKUP, Model 125-M

Available in thread sizes as small as 1/4 inch with pressure ranges up to 10,000 pounds.



#### ACCELEROMETER, Model 5-B

Has a linear acceleration range of plus of minus 30 Gs with a natural frequency of 150 cps. Diameter ½ linch; weight 1½

INDUSTRIAL ELECTRONICS, INC.

DETROIT 10, MICHIGAN 60 WHEELER STREET

# **B** BALLANTINE



#### STILL THE FINEST IN ELECTRONIC VOLTMETERS



MODEL 300



MODEL 302B



MODEL 305



MODEL 314



MODEL 310A

MODEL	FREQUENCY RANGE	VOLTAGE RANGE	INPUT IMPEDANCE	ACCURACY
300	10 to 150,000 cycles	1 millivolt to 100 volts	1/2 meg. shunted by 30 mmfds.	2% up to 100 KC 3% above 100 KC
302B Battery Operated	2 to 150,000 cycles	100 microvolts to 100 volts	2 megs. shunted by 8 mmfds. on high ranges and 15 mmfds. on low ranges	3% from 5 to 100,000 cycles; 5% elsewhere
305	Measures peak values of pulses as short as 3 microseconds with a repetition rate as low as 20 per sec. Also measures peak values for sine waves from 10 to 150,000 cps.	1 millivolt to 1000 volts Peak to Peak	Same as Model 302B	3% on sine waves 5% on pulses
310A	10 cycles to 2 megacycles	100 microvolts to 100 volts	Same as Model 302B	3% below 1 MC 5% above 1 MC
314	15 cycles to 6 megacycles	With probe, 1 millivolt to 1000 volts. Without probe, 100 microvolts to 1 millivolt	With probe, 11 megs. shunted by 6 mmfds. Without probe, 1 meg. shunted by 25 mmfds.	3% except 5% above 3 megacycles



MODEL 220 A
BATTERY OPERATED DECADE
AMPLIFIER gives exact voltage gains of 10 or 100,
permitting a corresponding
increase in voltmeter sensitivity
from 10 to 150,000 cycles.



#### PRECISION SHUNT RESISTORS

Four different types of Precision Shunt Resistors, varying from 1 to 1000 ohms, permit the Voltmeters to be used to measure currents from 1 ampere to one-tenth of a microampere.

#### MULTIPLIERS

Five different types of Multipliers, whose input resistance varies from 5 to 40 megohms, permit the voltage range of the Voltmeters to be increased 10 or 100 times.

1300A



1300B

BALLANTINE pioneered circuitry and manufacturing integrity assure the maximum in SENSITIVITY • ACCURACY • STABILITY

- All models have a single easy-to-read logarithmic voltage scale and a uniform DB scale.
- The logarithmic scale assures the same accuracy at <u>all</u> points on the scale.
- Multipliers, decade amplifiers and shunts shown above extend range and usefulness of voltmeters.
- Each model may also be used as a wide-band amplifier.

For further information, write for catalog

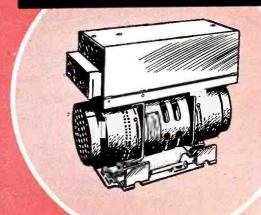
BALLANTINE LABORATORIES, INC.

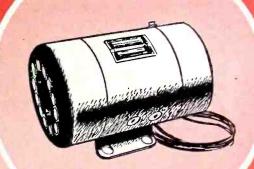
100 FANNY ROAD BOONTON, N. J.

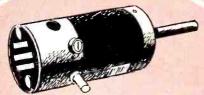
# Bendix ROTARY POWER SUPPLIES

DYNAMOTORS, INVERTERS, MOTOR GENERATORS

Designed to meet the EXACT Requirements of Each Application!







Whenever DC is available,

Bendix will tailor a complete

power supply or motor from standard,

mechanical parts to provide the exact voltage—either AC or DC—called for by your equipment.

**DYNAMOTORS** — essentially DC transformers — will supply one, two, or three DC outputs for direct application to electronic circuits. Radio filtering and voltage regulation are available. Compact, efficient units can be provided with outputs of 10 to 500 watts.

**INVERTERS** — will produce an AC output for supplying transformer-type power supplies or operating power for servos, synchros, etc. Standard models to work from 28 volts and deliver 115 volts, 400 cycles, single or three phase are available in ratings up to 2500 VA.

Frequency and voltage are closely regulated in all models.

MOTOR GENERATORS—are available for furnishing combinations of DC and AC and for various special requirements.

**MOTORS** — for performing mechanical functions are designed by Bendix engineers for the most efficient utilization of space and power.

YOUR POWER SUPPLY PROBLEM will receive prompt engineering attention at Bendix. Please send a complete description of the performance required and the condition under which the supply must work. You will be answered with detailed information and specific recommendations for the most practical solution to your problem.

BENDIX AVIATION CORPORATION
RED BANK DIVISION

EATONTOWN, NEW JERSEY

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

Bendix
AVIATION CORPORATION

# Bandis

# RELIABLE ELECTRON TUBES



● Bendix Reliable Electron Tubes meet the most rigid requirements for long, stable life under extreme operating conditions. Their construction is "ruggedized" to withstand severe mechanical shock and vibration and the materials and processes used in their manufacturing assure extra long, stable operation. Every Reliable Tube is exhausted to an extremely "hard" vacuum, and each tube is aged before shipment by operation for 50 hours at full rating under vibration.

Reliable Receiving Tube types include RF Pentodes, Twin Triodes, Beam Power Amplifiers, and Full Wave Rectifiers.

Bendix Electron Tube research has also produced many special purpose tubes. In addition to receiving types, tubes in the following categories are available:

CHRONOTRONS
CONVECTRONS
COLD CATHODE TYPES
COUNTER TUBES
KLYSTRONS

MINIATURE TUBES
NOISE DIODES
SPARK GAPS
THYRATRONS
VOLTAGE REGULATORS

Whenever a special tube problem arises, consult Bendix engineers. Your requirements will receive prompt attention.

#### BENDIX AVIATION CORPORATION

RED BANK DIVISION EATONTOWN, NEW JERSEY

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ONE OF ITS KIND

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design engineers and
purchasing agents will find
a complete, accurate, and
up-to-date list
of the manufacturers
of all types of electronic
and allied products . . .
components and complete
equipment.

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When buying, or requesting product information be sure to mention . . .

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# SINCEROS

**Precision-Built by** 

## ECLIPSE-PIONEER



● For more than 18 years Eclipse-Pioneer has been a leader in the development of high precision synchros for aircraft, marine and industrial applications. Today, thanks to this long experience and specialization, Eclipse-Pioneer Autosyn\* Synchros give you a guaranteed accuracy of 15 minutes (maximum) on all individual AY-200 type 400 cycle transmitters, differential generators, control transformers and resolvers. Furthermore, this phenomenal accuracy applies to all production units in this series. Where special applications are involved, Eclipse-Pioneer will supply Autosyn Synchros with an even finer degree of accuracy. In addition, Eclipse-Pioneer produces a precision-built Pygmy (AY-500 series) weighing only 1¾ oz. and no larger in diameter than a twenty-five cent piece. For high precision at lowest cost—call on Eclipse-Pioneer.

\* REG. TRADE MARK BENDIX AVIATION CORPORATION

LOOK FOR THE PIONEER MARK OF QUALITY
REG. U. S. PAT. OFF.

#### **Typical Performance Characteristics**

1	One AY-201-3 Driving		One AY-500-3 Driving
	One AY-500-3	Two AY-500-3	One AY-500-3
	Control Transformer	Control Transformers	Control Transformer
INPUT Voltage Frequency Current Power Impedance	26-volts, single-phase	26-volts, single-phase	26-volts, single-phase
	400 cycles	400 cycles	400 cycles
	88 milliamperes	110 milliamperes	55 milliamperes
	0.8 watts	1.2 watts	0.9 watts
	105 + j280 ohms	100 + j220 ohms	290 + j370 ohms
Voltage Max. (rotor output) Voltage at null Sensitivity Voltage phase shift System accuracy (max. possible spread)	17.9 volts 40 millivolts 310 millivolts/degree 23 degrees 0.6 degrees	16.2 volts 40 millivolts 280 millivolts/degree 26 degrees  0.6 degrees	14.1 volts 40 millivolts 245 millivolts/degree 44 degrees 0.75 degrees

Other E-P precision components for servo mechanism and computing equipment:

Servo motors and systems • rate generators • gyros • stabilization equipment • turbine power supplies • remote indicating-transmitting systems and special purpose electron tubes.

For detailed information, write to Dept. I

#### ECLIPSE-PIONEER DIVISION of

TETERBORO, NEW JERSEY

Bendix AVIATION CORPORATION

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# GYROS

Designed, Developed, and Produced by

### ECLIPSE-PIONEER



Eclipse-Pioneer, one of the world's largest producers of Gyros, has developed a series of direct reading and remote transmitting Gyros for radar stabilization, navigation, remote compass, automatic pilot, and other similar airborne applications.

Typical of these Gyros is the type 14104, a two axis, gravity erected Vertical Gyro Transmitter designed for use as a remote vertical reference where vertical stabilization is required. The instrument is essentially an electrically driven, vertical-seeking gyro with separate Autosyn\* transmitter pick-offs on the pitch and bank axes. Sealed in an aluminum case, protection against environmental conditions is accomplished by means of a double "O" ring labyrinth air tight seal. Signals are brought out on sealed headers (terminal panels) and caging and uncaging is obtained thru D.C. solenoids. Provisions are incorporated within the case to reduce bank error encountered in turns. A means of sensing turns is required in order to employ this feature.

\* REG. TRADE MARK OF BENDIX AVIATION CORPORATION

LOOK FOR THE PIONEER MARK OF QUALITY

#### Specifications for Eclipse-Pioneer Gyro Type 14104

Dimensions: 61/8" diam., 63/4" high . Weight: 61/4 lbs.

Operational limits: 360° in roll and pitch with controlled tumbling of the pitch axis at near 90°. Erection device: A gravity sensitive erection system maintains the gyro in a vertical position to within ±¼° of vertical.

Caging: From any position at full rotor speed in less than 45 seconds.

#### **Power Requirements**

Gyro rotor: 115 volts, 400 cycle, 3 phase, 25 VA . Gyro caging: 28 volts DC, 5 amperes. Gyro turn error compensation: 115 volts, 400 cycle, Single phase 40 MA. Pickoff excitation: 26 volts, 400 cycle, Single phase, 0.34 watts each.

#### Bank and Pitch Pickoff Information

Input voltage: (Nominal rotor excitation): 26 volts, 400 cycle, Single phase.

Input current: 50 milliamperes.

Stator output-max. (line to line): 11.8 volts. Input impedance (stator open): 139 + J510 ohms. Sensitivity: 220 millivolts x degree sine of

Stator resistance—DC (line to line): 34 ohms.

displacement angle. Null voltage-max.: 70 millivolts.

Rotor resistance-DC: 48 ohms.

Phase shift (rotor to stator): 4°

For detailed information, write to Dept. I

#### ECLIPSE-PIONEER DIVISION of

TETERBORO, NEW JERSEY

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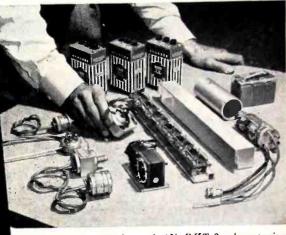
# BUYERS' GUIDE

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extensive trade name
listings
geographical listings
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Complete
Telemetering
Facilities
from
BendixPacific



This complete 6 channel AN/DKT-3 telemetering system with pickups weighs less than 12½ pounds.

Bendix-Pacific telemetering facilities can provide you with any phase of a complete instrumentation service.

These include:

### AIRBORNE COMPONENTS

The standard AN/DKT 3 subminiature telemetering components which remotely measure and indicate acceleration, motion and position, pressure, strain, temperature, vibration, velocity, voltage and current. Transmitted power up to 15 watts is available.

### RECEIVING STATIONS...

New instrumentation equipment designed to receive frequency-modulated signals employing continuous or commutated subcarriers. A maximum of 14 continuous subcarriers can be received simultaneously and up to 27 signal channels can be separated from one commutated subcarrier, each signal can be recorded as a continuous trace.

#### ENGINEERING...

Application engineering to adapt the Bendix-Pacific System to each specific problem.

#### INSTALLATION...

Supervision of initial installation.

#### FLIGHT TESTING...

Flight testing, reduction and analysis of data.

WRITE FOR COMPLETE INFORMATION

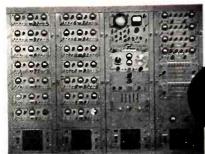


Photo at left shows typical 14 band Bendix Receiving Station.

Pacific Division

Bendix Aviation Corporation

O MEASURE. TO WARN .. TO INDICATE .. AT A DISTANCE

# the ideal insulation

### INJECTION MOLDED GRADES:

#### MYCALEX 410

MYCALEX 410 IS APPROVED FULLY AS GRADE L-4B UNDER NATIONAL MILITARY ESTABLISHMENT SPECIFICATION
JAN-1-10 "INSULATING MATERIALS, CERAMIC, RADIO, CLASS
L." CAN BE INJECTION MOLDED, WITH OR WITHOUT METAL IN-SERTS, TO EXTREMELY CLOSE TOLERANCES.

#### CHARACTERISTICS

Power Factor, 1 megacycle0.0015
Dielectric Constant, 1 megacycle9.2
Loss factor, 1 megacycle
Dielectric Strength, volts/mil400
Volume Resistivity, ohm-cm1x1015
Arc Resistance, seconds250
Impact Strength, Izod
ftlb. /in. of notch0.7
Max. Safe Operating Temp. C350
°F660
Water Absorption, % in 24 hoursnil
Coefficient of Linear
Expansion, °C11x10-6
Tensile Strength, psi6000
Compression Strength, psi 25000

#### **MYCALEX 410X**

MYCALEX 410X CAN BE INJECTION MOLDED, WITH OR WITHOUT METAL INSERTS, TO EX-TREMELY CLOSE TOLERANCES.

#### CHARACTERISTICS

Power Factor, 1 megacycle0.012
Dielectric Constant, 1 megacycle6.9
Loss factor, 1 megacycle0.083
Dielectric Strength, volts/mil400
Volume Resistivity, ohm-cm5x10 <sup>14</sup>
Arc Resistance, seconds250
Impact Strength, Izod,
ftlb./in. of notch0.6
Max. Safe Operating Temp., C350
°F660
Water Absorption, % in 24 hoursnil
Coefficient of Linear
Expansion,°C12x10-6
Tensile Strength, psi6000
Compressive Strength, psi28000

#### -a superior inorganic glass-bonded mica insulation featuring

- HIGH DIELECTRIC STRENGTH
- IMPERVIOUS TO OIL OR WATER 
   IMMUNE TO HUMIDITY
- LOW LOSS HIGH EFFICIENCY PERMANENT DIMENSIONAL STABILITY
  - WITHSTANDS HIGH TEMPERATURE
- FREEDOM FROM CARBONIZATION
   EXCELLENT MECHANICAL CHARACTE



AVAILABLE IN SHEETS, RODS, AND FABRICATED TO SPECIAL SHAPES

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.

#### PRODUCED IN TWO GRADES

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 injected molded to high precision.



Mycalex Low Loss UHF Tuner Tube Socket

7-Pin Minlature

Tube Socket with Four Ground Lugs

9-Pin Miniature

Snap Saddle Type Tube Socket



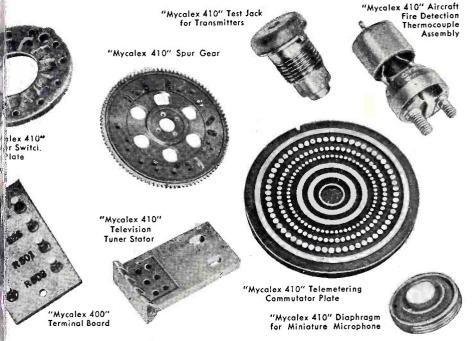
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Owners of 'MYCALEX' Patents and Trade-Marks

# ALL frequencies MY CALEX

# economical, widely applicable chines and molds to close tolerances

is a highly developed glass-bonded mica insulation backed by over a entury of continued research and successful performance. In its present e of development, MYCALEX combines every important character-anded of a modern, permanent, efficient electrical insulating material. EX is supplied in sheets or rods, can be injection or compression molded tolerance, is readily machineable, and can be fabricated in practically for shape. Dielectric losses are very low from 60 cycles to 24 kilomega-r second, arc resistance, volume resistivity and other electrical character-set the most rigorous requirements. Physical properties are equally acous.



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 EERS' HANDBOOK will be sent or nequest. Tells the entire EX insulation story — Contains of factual information including engineering, and practical manudata—types of MYCALEX, ristics, properties of dielectrics, molded grades, design of molded

s, compression molded grades, f machined insulators, etc.

these data sheets cover the entire line of MYCALEX tube sockets—miniature, subminiature 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!

Available on request.

OR LITERATURE, INFORMATION OR QUOTATIONS— WRITE OR WIRE 150 CLIFTON BLVD., CLIFTON, N. J.

tive Offices: 30 Rockefeller Plaza, New York 20 and General Offices: Clifton, New Jersey

### **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 megacycle0.0018 Dielectric Constant, 1 megacycle7.4
Loss Factor, 1 megacycle0.013
Dielectric Strength, volts/mil500
Volume Resistivity, ohm-cm2x10 <sup>15</sup>
Arc Resistance, seconds
Impact Strength, Izod,
ftlb./in.of notch1.85
Max. Safe Operating Temp., C370
°F700
Water Absorption, % in 24 hoursnil
Expansion,°C10.2x10-6
Tensile Strength, psi6000
Compressive Strength, psi35000

#### **MYCALEX K-10**

CHARACTERISTICS

Dielectric Constant, 1 megacycle10.6
Q Factor, 1 megacycle310
Loss factor, 1 megacycle0.034
Volume Resistivity, ohm - cm3.0x1014
Dielectric Strength, volts/mil
(0.10 in. thickness)270
Fractional Decrease of Capacitance
with Temperature Change0.0056
Fractional Increase of Capacitance
with Temperature Change0.0076
Max. Safe Operation
Temperature, C400

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.





under vibration

under strain

in limited space

for fine adjustment

in inaccessible places

needing strength in small sizes

in compact design

for maximum holding power

... use genuine

ALLEN OHEAD

socket screws and keys

 $\checkmark$  . . . . for fastening thin pieces

Class 3 fit, quality controlled uniformity and strength, wide range of standard sizes.



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# SIVIALL INIETAL STAIVIPINGS ATTON ACGUYER

For over 33 years P-M has been a dependable source for small metal stampings. An extensive modern plant, complete equipment, specialized engineering experience and toolmaking skill combine at P-M to produce stamped metal parts accurately, economically, promptly. Moderate die charges. Modern facilities for large volume production. Special stamping problems are gladly accepted; recommendations for the most efficient and economical solutions are made promptly. Send prints for your next stamping job to P-M.

#### TERMINALS for ELECTRIC WIRES

Being long experienced specialists in the terminal field, we have dies to produce over 400 different kinds of separate terminals, and every modern facility to meet your standard or special requirements. We also provide terminals in continuous form, supplied on reels, with machine for attaching and soldering tandem terminals to wires in one continuous operation. Send for folder.

#### PATTON-MacGUYER COMPANY

EDGEWOOD STATION, PROVIDENCE 5, R. I.

### VARIABLE INDUCTANCE COILS

Series 102 Covers 2-180 µH Range Completely



Ideal for

- Video peaking
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- RF & IF circuits
- Compact plastic form

Features

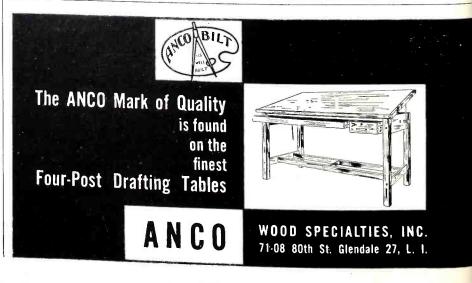
- Two extra terminalsIndividually boxed
- Add Series 102 Coils to your component stock

Save engineering time.

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NORTH HILLS ELECTRIC CO.

Box 427, Great Neck, N.Y., Phone BAyside 4-0540



## SUPERIOR ELECTRIC COMPANY

#### THE ONE SOURCE FOR VOLTAGE CONTROL EQUIPMENT

The Superior Electric Company offers equipment for most voltage control applications. In the shop, laboratory or inspection department or any other place voltage must be controlled—you can look to SUPERIOR for precision perfected voltage control apparatus to suit your needs.

# VARICELL D-C POWER SUPPLIES

The VARICELL operates from an a-c source to deliver a stabilized and regulated variable d-c output voltage. Any setting of output voltage is unaffected by line voltage changes or load current variations. For any setting in the range of 6 to 30 volts, R.M.S. ripple voltage never exceeds 0.1 volts, stabilization and regulation is  $\pm$  0.25 volts. A-C input: 95-135 volts, 60 cycle, single phase; D-C output: 0-30 volts, 15 amperes.

WRITE FOR VARICELL BULLETIN V1051

TYPE 13015



## VOLTBOX A-C POWER SUPPLIES

This compact, portable source of variable a-c voltage is widely used in laboratories and in inspection, test and plant maintenance departments. All necessary components are housed in the castaluminum case. Connected to a 50/60 cycle, single phase source, turning the "ON-OFF" switch to "ON", snapping the line-load switch to "LOAD" and rotating the knob produces a continuously adjustable output voltage at the output receptacles and binding posts. Various models are offered in ratings to suit each requirement.

WRITE FOR BULLETIN P550



Superior 5-WAY BINDING POSTS

This versatile binding post offers 5 different methods of connection—permanent clamping, spade lug, clip-lead, banana plug, or looping and clamping. Ruggedly built of the finest materials, it is easy to install and use. Complete insulation is provided with a current capacity of 30 amperes and a working voltage of 1,000 volts. Available in red or black.

#### WRITE ON YOUR LETTERHEAD FOR A FREE SAMPLE

Long active in the development of precision voltage control apparatus, The Superior Electric Company is thoroughly familiar with every aspect of this

important subject. Sound, practical advice will gladly be given on any type of installation. A complete engineering service is available to develop special adaptations or new designs for funusual applications. Equipment for defense orders will be engineered and manufactured to meet government specifications.



5-WAY BINDING POST

THE SUPERIOR ELECTRIC COMPANY
BRISTOL, CONNECTICUT



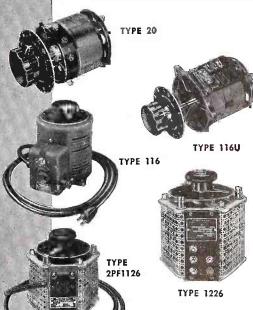
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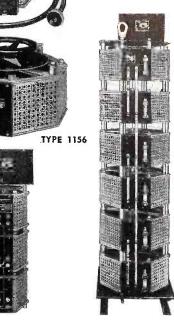
### WERSTAT

#### VARIABLE TRANSFORMERS



POWERSTAT variable transformers are autotransformers of toroidal core design with a movable brush tap which rotates to deliver a continuously adjustable output voltage from a-c power lines. Features of every POWERSTAT are excellent regulation, high efficiency, conservative ratings, zero waveform distortion, rugged mechanical construction, smooth control and standard mountings. Numerous types are available for 115, 230 and 460 volts, single and three phase operation in ratings from 150 VA to 100 KVA. Most models are offered for either manual or motor-driven operation. In addition, oil-cooled and explosion-proof types are available. In the chart are listed some of the standard types. If one of the units listed does not suit your particular need, consult us. There's a POWERSTAT for every variable a-c voltage control requirement.





**TYPE MW1156-6** 

Line Volt.	Out- put Volt.	Max. Out- put Amp.	Out- put KVA	Fre- quency	Туре	Appro Net Wt. (Lbs.)	ximate Shipp. Wt. (Lbs.)	**Standard Motor Speeds
1,20	0-132	1.25	0.165	\$60	*10	1.8	3	
115	0.135 0.135 0.135 0.135 0.135 0.135 0.135 0.135 0.135 0.135 0.135 0.135	3.0 7.5 7.5 7.5 7.5 15.0 15.0 30.0 45.0 45.0 90.0 135.0 180.0 270.0	0.4 1.0 1.0 1.0 2.0 2.0 4.0 6.1 6.1 12.1 18.2 24.3 36.4	\$60 \$0,60 \$0,60 \$0,60 \$0,60 \$0,60 \$0,60 \$0,60 \$0,60 \$0,60 \$0,60 \$0,60 \$0,60	*20 *116U 116 3PF116 3TF116 1126 F1126 1126-2P 1156-2P 1156-3P 1156-4P 1156-6P	4 10 11 11 11 21 21 48 73 74 150 225 330 500	6 11 12 12 12 25 25 55 80 81 170 295 420 600	
230	0.270 0.270 0.270 0.270 0.270 0.270 0.270 0.270 0.270 0.270 0.270 0.270 0.270 0.270 0.270	3.0 3.0 3.0 7.5 7.5 9.0 9.0 28.0 28.0 45.0 84.0 112.0	0.81 0.81 0.81 2.0 2.4 4.0 7.5 7.5 12.1 22.7 30.2 45.3	50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60	*216U 216 3F216 3F216 3T6216 *116U-2S *116-2S 1226 F1226 F1256 F1256-2S 1256-2P 1256-3P 1256-4P 1256-6P	10 11 11 17 18 25 25 45 73 74 144 150 225 330 500	11 12 12 12 22 23 29 29 52 80 80 164 170 295 420 600	
460	0-540 0-540 0-540 0-540 0-540 0-540	3.0 3.0 9.0 28.0 56.0 84.0	1.6 1.6 4.9 15.1 30.2 45.3	50/60 50/60 50/60 50/60 50/60 50/60	216U-2S 216-2S 1226-2S 1256-2S 1256-4PS 1256-6PS	17 18 53 144 330 500	22 23 60 164 420 600	W,X,Y,Z W,X,Y,Z W,X,Y W,X,Y
Three Phase	0-135 0-135 0-135 0-135 0-135 0-135 0-135	3.0 7.5 7.5 15.0 45.0 90.0 135.0	0.7 1.8 1.8 3.5 10.5 21.0 31.6	\$60 50/60 50/60 50/60 50/60 50/60 50/60	*20-2D *116U-2D *116-2D 1126-2D 1156-2D 1156-4D 1156-6D	9 17 18 45 144 320 490	15 22 23 52 164 410 590	W,X,Y,Z W,X,Y,Z W,X,Y W,X,Y
230	0-230 0-270 0-270 0-270 0-270 0-270 0-270 0-230 0-270 0-270 0-230	3.0 3.0 7.5 7.5 9.0 15.0 28.0 45.0 56.0 84.0 90.0	1.2 1.4 1.4 3.5 3.5 4.2 7.0 13.1 17.9 26.2 39.3 35.8	60 50/60 50/60 ‡60 \$0/60 \$0/60 50/60 50/60 50/60	20L-3Y *216U-2D *216-2D *116U-3Y *116-3Y 1226-2D 1126-3Y 1256-2D 1156L-3Y 1256-4D 1256-6D 1156L-6Y	15 17 18 26 27 53 65 144 215 320 490 500	24 22 23 36 37 60 75 164 280 410 590 600	W X Y Z W X Y Y W X Y Y W X Y
460	0-540 0-540 0-540 0-540 0-540	3.0 3.0 9.0 28.0 56.0	2.8 2.8 8.4 26.2 52.5	\$60 \$60 \$60 \$60 \$60	*216U-3Y 216-3Y 1226-3Y 1256-3Y 1256-6Y	26 27 76 215 500	36 37 86 280 600	W,X,Y,Z W,X,Y,Z 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. It 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 for full range travel. Since the driving motors are frequency sensitive, be sure to specify whether codd 10, 11 and 14 pounds to the 116-216, 1126-1226 and 1156-1256 types, respectively.



TYPE MZ1126-3Y

WRITE FOR POWERSTAT BULLETIN P 550 SUPERIOR ELECTRIC COMPANY THE

## STABILINE

Automatic voltage regulators

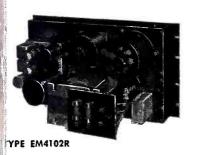
wo types of STABILINE automatic voltage regulators are built by The uperior Electric Company to meet the requirements of maintaining constant bltage to electrical equipment.

#### YPE E INSTANTANEOUS ELECTRONIC

he completely electronic type IE has no moving parts and provides instananeous correction of line voltage variations. At no load, full load or any ntermediate load, constant output voltage is maintained regardless of line uctuations. The output voltage is held to within  $\pm$  0.1 volts of nominal for ide line variations and within  $\pm$  0.15 volts of nominal for any load current r load power factor change from lagging .5 to leading 9 Waveform distoron never exceeds 3%. Standard types are listed below.

#### YPE EM ELECTRO MECHANICAL

he type EM consists of a very sensitive electronic detector controlling a motorriven POWERSTAT variable transformer which feeds a buck-boost auxiliary ansformer While not instantaneous, the type EM corrects faster than most utomatic voltage regulators. It is ideal for maintaining constant voltages to prge industrial loads or for obtaining a constant output voltage with zero aveform distortion. Features include complete insensitivity to the magnitude nd power factor of the load, no effect on system power factor, no critical djustments, high efficiency and adjustable output voltage



RATINGS TYPE IE

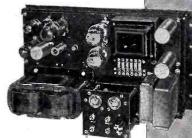




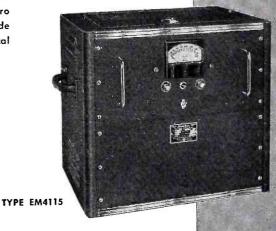
CONTROL CIRCUIT



TYPE IE51002R



TYPE IESTOIR



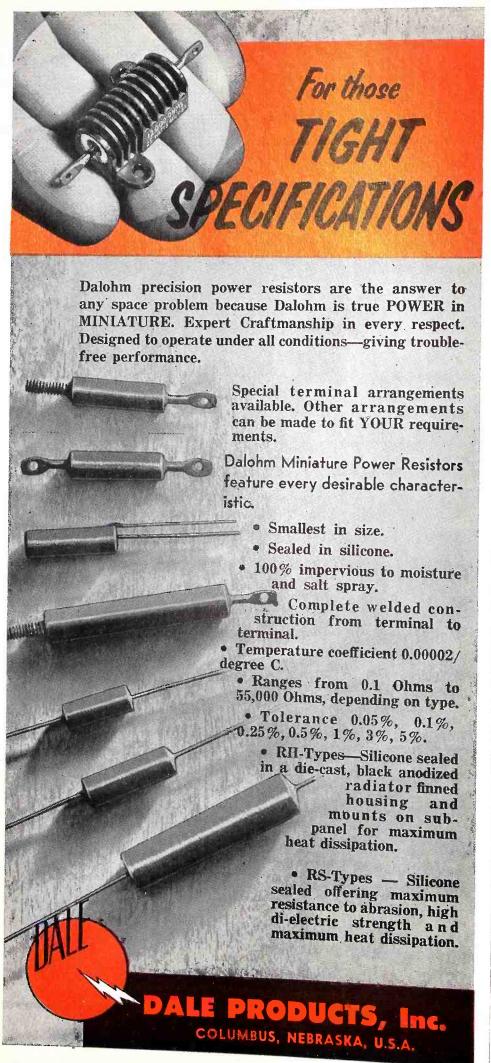
RATINGS TYPE EM

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 ± 10%	0 - 2.2		0.25	IE51002
95-135	110-120	60 ± 10%	0 - 2.2		0.25	1E51002R
95-135	110-120	60 ± 10%	0 - 4.5		0.5	1E51005
95-135	110-120	60 ± 10%	0 - 4.5		0.5	1E51005R
95-135	110-120	50 ± 10%	0 - 4.5	.5 lagging	0.5	IEL51005
95-135	110-120	50 ± 10%	0 - 4.5		0.5	IEL51005R
195-255	220-240	50 ± 10%	0 - 2.2		0.5	IEL52005
195-255	220-240	50 ± 10%	0 - 2.2	to.	0.5	IEL52005R
95-135	110-120	60 ± 10%	0 - 8.5		1.0	IE5101
95-135	110-120	60 # 10%	0 - 8.5		1.0	1E5101R
95-135	110-120	50 ± 10%	0 - 8.5	.9 leading	1.0	IEL5101
95-135	110.120	50 ± 10%	0 - 8.5		1.0	IEL5101R
195-255	220-240	50 ± 10%	0 - 4.5		1.0	IEL5201
195-255	220-240	50 ± 10%	0 - 4.5		1.0	IEL5201R
95-135	110-120	60 ± 10%	0 - 22.0		2.5	1E5102
95-135	110-120	60 ± 10%	0 - 22.0		2.5	1E5102R
195-255	220-240	60 ± 10%	0 - 11.0	1	2.5	1E5202
195-255	220-240	60 ± 10%	0 - 11.0		2.5	1E5202R
195-255	220-240	50 ± 10%	0 - 11.0		2.5	IEL5202
195-255	220-240	50 ± 10%	0 - 11.0	1	2.5	IEL5202R
95-135	110-120	60 ± 10%	0 - 43.5	1	5.0	1E5105
195-255	220-240	60 ± 10%	0 - 22.0		5.0	1E5205

Nominal Output Voltage	Input Voltage Range	Output Voltage Range	Output Current (Amperes)	Output KVA	Туре
Single Pha	50				
115	95-135	110-120	17.5 52.0 130.0	2.0 6.0 15.0	EM4102 EM4106 EM4115
230	195-255	220-240	32.5 120.0	7.5 27.5	EM4207 EM4228
460	400-520	420-460	15.0 40.0	6.6 17.6	EM4407 EM4418
Three Pha 230	195-255	220-240	25.0 38.0 50.0 113.0 175.0	10.0 15.0 20.0 45.0 70.0	EM6210Y EM6215Y EM6220Y EM6245Y EM6270D
460	400-520	420-460	16.0 22.0 33.0 66.0 100.0	12.5 17.5 25.0 50.0 75.0	EM6412Y EM6417Y EM6425Y EM6450Y EM6475Y
	420-500	420-460	131.0	100.0	EM64100Y

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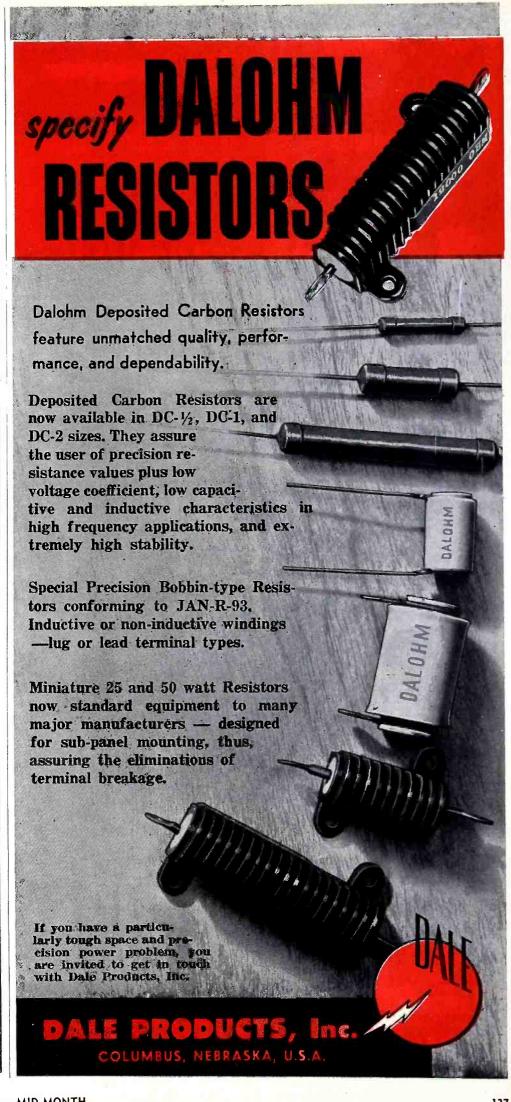
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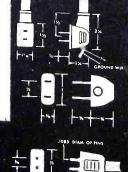
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### SPERRY GYROSCOPE COMPANY

#### KLYSTRON TUBES and MICROLINE† INSTRUMENTS

Stemming from its sponsorship of the development of the klystron in 1939, Sperry has had vast experience in the manufacture of these tubes for transmitting, for multiplying and for use as local oscillators. 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.

#### LYSTRONS

Frequency

уре	Description		Rang	quei ge in	MC	Power	Voltag	e Voltage	Fittings
RL17	Reflex		750	to 99	0	5w	1000	0 to -1500	1-SKL
23	Oscillator Reflex		950	to 11:	50	5w	1000	0 to -1500	2-SKL
L7C	Oscillator Reflex		1850	to 21	60	10w	1000	0 to -1000	1-Type N
(41	Oscillator Reflex		2660			250mw*	1250	0 to -750	2-SKL
	Oscillator								1-SKL
42	Reflex Oscillator		3300			250mw*	1250	0 to -750	
43	Reflex Oscillator	4	1200	to 57	00	250mw*	1250	0 to -750	1-SKL
44	Reflex Oscillator		700	to 75	00	250mw*	1250	0 to -750	1-SKL
39	Reflex		7500	to 10	,300	250mw*	1250	0 to -750	1-SKL
€C-64		3	3950	to 59	30	1.2w	900	0 to -500	UG149A/U
ries C-43	Oscillator Reflex		925	to 81	00	1w	750	0 to -300	UG344/U
ries 1U-55	Oscillator Reflex	14	,000	to 17	500	25mw	300	0 to -150	UG419/U
	Oscillator								
22	Amplifier/ Oscillator		3300			20w*	3000	none	4-SKL
C-19	Amplifier/ Oscillator		5000	to 63	00	6w	625	none	2-Waveguid
S28	Cascade Amplifier	** 2	2600	to 28	00	225w	4000	none	1½″x¾″ 2-SKL 1″-32 specia
35	Cascade	1	2730	to 33	30	25w	3000	none	3-SKL
C41	Amplifier Cascade Amplifier	3	3700	to 42	00	10w	750	none	2-BNC 1-Waveguid (WR-229)
C9G	Cascade	** /	1970	to 50	34	9w	1000	попе	2-BNC 1-SKL
C33	Amplifier Cascade Amplifier	** /	1800	to 53	00	500w	5200	none	2-BNC 1-Waveguid 2"x1"
L39	Pulsed Cascade An		960	to 12	15	30 kw	20,000	none	2-BNC 1%" coaxi
X30	(1% duty c Pulsed Amplifier	**	9100	to 95	500	325 w	5000	none	(female) 2-Waveguid 1"x½"
X22	(3.5% duty Pulsed Amplifier	** (	9100	to 95	00	7.5kw	17,000	none	2-Wavegui- 1"x1/2"
34	(2.5% duty Oscillator-	cycle	27 <b>3</b> 0	to 33	130	14w	1900	попе	2-SKL
47	Buffer Frequency		250	to 28	0 in	140mw	1000	none	4-SKL
1527	Multiplier Frequency	**	250	to 27		350mw	1000	none	2-BNC
1C11	Multiplier Frequency	**		to 27 to 87	'00 out '5 in	400mw	1000	none	1-SKL 2-BNC
ries 1X32	Multiplier AmpFreq.	**	3750	to 60	100 out 250 in	1.5w	1000	попе	1-SKL 1-BNC
IAJZ	Multiplier	**			,500 out		2000	110113	1-SKL 1-Wayegui
		**	4700		noo :-	C00	1500	mome	1"x½" 1-BNC
ИK40	AmpFreq. Multiplier	**23			200 in 5,000 out	600mw	1500	none	1-SKL
									1-Waveguio

Output Beam Reflector

#### \*Minimum Output Power.

#### BARRETTER AND THERMISTOR MOUNTS

Model	Description	Bar- retter Type	Fre- quency Range-kmc	Max. VSWR	Fitting Input	s Output
148	1/8" Coaxial (tunable)	811	.5-2.5	2.0	UG-46/U	UHF
163	Type N Coaxial	821	2.5-2.7	1.8	Type N Plug	
85	Type N Coaxial	821	2.7-2.9	1.8	Type N Plug	
164	Type N Coaxial	821	2.9-3.1	1.8	Type N Plug	
285	Type N Coaxial	821	3.1-3.3	1.8	Type N Plug	
	2"x1" Waveguide	821	3.7-4.5	1.5	UG-149A/U	UHF
	2"x1" Waveguide	821	4.6-5.65	1.5	UG-149A/U	UHF
	1½"x¾" Waveguide	821	5.3-6.6	1.7	UG-344/U	UHF
	1½"x¾" Waveguide	821	6.0-7.6	1.5	UG-344/U	UHF
184	1"x½" Waveguide	821	8.5-9.6	1.5	UG-39/U	UHF
	1"x½" Thermistor Waveguide	-	8.5-9.6	1.5	UG-39/U	BNC

#### BARRETTER ELEMENTS

811 125 OHMS (see Mounts) 821 200 OHMS (see Mounts)

#### IMPEDANCE METERS

Model	Frequency Range-kmc	Reading Accuracy	Transmission Line Size	Detector Element	Flang Input	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"x11/2"	1N21B*	UG-214/U	UG-214/U
103B	3.95-6.0	0.1mm	2"x1"	1N23B*	UG-149A/U	UG-149A/U
116A	3.5-7.0	0.1mm	%" Coaxial	1N23B*	UG-141/U	UG-140/U
201	5.3-8.2	0.1mm	11/2"x3/4"	1N23B*	UG-344/U	UG-344/U
145	8.1-12.4	0.1mm	1"x1/5"	1N23B*	UG-39/U	UG-39/U
320	18.0-26.5	0.01mm	1/2"x1/4"	1N26	UG-425/U	UG-425/U
346	26.5-40.0	0.01mm	.360"x.220"	1N53	UG-381/U	UG-381/U

<sup>\*</sup>The Model 821 barretter element can also be used.

#### IMPEDANCE TRANSFORMERS

Model	Type	Description	Frequency Range-kmc	Wax. VSWR	Fittings
363	Double-Slug	1/8" Coaxial	.665-3.7	5-6	UG-46/U and UG-45/U
34A	Triple-Stub	%" 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"x11/2"	2.6-4.0	10	UG-214/U
109B	Double-Slug Waveguide	2"x1"	3.95-6.0	8-14	UG-149A/U
117B	Susceptance Waveguide	2"x1"	3.95-6.0	40	UG-149A/U
202	Susceptance Waveguide	1½"x¾"	5.3-8.1	40	UG-344/U
178	Susceptance Waveguide	1"x½"	8.1-12.4	40	UG-39/U
146	Double-Slug Waveguide	1"x½"	8.1-12.4	8-14	UG-39/U
347	Susceptance Waveguide	0.360″x0.220″	26.5-40.0	35	UG-381/U

<sup>\*</sup>Pretuned by manufacturer to center frequency specified by customer. An individual tube has only trimmer tuning.

<sup>(</sup>See Adapter Section for klystron tube fittings).

#### FREQUENCY METERS

Model	Description	Type*	Frequency Range-kmc	Absolute Accuracy	Fitting R-F	s 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
27A	Coaxial	T	3.5-6.5	1/1000	Type N	UHF
28B	Cavity	T&A	4.01-6.0	1/10,000	UG-149A/U	UHF
207	Coaxial	T	5.3-8.1	1/2000	Type N	UHF
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	
349	Cavity	T&A	19.0-26.0	1/1000	UG-425/U	
350	Cavity	T&A	26.5-39.0	1/1000	UG-381/U	
126	Coaxial	A	8.1-10.2	1/2000	UG-39/U	
138A	Cavity Direct Reading	Ä	8.43-9.66	1/4000	UG-39/U	

<sup>\*</sup>T—Transmission, A—Absorption

#### DIRECTIONAL COUPLERS

Model	Description	Frequency Range-kmc	Attentua- tion-db	Fittlngs
517	1/8" Coaxial	.2448	20-30-40	UG-46/U*
519	%" Coaxial	.4896	20-30-40	UG-46/U*
480	%" Coaxial	.96-1.99	20-30-40	UG-46/U*
467	%" 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
		4.0-6.0	30	UG-149A/U
322	2"x1" Waveguide	4.0-6.0	40	UG-149A/U
209	1½"x¾" Waveguide	5.3-8.1	24	UG-344/U
237	11/2"x3/4" Waveguide	5.3-8.1	30	UG-344/U
235	1"x1/2" Waveguide	8.1-12.4	20	UG-39/U
236	1"x½" Waveguide	8.1-12.4	24	UG-39/U
234	1"x½" Waveguide	8.1-12.4	40	UG-39/U
388	0.702"x0.390" Waveguide	12.4-17.0	20	UG-419/U
413	½"x¼" Waveguide	18.0-26.5	20	UG-425/U
415	½"x¼" Waveguide	18.0-26.5	40	UG-425/U
405	0.360"x0.220" Waveguide	26.5-36.0	20	UG-381/U
712	%" Coaxial	1.08-1.30	40	UG-46/U
794	1/8" Coaxial	.83-1.05	40	UG-46/U

<sup>\*</sup>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	Attentua- tion Range-db	Wavegulde Size	Fittings
127A 294 110 216 292 134A 173 174 183 152A	Precision ± .2db Variable Variable Variable Variable Calibrated ± .5db Fixed ± .5db Fixed ± .5db Variable	29-32mc 2.6-4.0 4.0-6.0 5.3-8.1 7.0-10.0 8.5-9.6 8.5-9.6 8.5-9.6 8.1-12.4	15-95 2-16.5 0-20 2-20 2-20 2-45 3 6 10 0.5-20	3"x1½" 2"x1" 1½ "x¾" 1½ "x¾" 1"x½" 1"x½" 1"x½" 1"x½" 1"x½"	UHF UG-214/U UG-344/U UG-39/U UG-39/U UG-39/U UG-39/U UG-39/U UG-39/U
375 290	Variable Variable	12.4-18.0 3.95-6.0	0.5-20 2-20	0.702″x0.391″ 2″x1″	UG-419/U UG-149A/U

#### TERMINATIONS

Model	Description	Frequency Range-kmc	Power Capacity Watts	Max. VSWR	Fittings
637 308 105 113 214 213 150 246 401 402 495	%" Coaxial 3"x1½" Waveguide 2"x1" Waveguide 2"x1" Waveguide 1½"x¾" Waveguide 1½"x¾" Waveguide 1"x½" Waveguide 1"x½" Waveguide 1"x½" Waveguide 0.702"x0.391" Waveguide 0.360"x0.220" Waveguide 1"x½" Waveguide	.65-3.5 2.6-4.0 3.95-6.0 4.0-6.0 5.3-8.2 5.3-8.2 8.1-12.4 8.1-12.4 12.4-18.0 26.5-40.0 8.1-12.4	12 1 1 210 1 150 1 100 100 18 5	1.4 1.04 1.10 1.10 1.04 1.10 1.04 1.10 1.15 1.15 Tunable	UG-46/U UG-214/U UG-149A/U UG-149A/U UG-344/U UG-39/U UG-39/U UG-39/U UG-381/U UG-39/U

#### WATTMETER BRIDGES-SIGNAL SOURCES

Model 296B	Wattmeter Bridge* Wattmeter Bridge* Klystron Power Supply—see Klystrons Microwave Receiver F. M. Test Set (Commercial equivalent of the TS-147/B)
	Commercial Edulysient of the 15-147/D

<sup>\*</sup>See Barretter & Thermistor Section for units applicable to these bridges.

#### DETECTORS AND MIXERS

					Fittings	
Model	Description	Frequency Range-kmc	Crystal	Input	Local Osc.	Output
111A	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
360	Detector 1"x½" Waveguide	7.5-9.6	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 ½ "x¼" 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	1 N23	Type N Female	Type N	UHF
379	Mixer	8.1-12.4	1N23B	UG-39/U	Ū <b>G</b> -39∕U	UHF

<sup>\*</sup>The Model 821 barretter element can also be used.

#### ADAPTERS

Model	Description	Frequency Range-kmc	Fit	tings
352A	%" Coaxial to Type N	0-4.0	UG-45/U	Type N Jack
217	1/8" Coaxial to Type N	0-4.0	UG-46/U	Type N Jack
354A	1/8" Coaxial to 1/8" Coaxial	0-4.0	UG-45/U	UG-45/U
355A	%" Coaxial to %" Coaxial	0-4.0	UG-46/U	UG-46/U
101A	%" Coaxial to Type N	0-7.0	UG-140/U	Type N Jack
286A	%" Coaxial to BNC	0-7.0	UG-140/U	UG-290/U
398	3" to 1½" Waveguide to	2.6-4.0	UG-214/U	UG-140/U
	5%" Coaxial			
250	3"x1½" Waveguide to Type N	2.6-4.0	UG-214/U	Type N Jack
144A	3"x½" Waveguide to	2.6-4.0	UG-214/U	UG-45/U
	%″ Coaxial ¯			
248	2"x1" Waveguide to Type N	3.95-6.0	UG-149A/U	Type N Jack
100A	2"x1" Waveguide to 5%" Coaxial	3.95-6.0	UG-140/U	UG-149A/U
204	1½"x¾" Waveguide to Type N	5.3-8.2	UG-344/U	Type N Jack
251		<b>5</b> .3-7.0	UG-344/U	UG-140/U
	%" Coaxial			1 0 1 0 1
249	1¼"x%" Waveguide to Type N	<b>7</b> .0-10.0	UG-51/U	Type N Jack
167A	1"x½" Waveguide to Type N	8.1-12.4	UG-39/U	Type N Jack
486A	SKL to 1"x½" Waveguide	8.1- <b>1</b> 2.4	UG-39/U	SKL
	Transformer Adapter			
UG-27	5/U SKL Cable End Plug.			
UG-27	6/U SKL Right Angle Plug.			
UG-13	1/U SKL Type N Jack Adapter.			

#### MAGIC TEES

Model	Description	Frequency Range-kmc	Max. VSWR (Any Arm)	Min. Isolation (Shunt to Series)	Fittings
406	1"x½"	8.1-12.4	2 2	35	UG-39/U
391	0.360"x0.220"	26.5-40.0		35	UG-381/U

#### TEES AND BENDS

Model	Description	Frequency Range-kmc	Fittings
274	3"x1½" Waveguide—Series Tee	2.6-4.0	UG-214/U
275	3"x1½" 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	1½"x¾" Waveguide—Series Tee	5.3-8.2	UG-344/U
277	1½"x¾" Waveguide—Shunt Tee	5.3-8.2	UG-344/U
278	1¼"x5%" Waveguide—Series Tee	7.0-10.0	UG-51/U
279	1¼"x%" 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"x½" Waveguide—Shunt Tee	8.1-12.4	UG-39/U
170	1"x½" Waveguide—E-Plane Bend	8.1-12.4	UG-39/U
171	1"x½" 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	½"x¼" Waveguide—Series Tee	18.0-26.5	UG-425/U
395	½"x¼" Waveguide—Shunt Tee	18.0-26.5	UG-425/U
		20.0 20.0	55 120/5

#### SHORTS

Model	Description	Frequency Range-kmc	Fittings
636	%" Coaxial	.7-4.0	UG-46/U
114A	2"x1" Waveguide	3.95-6.0	UG-149A/U
203	1½"x¾" Waveguide	5.3-8.2	UG-344/U
377	1"x½" 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

# SPEED PRODUCTION

WITH PRECISION



**EQUIPMENT** 



**TYPE 238** 

#### L VECTOR IMPEDANCE LOCUS TTER for transformers, als, peizo ceramics, etc.

Iredance range is 1 megohm from + 90° ro h zero to -90°; operating frequency range in 100 cps to 100 kc. The origin can be shifted play vector impedance or vector voltage in y uadrant full scale on the 7 inch cathode ray

P-T-L Locus Plotter operates on 115V, 60 cps it and contains special electronically regulated supplies. Where permanent records are report output voltage may be connected to any ard "X"—"Y" recorder.



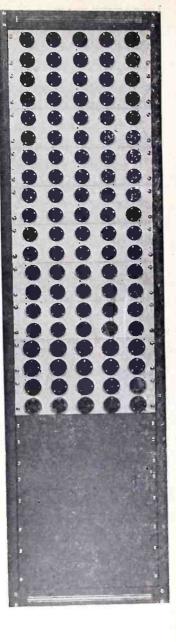
**TYPE 242** 

### 100 VACUUM TUBES FOR 50 HR. RELIABILITY TESTS

Any standard voltage and load may be quickly applied to any tube element for practically all receiving types and for many transmitting tubes by using TYPE 242 Aging Rack. Plate, filament, screen and grid voltages may be varied at will. Multiple banks of ten production-type sockets accommodate octal, small seven, noval nine or subminiature tubes. Each bank is individually controlled so that up to ten different tube types may be aged simultaneously.

Self contained filament and plate power is supplied, together with adequate bias voltages. Overload protection is included in all circuits.

Special designs available for simultaneously vibrating tubes during the aging run.





**TYPE 239** 

# P-T-L BRIDGE NULL INDICATOR FOR A-C BRIDGES

I vides simultaneous and independent indications, on a 3" cathode by ube, of both reactive and resistive unbalances. After simple witl set-up, no manual operations are required.

le amplifier has gain sufficient to give 1 inch deflection for 10 ne volts of input. At maximum sensitivity, hum level is less than 1 nievolt. Continuous tuning in 9 ranges adequately reduces harmonic res. A.V.C. is incorporated to reduce overload distortion and speed raction testing. Frequency range is 20 cps to 20 kc.

### P-T-L SYNCHRO ERROR TESTER COMPLIES WITH ARMY ORDNANCE SPEC. FXS 1066

Every 10 degrees of rotation of either Torque or Control Synchros may be checked to an accuracy of 10 seconds by reference to preci-

sion delta network. When used with a suitable positioning stand, all required electrical tests for 60 or 400 cycle synchros may be made quickly and accurately without the use of highly skilled personnel.

The various connections for transmitters, receivers and transformers are made automatically by simply rotating a master selector switch. The fundamental and total null signals are individually indicated.



**TYPE 226** 

WRITE FOR COMPLETE DATA



#### PENNSYLVANIA TESTING LABORATORY

DOYLESTOWN, PENNSYLVANIA

SPECIALIZING IN DESIGN, DEVELOPMENT AND MANUFACTURE OF ELECTRONIC PRODUCTION TESTING FACILITIES

# MINGS MICHONAVE

Shown on the next page are but a few of the many precisionengineered components made by Kings Microwave Company. The complete line offers features of advance design and dependability that assure maximum accuracy and versatility.

Our fully-staffed engineering department welcomes the opportunity of assisting you with your individual microwave and research problems. Your inquiries and requests for catalogs are invited.

отоня	MODEL No.	DESCRIPTION	FREQUENCY RANGE, MCS	TRANS, LINE SIZE	CONNECTORS	SPECIAL FEATURES
1	073	Crystal Mixer	2,600-3,400	5/8" coax.	3-UG-21B/u	1, 2, 3, 4, 11
2	434	Feed Horn	8,500-9,600	RG-52/u	1-UG-39/u	2, 5, 6, 7, 11
3	403	Wavemeter, Direct Reading	8,500-9,600	RG-52∕u	2-UG-40/u	1, 7, 8, 9, 11
4	047	Double Stub Tuner	1,000-10,000	5/8" coax.	UG-21B/v, UG-18B/v	1, 2, 3, 7, 11
5	108 51	Adapter	0-4,000	5/8" to 7/8" coax.	UG-46/u, UG-21B/u	1, 2, 3, 6, 10, 11
6	948	Antenna	75	5/8" coax.	1-UG-21B/v	3, 8, 11, 12
7	972	Mixer-TR. Assembly	2,700-2,900	5/8" coax.	3-UG-21B/u	1, 2, 3, 4, 11
8	002	Filter-Detector Assembly	2,600-3,400	5/8" coax.	1-UG-21B/u, 1-SO-239	1, 2, 3, 6, 7, 8, 11, 1
9	026 \$	Oscillator Cavity	2,600-3,300	5/8" coax.	1-UG-21B/u	1, 2, 3, 8, 11, 14
10	025	Hi Power Load	2,600-3,400	RG-48/u	UG-200/υ	7, 11, 12, 15
11	248	Antenna	2,600-3,400	5/8" coax.	UG-21B/u	1, 2, 3, 6, 11
12	165	Oscillator Cavity	1,200-1,400	5/8" coax.	UG-21B/u	1, 2, 3, 7, 11, 14,1
13	068 (	Standing Wave Indicator	4,000-6,000	RG-49/u	2-UG-149/u	1, 2, 3, 4, 7
14	138	Wavemeter	3,700-4,400	5/8" coax.	UG-21B/u	1, 2, 3, 4, 7, 8
15	040 X	E/H Tee	8,200-12,400	RG-52/u	4-UG-39/u	1, 2, 7, 11
16	106 V	Series Tee	12,400-18,000	RG-91/u	3-UG-419/u	1, 2, 7, 11
17	264 Y	E Plane Elbow	7,050-10,000	RG-51/u	2-UG-51/u	1, 2, 6, 7, 11
18	288 Y	Bidirectional Coupler	8,500-9,600	RG-51/u	2-UG-51/u, 2-UG-21B/u	
19	401 X	Waveguide Coaxial Adapter	8,500-9,600	RG-52/u	1-UG-39/u, 1-UG-21B/u	
20	134 Z	Flap Attenuator	5,850-8,000	RG-50/u	UG-344/u	1, 2, 7

#### SPECIAL FEATURES

- 1. Silver Plated
- 2. Brass Construction
- 3: All Contacts
  Beryllium Copper
- 4. Uses 1N21 B Crystal
- 5. Gold Plated
- 6. Pressurized

- 7. Enamel External Finish
- 8. Temperature Compensated
- 9. Calibrated to ±2 mcs
- 10. All Insulators Teflon
- 11. Used in Armed Services Equipment
- 12. Aluminum Construc-
- 13. Uses 1N32 Crystal
- 14. Uses 2Ç40 Vacuum Tube
- 15. Maximum Average Power 1KW
- 16. Motor Operated

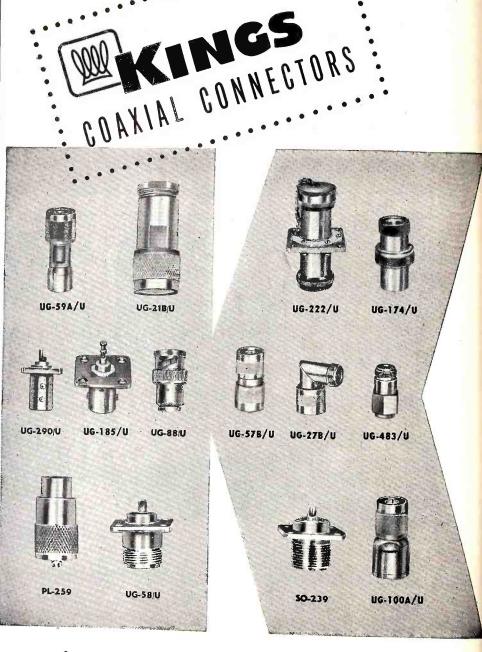
# RADIO FREQUENCY COMPONENTS



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directory

GUDE



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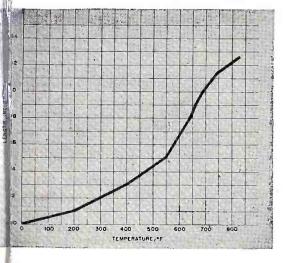
40 MARBLEDALE ROAD, TUCKAHOE, N. Y.
IN CANADA: ATLAS RADIO CORP., TORONTO

KINGS solves your insulation problems with TEFLON and

**TEXTOLITE** 

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Specifications.



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Manufacturers from coast-to-coast call on Kings to produce their insulation parts from machined bar stock made from Teflon or Textolite 1422.

Tolerances are held extremely close. Special lubricants developed by Kings will not affect the dielectric characteristics of these materials.

For most purposes of electrical insulation, in relatively high frequency fields, Textolite 1422 is recommended. Where impact strength, chemical inertness, and resistance to heat are major factors, Teflon is recommended.

Kings fabricates its own Teflon Rod and Tubing which is also available to industry in raw form. Whatever your insulation problem, you can rely on Kings. Distributors inquiries solicited.



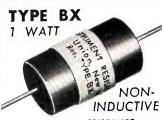
Plastics Division, BOX 217, TUCKAHOE, N.Y.

IN CANADA: ATLAS RADIO CORP., LTD., TORONTO

A COMPLETE LINE OF HIGH ACCURACY, QUALITY-BUIL

-diversified types that meet every requirement

IN-RES-CO wire wound resistors offer the circuit designer a new opportunity to meet increasingly critical requirements without excessive cost. The IN-RES-CO line is complete — resistance ranges from .01 ohm to several megohms; power ratings from a fraction of a watt to 10 watts. Included are types to counter high humidity, fungus, space limitations, temperature rise, etc. Units can be supplied either inducperature rise, etc. Offics can be supplied ertifer inductive or non-inductive, wound with 331 Alloy, Nichrome, Manganin or Karma, depending on requirements.



MAXIMUM RESISTANCE 331 Alloy ......1.5 megohm Nichrome ......1.0 megohm ..30,000 ohms Manganin ...... BODY 9/16" dia., 1" long TOLERANCE Standard 1 % , Special to 0.1 %



MAXIMUM RESISTANCE 331 Alloy .... ....750,000 ohms .....500,000 ohms Nichrome Manganin ...... 15,000 ohms BODY 9/16" dia.,11/16" long TOLERANCE Standard 1 % , Special to 0.1%

### TYPE RL 1/2 WATT

### NON-INDUCTIVE

MAXIMUM RESISTANCE 331 Alloy .....500,000 ohms Nichrome .....400,000 ohms .... 15,000 ohms Manganin ...... BODY 1/2" dia., 1/2" long TOLERANCE Standard 0.5 % , Special 0.1 %

TYPE RB Same except Bakelite shell

### TYPE SL 1 WATT

NON-INDUCTIVE

331 Alloy ..

MAXIMUM RESISTANCE .1 megohm Nichrome ......850,000 ohms

Manganin ...... 30,000 ohms BODY 1/2" dia. , 1" long TOLERANCE Standard 0.5 % , Special 0.1 %

TYPE SB Same except bakelite shell.

### TYPE SM-15



MAXIMUM RESISTANCE Karma ....200,000 ohms Nichrome ......150,000 ohms 6,000 ohms Managnin... BODY 5/16" dia., 3/8" long TOLERANCE Standard 1 % , Special to 0.1 %

### SM-30 30 WATT



.....400,000 ohms Karma Nichrome ......300,000 offins ... 12,000 ohmi Managnin .. BODY 5/16" dia., 3/4" long TOLERANCE Standard 1 % , Special to 0.1%

### TYPE WLA

1 WATT



MAXIMUM RESISTANCE 331 Alloy ......15,000 ohms Nichrome ...... 8,000 ohms Manganin ...... 2,500 ohms

BODY 3/16" dia., 1" long TOLERANCE Standard 1 %

TYPE WLAN NON-INDUCTIVE 50 % lower max. res.

### TYPE WLA 5/8 1/2 WATT



### INDUCTIVE

MAXIMUM RESISTANCE 331 Alloy ......7,500 ohms Nichrome 4.000 ohms Manganin ..... .....1,250 ohms

BODY 3/16" dia., 5%" long TOLERANCE Standard 1 %

TYPE WLAN 5/8 NON-INDUCTIVE 50 % lower max, res.

### SPACE



### IR INDUCTIVE

IR 107 1200 IR 187 2500 IR 218 IR 125 3500 IR 250 120 IR 375 28000

TYPE IRN (NON-INDUCTIV 50% lower max. res.

### INSTRUMENT RESISTORS CO.

COMMERCE AVENUE UNION, NEW JERSEY



### -resistor manufacturers exclusively

IN-RES-CO facilities are devoted exclusively to the development and manufacture of quality resistors for the electrical and electronic industry. This specialization, dating back over 23 years, is complete assurance of highest product quality. Why not specify IN-RES-CO on your next job.

APPLICATION-DESIGNED RESISTORS



### TIVE COMPONENTS FOR EVERY APPLICATION



M RESISTANCE 250,000 ehms .200,000 ohms 8,000 ohms " dia.,15/32" long

LERANCE 5 % . Special 0.1 % PE P-IL ept radial leads

### TYPE P-2 1/2 WATT

NON-INDUCTIVE

MAXIMUM RESISTANCE 331 Alloy .....500,000 ohms Nichrome .....400,000 ohms Manganin ...... 15,000 ohms BODY 9/16" dia., 9/16" long TOLERANCE

Standard 0.5 % , Special 0.1 % TYPE P-2L

Same except radial leads



M RESISTANCE ..1 meachm ......850,000 ohms .. 30,000 ohms 6" dia., 1" long

LERANCE 5 % , Special 0.1 % PE P-4L ept radial leads

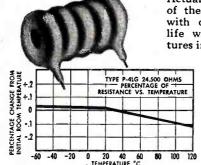


TYPE P-10L

Same except radial leads

### High Temperature Resistors

- built to exceed MIL-R93-A specifications



Actual tests prove the ability of these resistors to function with dependability and long life where ambient temperatures in excess of 235°C are en-

countered. In addition they feature a very low temperature coefficient resulting in nearly constant ohmic value over an extreme temperature range . . . from -55°C to + 125°C the total percentage change is under 0.2%.

### TYPE P-1LG

NON-INDUCTIVE MAX. RES. 2500 ohms BODY SIZE 9/16" dia., 15/32" long

### TYPE P-2LG

NON-INDUCTIVE 2 WATTS MAX. RES. 5000 ohms BODY SIZE 9/16" dia., 9/16" long

### TYPE P-4LG

NON-INDUCTIVE MAX. RES. 10,000 ohms BODY SIZE 9/16" dia., 1" long

### TYPE P-10LG

VATTS NON-INDUCTIVE MAX. RES. 25,000 ohms 6 WATTS BODY SIZE 5/8" dia., 2 1/8" long

TOLERANCE Standard 1 %, Special to 0.1 %



### TYPE ALA 4 WATTS INDUCTIVE

331 Alloy .....30,000 ohms Nichrome .20,000 ohms Manganin ..... ....10,000 ohms

BODY SIZE 3/8" dia., 1 1/8" long TOLERANCE

Standard 3 % , Special to 0.1 % TYPE ALAN NON-INDUCTIVE 50 % lower max, res.

### TYPE BLA



331 Alloy .... ......40,000 ohms Nichrome .....25,000 ohms Manganin .....12,500 ohms BODY SIZE 3/8" dia., 1 5/8" long

TOLERANCE

Standard 3 % , Special to 1 % TYPE BLAN NON-INDUCTIVE 50 % lower max, res.

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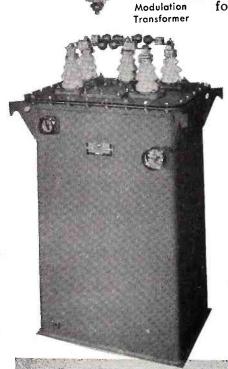


AIR...OIL...ASKAREL

MAGNATRAN PRODUCTS
PLATE TRANSFORMERS

PLATE TRANSFORMERS
FILAMENT TRANSFORMERS
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Air Cooled

Filament Transformer 45000 Volt

Test



CBS-Columbia design laboratories, Al Goldberg me important readings with the EICO Model 221 Tube Valtmeter and Model 555 Multimeter, as

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10. Exclusive EICO Make-Good Guarantee

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377K Sine & Square Wave 95 WIRED \$49.95

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950K R-C BRIDGE & WIRED \$29.95



25.95. WIRED \$34.95

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NEW 536K MULTI-METER KIT \$12.90 WIRED \$14.90 1000 ohms/volt

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ELECTRONIC INSTRUMENT CO., Inc. 84 WITHERS STREET, BROOKLYN 11, NEW YORK



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### RELAY GUIDE ALLIED'S S- Solution

ADDITIONAL FEATURES
. Available with Standard eramic Insulation.
. Available with bakelite ase and screw terminals.
. Available hermetically ealed.
. Available with auxiliary ontacts.
. Available for low ca-
. For intermittent opera- ion only.
7. Available in double- creak contact arrangement.
. Available with ceramic nsulation only.
. Listed by Underwriters' aboratories, Inc.
O. Designed to handle a naximum of 75 watts of
adio frequency up to 150 negacycles when inserted
n a properly terminated 2 ohm line.
11. MIL-R-5757A
NOTE 1.
Minimum coil data applies where shock and vibration

are not a factor.

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.

The following relays are AN Ap-

PBHN-9D PBHN-12D PBHS-9D

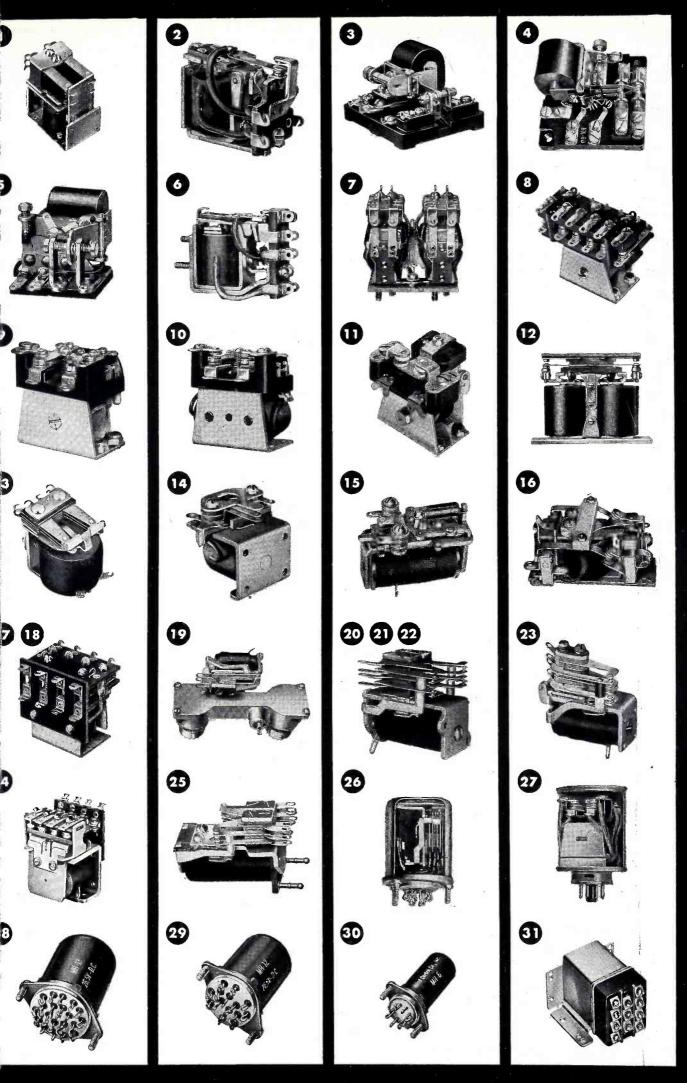
NOTE 2.

NOTE 3.

proved:

SKHN-CC-CC SKHW-CC-CC PBHN-6D PBHW-6D

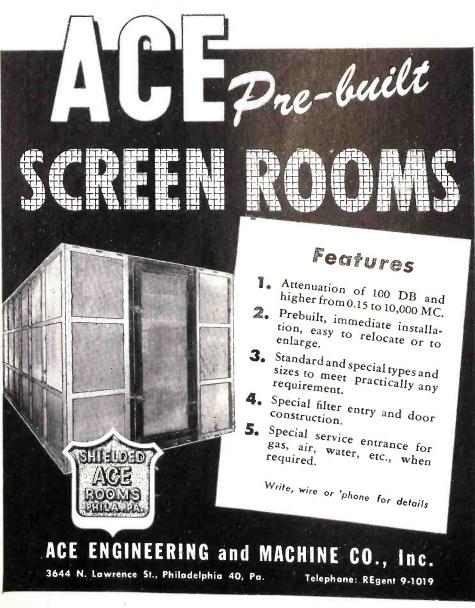
A		ED'S		R	El	A			S	<u>Ul</u>	7-		
	THE THE WAY	1221	OIL DAT	APERE	s AC.	4 0 C	47.7.7.7.	COLLS COLLS	DIMEN	sions	AFICH	SAORIO OUNCES	之
ALLES	TAR LENA	S. D. C. S.	DC.	7	1		145	Corre	16	4	16.	OUNC	1
6,	To CENT	E 10,70	ERRE	SININUA	PATED	WAT THE	*	JE2	THE	A AB	The leave	12/0	,
-		1		AC	2.9	5.0	7.0		220	2-1/16	1-1/8	2-1/10	6
0	PK	4.P.D.T.		DC AC	0.8	1,5 3.5	5.5	4500 3500	230	1-3/16	15/16	1-5/8	
2	AS	S.P.D.T.	5	DC	0.5	0.12	4.6 9.5	3485 12000	60				+
3	В	S.P.D.T.	1	DC (	0.009	0.012	4.9	12000	12 150	1-3/4	2-3/8	2-3/4	
4	ВК	D.P.D.T.		AC DC	.190	.024	4.9	12000	18	1-21/32	2-5/8	2-5/8	-
6	BG	S.P.D.T,		DC	.011	.05	4.8	5000	16	1-1/4	1-3/4	1-3/8	3
0	ВЈ	D.P.D.T.		AC DC	1.0	3.5 2.0	7.3 5.5	3370 3370	220 82	1-9/16	25/32	2-5/1	6
0	BJU E	LECT. LATCH 4.P.D.T.	E	AC DC	3.6 2.8	9.0 3.5		3370 3370	110	1-15/16	1-7/8	1-9/1	6
8	BN	6.P.D.T.	10	DC	1.5	3.5	8.0	4460	125	2-9/16	3	1-23/3	32
0	ВО	D.P.D.T.	15	AC DC	3.6	4.5	10.0	2675 5000	250 112	1-7/8	1-13/32	1-5/8	В
10	ВОҮ	D.P.D.T.	15	DC	.50	.75	7.2	10000	87	1-7/8	1-13/32	1-5/8	В
0	CN	S.P.S.T. N.O. OR N.C.	50	AC DC	7.2	9.0 3.5	14.0	700 <sup>-</sup>	230 125	2-1/2	2	2-1/-	4
12		DIFFERENTIAL D.P.D.T.	5	DC	.04	.05	5.0	8000		1-13/16	1-3/16	2-3/	8
13	ME	D.P.D.T.	2.5	DC	.2	.5	3.5	2800	60	1-3/16	13/16	1-3/8	8
0	FID	S.P.S.T.	2	DC	.08	.20	4.5	4900	31	1-3/8	1-3/16	1-3/	8
1	SW	S.P.D.T.	2.5	DC	.003	.012	4.25	13800	230	1-7/16	1-1/16	1-19/	32
16	HRX	D.P.D.T. 3.P.D.T.	15	AC	5.2	6.5	12.0	1800	230	1-1/2	2-11/16	1-5/	8
0	PO	3 & 4.P.D.T.	15	AC AC	8.0	10.0	7.0 17.2	870	230	2-1/4	(3.P.D.T		8
0	POY	3 & 4.P.D.T.	15	DC DC	0.6	1.0	8.2	10000	112	2-1/4	1-5/8 4.P.D.T		/8
0	RA	CO-AXIAL	1.25	DC	0.5	1.5	5.0	2000	55	2	2-3/16	1-3/	-
	SK-C-C	S.P.D.T. D.P.D.T.	R.F.	DC	.340	2.5	4.2	4500		1-5/16			_
	sk-cc-c	3.P.D.T.	1	DC	.545		4.2					-	_
	SK-CC-CC	4.P.D.T.				2.5		4500	-	1-1/2	31/32		
23	TSL	D.P.D.T.		DC	.755	2.5	4.2	4500		1-1/2	31/32	-	
23	PB		1	DC	0.5	1.0	5.0	2000	-	1-9/16	+	-	-
1		4.P.D.T.	10	DC	1.0	2.5	6.0	5000	-	1-13/16		+-	-
23	LK	6.P.D.T.	2	DC			7.0		110		1-3/3	2 2-7	/3:
23	SKH	Hermetically sealed relay — data same as SK											
2	воно		Н	erme	tically	sealed	d rela	y — d	ata san	ne as BO		, .	
28	MH18	6.P.D.T.	2	DC	1.0	3.0	6.0	6300	110	1-23/32	2 1-3/1	6 1-3/	/16
29	MH12	4.P.D.T.	2	DC	0.8	2.5	5.0	5000	110	1-23/32	2 1-3/6	4 1-3/	164
30	мнь	2.P.D.T.	2	DC	0.7	2.0	4.0	2000	55	1-3/4	.6	.6	5
9	PBHS	3.P.D.T.	10	DC	1.4	2.5	3.1		-	2-21/32	4	3	



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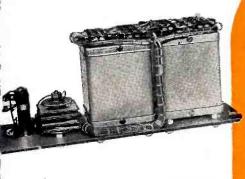
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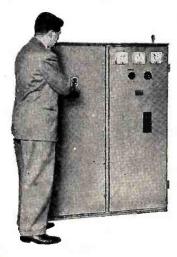
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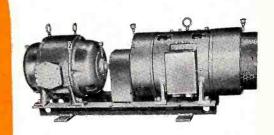
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If you have a requirement along these lines, give us a call—engineers who are really experts in their chosen fields will be glad to discuss your problems.

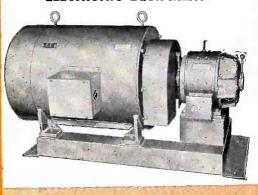


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Bogue Motor Alternators
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These units assure permeability on the order of 10 to 1 by comparison with conventional iron cores. They are much smaller, have high resistance and operate cooler.

### ▼ TV IMAGE W-I-D-T-H CONTROL TYPES

Tops for TV horizontal image deflection circuits. Give ratios of from 1 to 8 or more in low line voltage areas compared with 1-5 for ordinary high permeability cores,

# SEGMENTED DEFLECTION YOKE CORES

This popular 4-segment design is highly efficient and can readily be handled in production with little breakage.

Advitanages of Stackpole Ceramag ferrite cores include higher permeability; lower losses with higher efficiency and large operating temperatures; less corona effect; lower cost; howeights and smaller physical sizes. Maximum uniformity in electrical and mechanical characteristics is assured by exclusive Stackpole processing methods.

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for complete data including characteristics curves



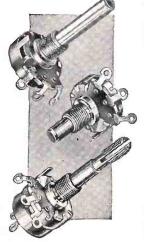
### STANDARD AND SPECIAL IRON CORES

The rapid increase in the use of molded iron cores throughout electronic engineering has resulted in large part from Stackpole engineering that has made new and improved types available in a wide assortment

of shapes, sizes and ranges. Special Stackpole manufacturing techniques assure cores of outstanding dependability and exceptionally high uniformity for exacting specifications. Write for details on any type.

STANDARD AND HIGH-FREQUENCY TYPES SIDE-MOLDED CORES
HIGH-RESISTIVITY CORES IRON CORES FOR CHOKE COILS IRON SLEEVE CORES
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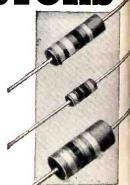


### FIXED AND VARIABLE RESISTORS

Stackpole Variable Resistors offer a fully proved selection of types and sizes for volume control, tone control, potentiometer and similar applications in values from 500 ohms to 5 megohms and in ratings to .6 watt. Recent developments include exceptionally small units conservatively rated at .5 watt and concentric shaft controls for television receiver uses.

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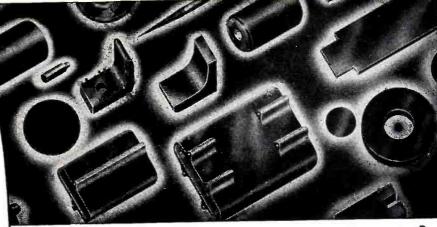
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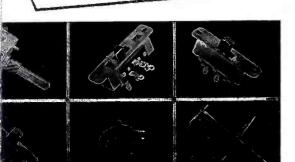


### CARBON-GRAPHITE SPECIALTIES

The unique electrical, mechanical, physical and chemical properties of Stackpole carbon, graphite and molded carbon-graphite products solve countless problems of friction, temperature, arcing, corrosion, shaft sealing, voltage regulation and others. So broad is the line of Stackpole products in this field, so extensive the facilities for "specials" that it is practical to list only a few of them here. Stackpole engineers welcome the opportunity to assist in adapting any of these products to your specific design, engineering or production requirements.



GET THIS DATA BOOK! Stackpole Booklet 40 contains a wealth of helpful data on carbon, graphite and carbon-graphite engineering uses. Write on company stationery.



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CHES including 3 ampere types

p your product—add to its convenience and "sale-with these sturdy, low-cost switches! 18 fractional ye and new 3 amp. types are available. Modification be produced economically for quantity users. Switch Bulletin RC7C. State details of your applior samples.



### SEND FOR COMPLETE DATA

Catalog RC-8 listing the complete line-up of Stackpole Electronic Component Specialties will gladly be sent on letterhead request. Write for your copy today.



### LINE SWITCHES for Stackpole Controls

Only .888" in diameter by .312" thick, the Stackpole A-10 DP ST line switch fits even the smallest Stackpole variable resistor controls. Rated 1 amp. 250 volts AC-DC or 3 amps. 125 volts it combines outstanding ruggedness with ample-sized contacts and positive contact wiping action. Ideal for long, trouble-free service for portable and auto radios and numerous other uses. A similar single-pole design, Type A-11, with or without dummy terminal is also available.





# TINY GA CAPACITORS

Stackpole GA Capacitors cost no more than "gimmicks" and assure far greater stability, higher Q, better insulation resistance and higher breakdown voltage. Moreover, they are mechanically superior and eliminate the inductive characteristic of twisted wires. Capacities of 0.5; 0.68; 1.0; 1.5; 2.2; 3.3 and 4.7 mmfd. are available. ±20% tolerance.

### STACKPOLE SPECIALTIES GA BAKELITE

COIL FORMS

Stackpole molded coil forms are the modern answer to the need for inexpensive mechanical supports for windings. Cost is low, space factor is reduced, assembly is easier and point-to-point wiring is feasible with far fewer soldered connections. Write for details and samples to your specifications.



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Insulated (Single, Twin, Triple) Non-Insulated Metal Spring (Push-Type) Panel & Telepost

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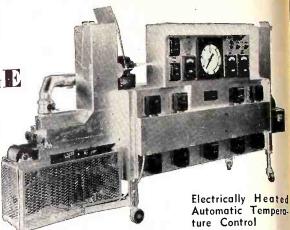


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In the Manufacture of Radio & Electronic Tubes



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This Forter-Teichmann annealer was designed especially for the Electronic industry. It has now been in operation for the past year and a half.

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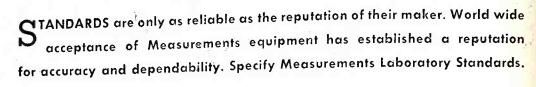
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Model 78-FM



### STANDARD SIGNAL GENERATORS

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Model 65-B



Model 80



Model 82

Model	Freq. Range	Output Range	Modulation		еп. (ii W.	n.) D.	Wgt.(ib.)	Price
65-B	75 Kc30 Mc.	0.1 micro- volt to 2.2 volts	A74. 0 to 100% 460 cps or 1000 cps External mod., 50-10,000 cps	11	20	101/4	55	\$875
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 cps 625-460 cps Fixed at approx. 30%	10	13	7	22	
78-FM	86 Mc 108 Mc.	1 to 100,000 microvolts	Deviation 0-300 Kc., 2 ranges FM. 400-8200 cps External mod. to 15 Kc.	10	13	7	25	\$375
80	2 Mc408 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30% 400 cps or 1000 cps External mod., 50- 10,000 cps	103/4	19	91/2	45	\$590
82	20 cps. to 208 Kc. 89 Kc. to 50 Mc.	0-50 volts 0.1 micro- volt to 1 volt	Continuously vari- able 0-50% from 20 cps to 20 Kc.	15	19	12	50	\$660
84	300 Mc 1000 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30%, 400, 1000 or 2500 cps Internal pulse modulator. External mod., 50-30,000 cps	12	26	10	135	\$1950
90	20 Mc 250 Mc.	0.3 micro- volt to 0.1 volt	Continuously variable, 0 to 100% Simusoidal mod. 30 cps to 5 Mc Composite Tv mod.	58¾	281/4	251/2	302	\$7460



Model 90 Television Signal Generator

### **PRICES**

Prices of all Instruments shown on this and following page subject to change without notice. All prices F.O.B. Boonton, N.J.

### SQUARE WAVE GENERATOR

Model	Freq. Range	Wave Shape	Output	H.	₩.	D.(in).	Wgt. (lb.)	Price
71	Continuously varia able 6 to 100,000 cps	Rise time less than 0.2 microseconds with negligible overshoot	Step Aftenuator: 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable	7	15	71/2	20	\$195



Model 71

### PULSE GENERATOR

Model	Repetition Date	Pulse Width	Output .	н.	₩.	D. (in.)	Wgt.(lb.)	Price
79-B	60 to 100,000 pulses per second.	40 microseconds.  PULSE SHAPE Rise time: approx. 0.5 microsec-	tive with respect to ground. "Sync. Output" 75 volts positive with respect	10	131/2	101/2	31	\$295



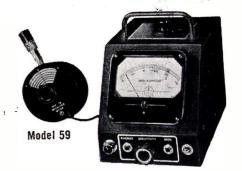
Model 79-B



Standards

### MEGACYCLE METER

Frequency Range	Freq. Accuracy	Modulation	Dimen.	Price
2.2 Mc. to 400 Mc.	Within + 2%	CW or 120 cps fixed at approx. 30%. Provision for external mod- ulation.		\$16B





### I.F. CONVERTER

1	Model	Frequency	Output	Modulation	Н.	w.	D. (in.)	Wgt. (lb.)	Price
	M-275	4.5 Mc., 10.7 Mc., 21.7 Mc.		Up to approx. 80% AM combined with or exclusive of FM	10	13	. 7	15	\$178



Model	Voltage Range	Freq. Range	Input Imped.	Dimen, (in.)	Price
52	0-1,0-3,0-10,0-30 and 0-100 volts AC or DC	30 cps to over 150 Mc.	Approx. 7 mmfd. Input Capacitance	H6 W43/4 D31/2 Wgt8 lbs.	\$135
67	.0005 to 300 volts peak-to-peak	5 to 100,000 sinewave cps	1 meg. shunted by 30 mmfd.	H.—7½ W.—7 D.—8½ Wt.—10 lbs.	\$235



Model 67

### U.H.F. RADIO NOISE and FIELD STRENGTH METER

Г	Model	Freq. Range	Sensitivity Range	Н.	W.	D. (in.)	Wgt. (lb)	Price
	58	15 Mc. to	1 to 100,000 microvolts in antenna. 1 to 100 microvolts on semilogarithmic output meter; balanced resistance attenu- ator with ratios of 10, 100 and 1000 ahead of all tubes.	9	16	11	35	\$925

Model 58

### **OSCILLATOR ₩ U.H.F.**

FREQ. RANGE: 300 Mc.-1000 Mc.

OUTPUT RANGE: Maximum varies between 0.3 volt and 2 volts

Adjustable over 40 db **OUTPUT IMPEDANCE: 50 ohms** 

DIMEN.: 121/2"h. 131/2"w. 8" deep

WEIGHT: 22 lbs.

PRICE: \$575

### CRYSTAL CALIBRATOR

FREQ. RANGE: .25 Mc. to 1000 Mc.

FREQ. ACCURACY: 0.002%

HARMONIC RANGE: .25 Mc. Oscillator: .25-450 Mc.

1 Mc. Oscillator: 1-600 Mc. 10 Mc. Oscillator: 10-1000 Mc.

DIMEN.: 8" high 6" wide 5" deep

WEIGHT: 4 lbs. Price: \$97.50



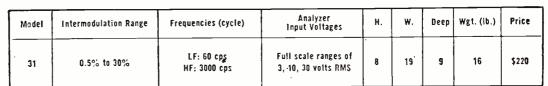
Model 111

### Model 112



Model 31

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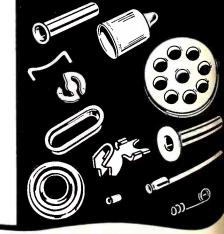
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Typitying wide current usage of JK crystals is the JK T-9, so popular for frequency standards.





### AND TOMORROW

Every day finds dramatic new uses for the hermetically sealed G-9. This stable crystal is used for "audio frequency" work.



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Linear, 500 ohms to 5 megohms.
Taper, 2,500 ohms to 2.5 megohms;
10% resistance at 50% C.W. rota-

tion.
Rated at 0.2 wath for linear units.
300° rotation.
Shaft locking device may be incorporated upon request.
Single and multiple units evailable.

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300° rotation without switch; 330° with switch.

Engineering Bulletin No. 117

### **COMPOSITION ELEMENT CONTROLS (Series 37)**

1-1/8 DIA.

Linear, 500 ahms to 10 megohms. Tapered, 1,000 ohms to 10 megohms. Rated at 0.5 watt for linear units. Standard taps at 371/2%, 50% and 627/2% 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

"74 DIA. FUN MINIMIUNIZATION
Linear, 10 to 10,000 ohms.
Rated at 1 wat.
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 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)**

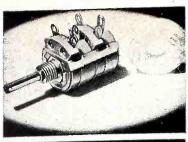
Linear, 1 to 50,000 ohms. Tapered, 5 to 25,000 ohms, Non-inductive 1 to 12,000 ohms, linear only. Linear, 3 watts.

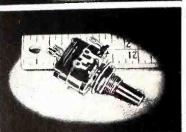
Mechanical rotation 300°. Electrical 280° without switch; 240° with switch.

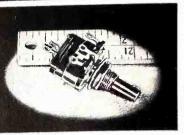
Engineering Bulletin No. 118

### CONSTANT IMPEDANCE

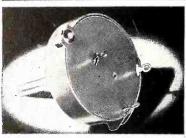
PADS (Series CIT-58)
Attenuation zero to 30 db in first
90% of C.W. rotation, approx.
linear. Infinite attenuation reached
in last 10%. Impedance range from
2 to 10,000 ohms, standard values.
Refer to bulletin. 2.5 watts continuous DC rating. Series CiB.roted
at 10 wotts. "L" pads, Bridged "T"
pads, Bridged "T"
pads, Bridged "T"
pads, Bridged "T"
and Bulletin No. 102,
and Bulletin No. 111

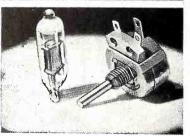






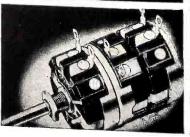


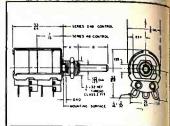


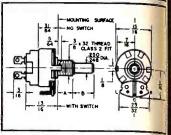


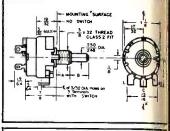


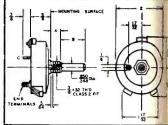


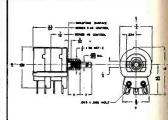


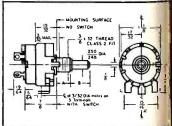


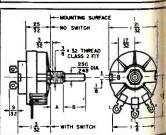


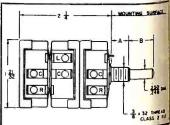


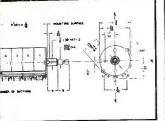












CLASS & FIT

. 1 = 01A

B CLASS EF 140 OLA

TERMINAL MOUNTING CENTERS

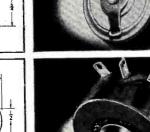
WINDING LENGTH

STANDARD TERMINAL TYPE "K" MOUNTING



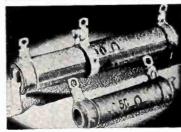


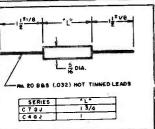


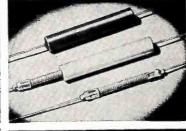


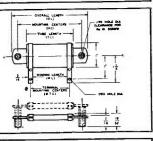




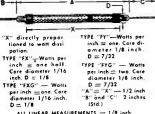


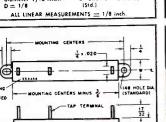


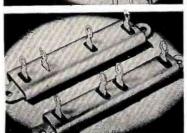












### **HIGH-PRECISION CONTROLS (Series 42a)**

Up to 18 sections in one unit assembly. Single shaft. No back lash. Linear: 10 to 100,000 ohms shandard. Max. resistance: 350 ohms per degree of rotation. Tapered, submit your requirements. Linearly up to ±0.5%. Power rating for linear units, 3 watts per section. Standard rotation: Mech. 270°; 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. Infermediate taps are special.

Metal dust-proof cover available.

Engineering Bulletin No. 103

### **POWER RHEOSTATS** (Series 25 & 50)

Full power rating even at ½ of rotation.
25-watt, ½ to 2,500 ohms; 50-watt, ½ to 5,000 ohms. Linear end 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.

15% for values of 50 ohms and higher.

higher.
10% for values below 50 ohms.
1% special.
Intermediate tops, upon order.
Widest choice of mountings and terminals. Nan-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 ±
10%.
Breakdown voltage between surface and resistance element, >
2500 volts A.C.
Ceramic tube casing, Inorganic materials throughout. Pigtail terminols, 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 minia-ture heating elements.
Ratings per winding inch: FXG, 1-watt: FYG, 2-watt.
Clinch-grip ferrule ends with bare pigtoil 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, 2½ 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.

15

### STELMA INC. COMMUNICATIONS ENGINEERS MANUFACTURERS OF ELECTRONIC EQUIPMENTS

CARRIER TELEGRAPH OR TELEPRINTER

INCREASE SPEED AND LENGTH OF LINE TRANSMISSIONS SIGNAL LOSS AND DISTORTION SIMULTANEOUS REDUCTION OF RECEIVER TONE DEMODULATOR-

Transmitter Tonekeyer—TTK-10



Accepts a D.C. telegraph pulse and emits corresponding on-off tone signal over any 600 ohm telephone or telegraph line. Designed for high speed electronic keying operations from 60 wpm to over 800 wpm. Conforms to JAN spees.
INPUT: 20 to 60 ma remote or local. 30 ma polar telegraph loop with remote battery.
OUTPUT: Level—15 dbm to +15 dbm. Tone Frequency—400 to 8000 cps. Sinusoidal signal. No more than 5% total harmonic distortion. Output impedance 600 ohms optionally balanced or unbalanced to ground. Blas distortions of ±20% at input corrected to less than 2% at output. Line voltage variations of ±10% affect local battery current 1%, output distortion 2% or less.
MONITORING: Meter measures input line current and output signal level. Monitoring jack in parallel with output. Polar sense switch permits inverting output signal with respect to the input signal.
POWER: 115/230 VAC 50/60 cps 90 watts.
DIMENSIONS: 19" x 8%" x 12%". Weight 34.5 lbs.

### BIAS MEASURING SET, LINE OR TELEPRINTER



- Insertion in Line Circuit Does Not Dis-

• Insertion in Line Circuit Does Not Disturb Operations.
• Read Percentage of Line or Printer Bias Distortion Directly on Dial.
• Portable, 6½" x 11½" x 9".
• Range: Mark or Space Bias Distortion 0 to 50%.
• Accuracy: ±3%.
• Input: 30 or 60 ma neutral or polar. 60, 70 and 100 WPM Teleprinter circuits.
• Power: 105/130 VAC 60 cps.
The Model 23 Bias Measuring Set may be connected in any teletype circuit without disturbing the teleprinter's operation. Indicates and measures any change in distortion on the line.
The Set generates a pulse of known width which is compared and adjusted to the width of the teletype pulses When they match, a neon lamp blinks and the instrument indicates the amount of bias distortion.

Power 105/130 V 60 cps. New Model 24 includes

the instrument indicates the amount of bias distortion. Power 105/130 V 60 cps. New Model 24 includes oscilloscope indicator.

### DIPLEX RECEIVING KEYER-Type CA-1447



### DOUBLE THE NUMBER OF TELETYPE MESSAGES ON ANY CIRCUIT BY TIME DIVISION

NPUT: 500-10,000 cps tone keyed with diplex signal 0 DBM to -40 DBM level. Compression amplifier permits uniform operation with varying line levels with or without filters in line. Input distortion may exceed 30%. Manual adjustment will allow unit to tolerate over 50% distortion.

OUTPUT: Two simplex neutral outputs each in the form of relay contacts. Output distortion—less than 5%.

POWER: 105/130 VAC 80 watts 50/60 cps.

CONSTRUCTION: 19" x 8%" x 104%". Vertical chassis with tubes in rear. All parts available when front door is opened.

### STELMA, INCORPORATED

MANUFACTURERS OF ELECTRONIC AND COMMUNICATIONS EQUIPMENT 389 LUDLOW ST. TELEPHONE 48-2579 STAMFORD, CONNECTICUT

TTD-11



Accepts a keyed on-off tone signal from any C00 ohm telephone or telegraph line and provides a 20 ma to 60 ma neutral or 30 ma polar output signal. Will operate a teleprinter or any device requiring keyed D.C. input. Output current is regulated to 1% for line voltage variations of ±10%. Keying speeds of up to 800 wpm are possible with this unit. Conforms to JAN specs.

INPUT: Keyed tone 300 to 10,000 cps. Line level -25 dbm to +10 dbm. Balanced or unbalanced 600 ohm impedance unit.

OUTPUT: Neutral or Polar 20 to 60 ma. 120 v supplied from unit or by remote battery. Bias distortions of ±20% at input can be corrected to less than 2% at output. Input level variations of ±60m cause less than 2% change in output bias distortion. (Square wave keying).

MONITORING: Meter measures output line current and input signal level from -15 dbm to 6 dbm to indicate proper clipping level. Monitoring jack in parallel with the input circuit.

POWER: 115/230 VAC 50/60 cps 130 watts.

DIMENSIONS: 19" x 834" x 12". Weight 30 lbs.

TELEPRINTER REGENERATIVE,

### TELEPRINTER REGENERATIVE, ELECTRONIC REPEATER MODEL TT-63



ELECTRONICALLY REDUCES BIAS DISTORTION TO A MINIMUM PERCENTAGE
Designed to accept 60, 75 or 100 wpm Teleprinter signals with up to 45% mark or space bias and produce a corresponding signal with less than 5% distortion. Conforms to JAN specs.
INPUT KEYING: A. Tone-500 to 8000 cps level +10 to -20 dbm. B. Neutral D.C. input, 20 ma to 60 ma, 600 ohms. C. Polar D.C. input 30 ma, 1200 ohms.

ohms.
OUTPUT: Neutral output relay contacts. Optional output can be set to follow steady input state (Normal) or to return always to mark on steady state inputs (Mark hold).
POWER: 115/230 VAC 50/60 cps 85 watts.
DIMENSIONS: 19" x 8%" x 10½". Weight 27 lbs.

# WE DESIGN AND MANUFACTURE COMMUNICATIONS EQUIPMENT AND SYSTEMS

HAVE A PROBLEM? NEED INFORMATION? WRITE US-Dept. W

ELECTRONIC
EQUIPMENT
Receivers—LW-SWMicrowave
Frequency Shift
Keyers
Frequency Shift
Converters
Panoramic Receivers
& Indicators
Intercept, Search/
Receiving Equipment

ment

Transmitters and Transreceivers Microwave Cavities Antenna Multi-

couples Radar Beacons Radar Identification

Equipment
Radar Sub-assemblies Delay Lines

TERMINAL UNITS

TERMINAL UNITS
Remote Controlled
Equipments
Multi-channel Automatic Variable and
Fixed Tuned Receivers
Tone Keyers
Diplex Keyers
Tone Demodulators
Regenerative Repeat

Regenerative Repeaters Audio Amplifiers and

Audio Amplifiers and Modulators
Filters—RF—AF — Band Pass
Multiplex, Time Division or Frequency Division Systems
Bias Distortion Meters
Frequency Shift Measuring Instruments

# 400% **MORE PRODUCT** LISTINGS

...in this 12th annual electronics

# **BUYERS**' GUIDE

than in any similar directory

# 4 Facts every Manufacturer

using sheet metal cabinets, consoles, chassis, or enclosures

ought to know about



fou Secure Complete Individuality with a Karp custom-built unit, nsuring: 

Exact, perfect fit; 

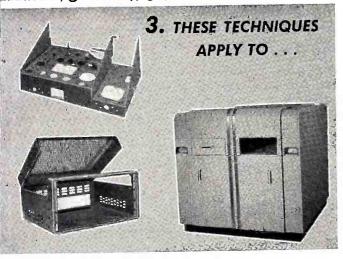
Lower overall assembly costs; 

Finished roduct cost no more than with a less expensive stock cabinet requiring extra assembly time due to inexact fit; 

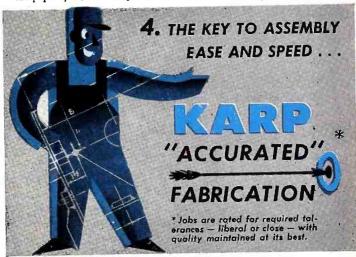
Finest appearance, reflected in ncreased sales; 

Individuality; 

Space-saving compactness.



Everything in Sheet Metal, from a simple chassis, rack, or panel to the most elaborate electronic apparatus console, cabinet, and enclosure. Karp fabricates any sheet metal, any gauge, any size, any quantity, from a small lot to big volume runs. Scientifically air-conditioned, dust-proof facilities insure finest quality painting and finishing. You Take Advantage of Our Dies and Tools accumulated over many years, saving you the expense of special dies, jigs, fixtures. Karp "Semi-Custom Design" gives you the benefits of a custom-built unit, plus low assembly cost and low finished product cost as compared with a stock cabinet. And Karp quality workmanship insures excellent efficiency and fine appearance.



You Save Assembling Time and Cost with Karp "Accurated" Fabrication of sheet metal because every dimension is accurate... every hole drilled clean, accurately sized and positioned... openings accurately spaced... all units uniform and finish perfect. Production is rolling and costs stay down in hundreds of plants, thanks to this "efficiency insurance."

### Why not let KARP Field Engineers study your assembly requirements?



Whether your fabricated sheet metal unit is a liberal or a close tolerance job — whether it calls for simple or intricate forming, drawing, bending,

welding, finishing, or all combined... "Accurated" Fabrication the Karp way insures assembly ease, speed, and economy. Send us your blueprints,

(Although Karp's new 75,000-square-foot plant—with over 400 employees and 27 years of know-how—is primarily engaged in production for major defense contracts and strategic materials are on allocation, we continue to the best of our ability to produce for general industry.)

### KARP METAL PRODUCTS CO., INC.

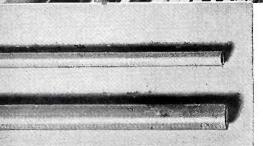
225 63rd STREET, BROOKLYN 20, NEW YORK

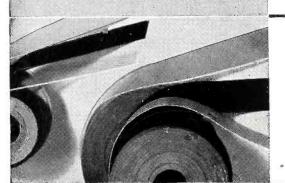
Specialists in Fabricating Sheet Metal for Industry



THE WM. BRAND AND CO., INC.







# Electrical · Electronic INSULATING MATERIALS WIRE and WIRE MARKERS

Quality Products to Safeguard Your Product Quality and Performance TURBO VARNISHED TUBING — All NEMA Grades

A cotton, rayon or glass braid impregnated with high quality insulating varnish. Recommended for general application requiring high tensile strength, flexibility, tear resistance, non-peeling and non-cracking qualities, low moisture absorption, oil and acid resistance. Radio Grade (NEMA B-1) and Magneto Grade (NEMA A-1) available from .022 l.D. Standard Lengths bundled as follows: No. 24 — No. 6½ mm., 500 ft.; No. 2 — No. 0, 250 ft.; 9 mm. to %" 1.D., 100 ft.; ¾" and larger, 52½".

### TURBO SATURATED SLEEVING - All NEMA Grades

Produced from select cotton, rayon or glass braid saturated with a specially formulated insulating varnish to assure desirable sealing properties with excellent flexibility. Recommended for low cost insulation where dielectric is not the major problem. Features absolute concentricity, high tensile strength, low moisture absorption and flexibility. Available from .022 I.D. standard lengths. Sizes 13 to 24 inclusive can be supplied in continuous lengths put up on spools. Stock colors up to size 12 include black, yellow, red, green, brown and blue. Black and yellow standard on larger sizes.

### TURBOSIL GLASS TUBING

A flexible glass braid reinforced with superior silicone insulating varnishes and developed specifically for those applications demanding flexibility with high heat resistance and dielectric strength. Exceedingly popular for use with circuits in small space where optimum protection with least bulk is prime requisite. Provides maximum safeguard against low and high temperatures (-70°C. to +200°C.), moisture, oil and grease. Available in natural color from No. 20 to %" I.D., in 42" standard lengths in four grades: Single Saturated (NEMA H-C-3), Double Dip (NEMA H-C-2), Triple Strength (NEMA H-C-1) and Magneto Grade (NEMA H-A-1).

### TURBO CAMBRICS, TAPES, CLOTHS, PAPERS

Broad line affords desired protection against voltage breakdown, oils, moistures and alkalies under the most severe operating conditions. All standard types, sizes, lengths and colors are available. TURBO line includes varnished cambric in sheets and rolls; varnished cambric tapes; dry and oil type splicing tapes; plastic backing tape; duplex cambric slot insulation; varnished duck; silicone varnished glass cloth; treated asbestos cloth; duplex glass slot insulation; extra thin varnished insulation of cambric, nylon, rayon and silk; and varnished papers. All tested in accordance with A.S.T.M. Specifications. Detailed data in TURBO Catalog. Write for samples.

### THE WILLIAM BRAND AND COMPANY, INC.

Yours FOR THE ASKING complete product information and index
of TURBO electrical
insulating materials and
wire plus helpful
ordering information.

WRITE TODAY FOR YOUR COPY

**SERVICE** backed by quality products and experience of specialists is the keynote to the growing acceptance of TURBO products. The Brand research laboratories are continuously studying new materials, methods and machinery to improve standard products and introduce new products to keep step with increased demands placed on electricity. Whatever your insulation problem, look to The William Brand and Co., Inc. for study, recommendations, samples and SERVICE. Turbo-Technician in your territory will be happy to serve you.

### BO EXTRUDED PLASTIC TUBING

ubing for wide application wherever you require resistance to tear and abrasion, ess, elasticity, flexibility for broad temperature range. Available in three classificap to 1.5" I.D., 7 colors and clear in continuous lengths or cut to length. Samples

**H HEAT:** Turbotrans 105 and Turbotherm 105 are U. L. approved for  $105^{\circ}$ C, usesons is specially processed tubing of high quality used extensively for potting, baking, botrans 105 is suitable at temperatures of  $-40^{\circ}$ C.

TEMPERATURE: Turbozone 47 is a non-corrosive tubing providing unusual flexitic sub-zero temperatures. Specially compounded to meet AAF12047A requirements. Not needed for oil use.

**ERAL PURPOSE:** Turbolex 63 meets JAN-1-631 requirements. Not recommended heat or oil use. Turbolex 85 is recommended for service for moderate heat and occasional re to oil. Not recommended for temperature applications below —30°C.

### BO WIRE AND MULTI-CABLES

onductor cables up to maximum %" O.D. Range of lays 1" to 10", right or left hand llers and cotton wraps if required. Can also pair conductors with range of lays ½" Manufactured to specifications.

SOTHERM 60: Radio and instrument hook-up wire. Constructed to JAN-C-76-SRIR V.) and SRHV (2500 V.). Available with nylon jacket or lacquered glass braid in standard plors. Nos. 16 to 24 solid or stranded.

BOTHERM 80: Radio, instrument and control hook-up wire. U. L. approved appliance or 80°C. — 30%-600 V., with or without cotton, rayon or glass lacquered overbraid. 2 to 26 solid or stranded. Nos. 14, 16 and 18 stranded U. L. approved for 80°C. — 1000 ndard RMA colors. Available also as a thin-wall instrument wire. Meets Buships 15-W-9, V. Nos. 22 to 28 in solid or stranded. Standard RMA colors.

**BOTHERM 90:** Radio, instrument and control hook-up and motor found wire with or it lacquered braid. U. L. approved 90°C. — 600 V. Nos. 16 to 26 solid or stranded, and RMA colors.

30THERM 105: Motor lead and appliance wire, U. L. approved 105° C. — 600 V. 6 to 26 solid or stranded. Standard RMA colors.

BOTHERM 105: Hook-up and appliance wire with lacquered glass overbraid. U. L. ved 105°C. — 300 and 600 V. Nos. 16 to 26 solid or stranded. Standard RMA colors.

BOLENE PE: Low voltage (150 V.) loop antenna wire. Nos. 22 and 24, solid or led, with natural or brown insulation.

**BOLENE NF:** High voltage Appliance Wire, U. L. approved 10,000 and 20,000 V. 4 to 22 solid and stranded in natural white.

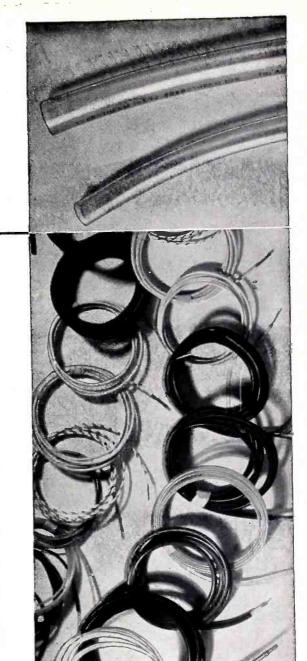
N SIGN CABLE GTO-15: U. L. approved 15,000 V. Nos. 12 and 14 stranded in al color primary insulation with black jacket.

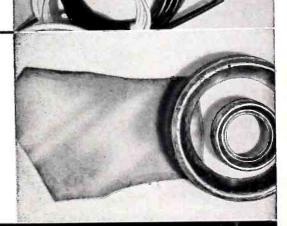
BO TWIN-LEAD TRANSMISSION LINE: Available in heavy duty outdoor light weight indoor types. 300 ohm and 150 ohm Twin-lead are standard. Special nations of conductor gage and web dimensions are available. Can be furnished with mprint on the web.

tional colors, contrasting color tracer stripes, other construction and special packagin special request.

RBO MICA PRODUCTS

Possessing ideal electrical properties, Mica is able in several grades and forms for every electrical need. TURBO Mica line includes: ER PLATE: can withstand direct contact with heat, 1000°F., 625 VPM. FLEXIBLE is soft mica bonded with non-hardening adhesive varnish can be bent or molded her cold or warm. AMBER SEGMENT PLATE: soft edged for wearing down with copper utator bars, 600 VPM. MOLDING PLATE: moldable at approximately 284°F., on flat is, 600 VPM up to .015" thickness, 450 VPM .015" and over. INDIA SEGMENT PLATE: guished from amber segment plate by increased hardness and higher thermal cheristics. B-H-1 and B-H-2 PLATE: built-up mica plate with high rigidity and good or factor suitable for condenser applications. BLOCK MICA to rigid specifications, andard sizes. MICA FILMS for mica condensers.





### URBO

WILLIMANTIC, CONN., U.S.A. TELEPHONE 3-1661

### 104 VALLEY STREET

RBO IDENTIFICATION MARKERS Slip-on identification sleeves in ded fabric or extruded plastic are available imprinted longitudinally or circumferentiin any diameter or length in any combination of colors. Dimensioned to precise limits usure snug fit, these markers clearly identify electrical conductors, tubing, wiring, hose, e, rod and similar connectors. Fadeproof, bleedproof and smearproof, TURBO Markers last the life of any product.



Model SR-10.0

# SORENSEN

### STANDARD UNITS AND SPECIFICATIONS

	STAN	DAKU	UN	113 4	HAD 3	FECI	ICAI	0143	
	AC REGULATORS		Input	and the same of th		VAC, 1 25" mod	Ď, 50-60 ~ els	~, 190 <u>-</u> 2	60 VAC
Nobatron Model E-6-15	Models available		Outpu		115 VAC ±5%; 230 VAC with "-25" mode				S" models
	(numbers denote VA capacities)		Reg. a	curacy	±0.1% against line or load				
	150\$		Distort	ion	2% — 3% max.				
	250S 500S (-2S) also 1000S (-2S) also 2000S 3000S (-2S) also 5000S (-2S) also 10000S (-2S) also 15000-2S		P. F. ro	nge	Down t	Down to 0.7			
			Load r	ange	0 to fu	II load			
			voltage. Models 150 5000S, 10000S, and			150S, 25 and 15	gainst overload or over- 150S, 250S, 500S, 1000S, and 15000-25 are self- ets available for others.		
AC Regulator	NOBATRONS** (DC Supplys—low v	Input		rent	95 — 130 VAC, 1⊕, 50-60 ~• In heavy current 28-volt series — 115/208, 3⊕, 4-wire, wye.				
Medel 5005	(numbers indicate voltage & current)	a unique sel	Reg. a	ccuracy	<u>+</u> 0.2%	% against line or load changes			
	E-6-5A		Ripple		1% RMS max.				
	E-6-15A	To a many to a many of the same of the sam	Load r	ange	1/10 to full load				
Nobatron Model SWR-5	E-6-40A E-6-100A E-12-5 Also	Model	Outpu	range	Adjustable ±10%; down to —25% a lesser accuracy				25% at
	E-12-15 SWR- E-12-50 output	5 with t either	Recove	ry time	0.2 seconds — this value includes chargin time of filter circuit for most severe chang in load or input conditions.				
	E-28-10 10 E-28-30 c E-28-70 12VE E-28-150 5 c E-28-350 E-125-10	6VDC @ 10 amp or 12VDC @ 5 amp	Miscel	aneous	voltage Normal availab Normal Meters in all.	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.			
B-Nobatron	E-200-5		Note	20 Marie 11 Marie 12	"A" models output either 6 or 7 volts.			olts.	
Model 500BB	400~ EQUIPMEN	Similar to 60 ~ regulators except: Accuracy ±0.5%; distortion 5% max.;							
	LINE REGULATO	ORS	VA capacities 250, 500, 1200, 2500.						
	NOBATRONS**		Mod	e gener lels 6VD DC @ 1	al specifications as 60 ~ Nobatrons. C @ 40 amp., 12YDC @ 10 amp., O amp.				
E	B-NOBATRONS**		Input 105-125 VAC, 1Φ, 50 − 60~.						
	(DC Supplys -		Load range		0 — full load				
	high voltage)		Ripple		10 mv (20 mv in 1000BB)				
			Model	325BB*	360BB**	500BB*	520BB** 560BB*		100088
		(	VDC	0-325	175-360	0-500	200-500	0-500	200-1000
SORENSE ACC SORE ACCOUNT TO A CONTROL OF A		output	Ma	0-125	0-120		0-200	0-500	
				reg bia 100 ** no	ulation acc s supply 0 00BB) meters, no	ned as standard equipmen curacy ±0.5% 0-150 VDC @ 0-5Ma (exco o bias supply curacy ±1.0%			t model
100			All have 6.3 VAC, 6-10 amperes, unregulated, C.T. except Model 1000BB.						
Variable Transfo		*"		except	model 10	UUBB.	V 41 31		180

\*"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.

Standard design AC regulators can be converted to meet appropriate AN-E-19, MIL, and JAN specifications.



### PRODUCTS

### TANDARD UNITS AND SPECIFICATIONS

nge-variable plys)

Changer

D250

Input range	95 — 130 VAC, 1⊕, 50 — 60~.						
Reg. accuracy	±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			

### DNIC EXCLUSIVES

rate egulator II	Load range Input volt. range Load P. F. range Output voltage Distortion Time constant Reg. accuracy				
Source for photometers /2-5 Nobatron	Input volt. range Output #1 for lamp #2 for filament #3 for bias Filtering				

Input voltage

Output voltage

**Output frequency** 

Distortion in

95 - 130 VAC, 1♠, 55 - 65~. 0.7 lagging to 0.95 leading 115 VAC, 1⊕ (adjustable from 110-120 volts) 3% max. 0.1 seconds +0.01%95-130 VAC, 1⊕, 50-60 cycles 6VDC adjustable ±10% at 5 amperes

0-1000 VA

1% max. #2 & 3 ±0.01% against line changes Reg. accuracy Time constant 0.1 seconds under most severe line changes

6VDC at 100 Ma. 2VDC adjustable ±10% at 100 Ma. 0.05% max.

Input frequency

95-130 VAC, phase to neutral, 3⊕, 4 wire 45-65 cycles 115 VAC,  $1\Phi$ , adjustable between 110-120 VAC 400 cycles ±10%

**Output voltage** regulation ±1.0% **Output frequency** regulation 250 VA Capacity Load range

±1% in standard model ±0.01% with auxiliary frequency standard 0.1 to full load

output 5% maximum P. F. range Down to 0.7 P. F. lagging Time constant 0.25 seconds Envelope modulation 2% maximum

A single phase input model is also available.



### COAST TO COAST

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

CALIFORNIA - HOLLYWOOD **Neely Enterprises** 7422 Melrose Ave.; Phone Whitney 1147
CALIFORNIA — SACRAMENTO **Neely Enterprises** 309 Ochsner Bldg.; Phone Gilbert 3-7461 CALIFORNIA - SAN FRANCISCO

**Neely Enterprises** 2830 Geary Blvd.; Phone Walnut 1-3960 COLORADO — DENVER

Ronald G. Bowen 852 Broadway D.C. - WASHINGTON

Burlingame Associates — F. L. Horman 2017 S St., N.W.; Phone Decatur 8000 FLORIDA - FORT MEYERS

Arthur H. Lynch & Associates P. O. Box 466; Phone 5-6762 GEORGIA — ATLANTA

Floyd Fausett & Son 1347 Beecher St., S.W.; Phone Raymond 3104 ILLINOIS — CHICAGO Loren F. Green & Associates

4949 W. Diversey Ave.; Ph. National 2-2370 KANSAS — WICHITA

Standard Products, Inc. 650 E. Gilbert Ave.; Phone Wichita 2-1431

KENTUCKY H. A. Watson, Jr. 817 Citizens Bldg.; Cleveland, Ohio
MASSACHUSETTS — BOSTON

Burlingame Associates — P. G. Yewell 270 Commonwealth Ave.; Ph. Kenmore 6-8100

MICHIGAN — DETROIT S. Sterling Company

13331 Linwood Ave.; Ph. Townsend 8-3130 NEW MEXICO - ALBUQUERQUE

**Neely Enterprises** 107 S. Washington St.; Phone 5-8731 NEW YORK - SYRACUSE

Burlingame Associates — J. D. Ryerson 712 State Tower Bldg.; Phone 2-0194

NEW YORK — NEW YORK Burlingame Associates 103 Lafayette St.; Phone Digby 9-1240 NORTH CAROLINA — CHARLOTTE

James L. Highsmith
P. O. Box 1011; Phone 5-6436
OREGON — PORTLAND The James L. Kearns Co. P. O. Box 5108; Phone East 4331

PENNSYLVANIA -- PHILADELPHIA Burlingame Associates - Ivan Robinson 7060 Garret Rd. (Upper Darby);

Phone Flanders 2-1597 PENNSYLVANIA - PITTSBURGH H. E. Ransford & Co.

Grant 8ldg.; Phone Grant 1-1880 TENNESSEE — KNOXVILLE A. R. Hough

P. O. Box 1452; Phone 8-4312 TEXAS - HOUSTON

Earl W. Lipscomb & Associates 2420-B Rice Blvd.; Phone Linden 9303
TEXAS — DALLAS

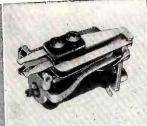
Earl W. Lipscomb & Associates 5103 W. Lovers Lane; Phone Elmhurst 5345 CANADA - TORONTO, ONT.

Charles W. Pointon 1926 Gerrard St., East.; Phone Oxford 7435

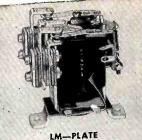


RENSEN AND COMPANY . 375 FAIRFIELD AVE., STAMFORD

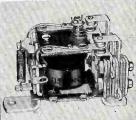




LT-LONG TELEPHONE









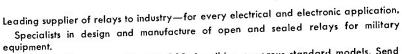






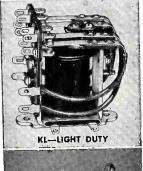


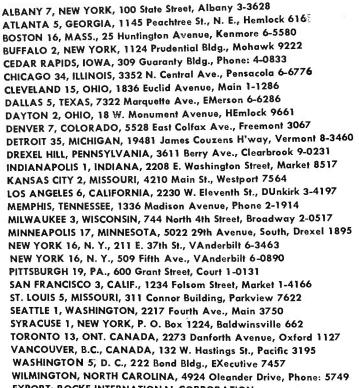


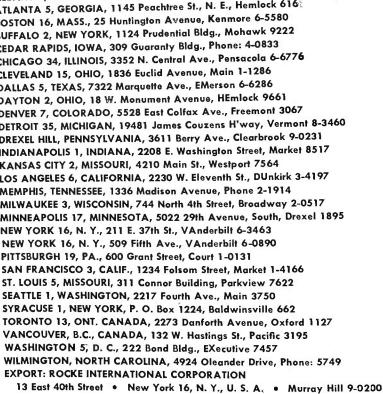


Write for 26 page catalog No. 109 describing numerous standard models. Send specifications for recommendations, samples and quotations.

Contact your nearest P & B Sales Engineering Office:







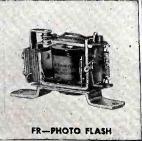


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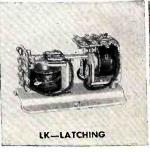
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CAN-SOLDER TER

# INC.

### PRECISION RESISTORS

JAN-R-93 LUG TERMINAL TYPES



CERAMIC FORMS: Non-hygroscopic material, high dielectric, low coefficient of expansion. No. 6 screw hole through center.

WIRE: Highest grade alloys; Cu-Ni, Ni-Cr, Cu-Mn-Ni, Ni-Cr-Al-Cu, Ni-Cr-Fe, enamel or fabric covered. Minimum size .0015 standard, .0007 special.

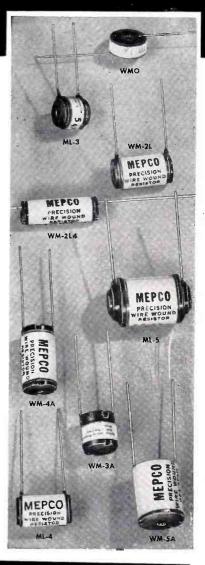
TEMPERATURE COEFFICIENT:  $\pm$  .003%°/C for ohmages up to approx. 1000; .017%/°C above 1000. .003%/°C may be ordered special on any type resistor. TOLERANCE:  $\pm 1\%$ ,  $\pm .5\%$ ,  $\pm .25\%$  standard.  $\pm .1$ . ±.05 special.

MOISTURE PROTECTION: Standard units thoroughly impregnated with moisture and salt water proofing compounds and fungus resistant acetate label. Vacuum impregnating and other special sealing on request.

INSULATION: Each cross-over wire insulated from winding by acetate cloth. All units receive 500V. breakdown test.

INDUCTANCE: Reversed, balanced winding in each pie section minimizes inductance up to approx 50KC. Special frequency characteristics upon request.

ype Wattage Rating		Resistance Range			Dimensions (Inches)		Jan Voltage Ratings			
Mepco	Jan.	Com- mercial	(OHM)	High (MEG)	Special* (MEG)	Length	O. D.	1%	.5%	.25%
RB 10	1/4	1/2	.1	.2	.5	15/32	1/2	215	186	152
WM 3	1/3	-1	.1	.2	.4	9/16	9/16	316	274	224
WM 4	1/2	1	.1	.6	1.5	1	9/16	387	335	274
WM 5	1/2	1	.1	.9	3	1 1/4	3/4	612	520	433
WM 2	1	2	1	3	5	2 1/16	7/8	2000	1732	1414
WM 1	1	1	1.0	.5	1	2 1/8	9/16	895	775	632
WM 12	.4	1	.1	.15	. 1 . 3	1	3/4	245	212	173
WM 13	1/2	1	.1	.3	.6	1 1/4	3/4	387	335	274
WM 14	.6	1	.1	.5	1,5	1 3/8	3/4	520	450	367
RB 51	1/4	1/2	.1	.1	.3	8/4	3/8	158	137	112



COMMERCIAL LEAD TERMINAL TYPES

METER

MULTIPLIER

JAN R - 29 TYPES MFA & MFB



GICALLY SEALED: Metal to Steatite. HIGH STABILITY: Finest by wire—Properly aged. SHOCK RESISTANT: Suspended elements—tushioning. REPLACEABLE SECTIONS: Eliminates complete loss of amaged. TEMPERATURE COEFFICIENT: ±.017%/°C standard, C special. TERMINALS: Nickel plated brass. Fits standard fuse clips.

10	Megohmst	Kilovolts	
105*	1.0	1.0	
155	1.5	1.5	A THE STATE OF THE
205	2.0	2.0	
255	2.5	2.5	
305	3.0	3.0	**************************************
355	3.5	3.5	**************************************
355*	3.5	3.5	
405	4.0	4.0	X X X X X X X X X X X X X X X X X X X
455	4.5	4.5	
505	5.0	5.0	25 1
505	6.0	6.0	33   5 % MAX
replacem	ent †±.	5%	91/2 ± 1/2 =

# PCO, INC. 37 Abbett Avenue Morristown, N. J.

Telephone: Morristown 4-5777

MOLDED ★ lead terminal PRECISION RESISTORS: Positive Connection between Winding and Terminal. Eliminates all soldered joints in resistor. No flux used—all connections non-corrosive. Cannot "OPEN" due to flexing of lead terminals. Same construction as our JAN R-93 Lug terminal types. ★ Terminal and end of winding are imbedded together by the metal molding process, assuring a positive electrical and mechanical connection.

Other lead terminal types are of the same basic construction as Lug Types. Terminals are No. 20 AWG copper wire, tinned, 1½" long. Wire fastened on resistor so it cannot turn or come loose. Wire from winding attached to lead at side opposite terminal to prevent breaking when terminal is flexed.

Type WM-O resistor usually supplied with an inductive winding. Special non-inductive construction on request.

Туре	Wattage Rating	Resistanc	e Range	Dimensions (Inches)		
	Rating	Low	High*	Length	O. D.	
WM 1/4	1/20	50 ohms	.03 meg	9/32	1/4	
WM 1/2	1/10	5 ohms	.05 meg	13/32	1/4	
WM 0	1/4	1 ohm	.2 meg	1/4	5/8	
WM 2L	1/2	.1 ohm	.1 meg	3/4	3/8	
ML-3	1	.1 ohm	.2 meg	9/16	9/16	
ML-4	1	.1 ohm	.6 meg	1	9/16	
ML-5	1	.1 ohm	.9 meg	1 1/4	3/4	
ML-2	2	1 ohm	3 meg	2	7/8	
WM 2L4	1/2	.1 ohm	?4 meg	3/4	3/8	
WM 3A	1	.1 ohm	.5 meg	1/2	1/2	
WM 4A	1	1 ohm	.8 meg	1	1/2	
WM 5A	1	1 ohm	1 meg	3/4	5/8	

† Not illustrated. \* Higher maximum resistance, at reduced power rating, may be had by using smaller wire sizes. Data on request.

# Electronic Components



Series E PRECISION Wire-Wound RESISTORS Miniature and Jan R-93 types



Toroid INDUCTORS and TRANSFORMERS
Stock types available
and Custom Windings to specifications



Precision WAVE FILTERS and EQUALIZERS
Custom built to Military Specifications



Series 1500
Plug-In AUDIO FILTERS and EQUALIZERS
Economically priced for general purpose use



Series 700 DECAGE INDUCTOR Units Indispensable for Audio Network design and Experimental work



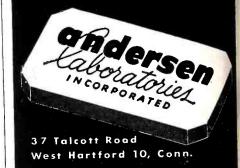
SOUND EFFECTS FILTER Model 4200 Features wide range of Pass-Band combinations and Low Hum pickup

in the manufacture of high grade components and accessories involving audio and carrier network designs. This field requires specialization since the problems encountered often require unorthodox approaches to their solution. Our Engineering Department has acquired a wealth of experience during the past years and our files contain thousands of designs.

Send for bulletins on our stock lines. Individual attention given to special requirements. Performance to meet specifications guaranteed.







development.

Included in this Issue is a list of over a

DISTRIBUTORS OF ELECTRONIC COMPONENTS

and

### ELECTRONIC EQUIPMENT

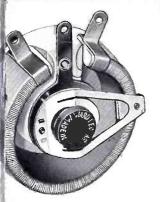
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electronics BUYERS' GUIDE

# Ward Leonard Electric Controls esult-Engineered for Superior Performance

### EOSTATS ng 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 applica-

Newly designed for use in electronic, industrial, and other equipment where smooth, gradual resistance change is essential.

Core and base, molded of highest ceramic materials, are bonded together by VITROHM enamel. Special alloy resistance wire is 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

50 watt rings from 1 to 7500 ohms 25 watt rings from 1 to 2500 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.



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 servicetested 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 loads, 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.

SISTORS



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-tothe-minute information on stock and madeto-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.

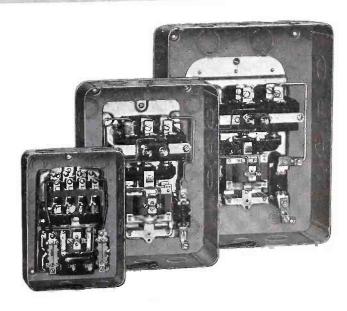


23 SOUTH STREET, MOUNT VERNON, N. Y.

Result-Engineered Controls Since 1892

RESISTORS . RHEOSTATS . RELAYS . ELECTRIC CONTROLS . CHROMASTER





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.



Resistance, auto-transformer and reactance type dim mers for theatre, auditorium, studio lighting control. Write for Ward Leonard Dimmer Bulletins 71-76.

### 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 chromaster 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. Chroms sol, an economical, non-critical chrome solution, plats directly on industrial steels, cast iron, and most not ferrous metals.

Write Ward Leonard for complete CHROMASTER details



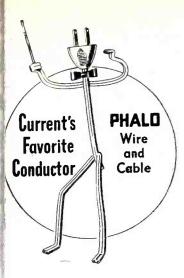
# WARD LEONARD ELECTRIC COMPANY

23 SOUTH STREET MOUNT VERNON, NEW YORK RESISTORS

Result-Engineered Controls Since 1892

RHEOSTATS . ELECTRIC CONTROLS .

CHROMASTER



Multiple Conductor
Paired and
Unpaired Cables



elephone and telegraph communi->n systems.

Microphone Cables





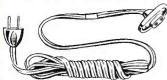
**Public Address Systems** 

e flexible stranded tinned copper luctors, vinyl plastic insulation; r-coded, cabled conductors; tinned per braid shield; over-all cotton d jacket.



pair solid tinned copper conducvinyl plastic insulation, color ed; cabled construction; over-all on braid jacket.

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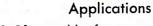




### For All Your Electronic Wire Requirements!

TRANSMISSION LINE CABLES

300 OHM



**72-Ohm** cable for use with receiving antennas—high frequency.

**100-Ohm** cable for use with receiving antenna, link connection, matching transformer. Also for experimental use at high frequency.

**150-Ohm** cable for use with receiving antenna, matching transformer and high frequency experimental applications.

**300-Ohm** for use with FM and Television receiving antenna.

**300-Ohm** heavy-duty cable. Same applications as above and also for low power transmitting antenna.

**300-Ohm** shielded cable. FM and Television lead adaptable to noisy locations.

3, 4 & 5 Conductor Antenna rotator control cable.

**75-Ohm** cable for use with doublet receiving antenna—low frequencies.

Same as above with added shield to reduce noise pick-up.

**72-Ohm** coaxial cable for television antenna.

**52-Ohm** cable for pulse and radio frequency transmission, television.

75-Ohm coaxial low loss.

For extension speakers, control circuits and low frequency doublet receiving antenna.



Cord Sets, Harness Assemblies, Special Assemblies, Multi-Conductor Cables, Shielded Wires for High Frequency Applications. PHALO for special wire requirements.

Hook up wires UL approved for 80°C, 90°C, and 105°C operating temperatures.

Your Inquiries Will Receive Prompt Attention!

PHALO PLASTICS CORPORATION

Graphic Arts Building, Worcester, Massachusetts

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### METERS

and INSTRUMENTS

HICKOK **PRECISION** SIMPSON TRIPLETT WESTON GENERAL ELECTRIC RCA

### WIRE

INCLUDING RG and SRIR CABLE

ALPHA AMPHENOL BELDEN BIRNBACH CORNISH



### TRANSFORMER

and POWER SUPPLIES

ATR MALLORY SOLA ELECTRIC STANCOR KENYON RAYTHEON **THORDARSON** FREED A. D. C. U. T. C.



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and POTENTIOMETERS

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I. R. C.

MALLORY OHMITE SHALLCROSS

and others

COMPETENT TECHNICAL STAF

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and FUSES DIALCO DRAKE GENERAL ELECTRIC E. F. JOHNSON LITTELFUSE



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The size of most electrical equipment is largely controlled by the thickness of insulation required for efficient or safe operation. Effective electrical insulating materials permit the design of smaller sized electrical equipment which will deliver efficient service.

That's why, today, more and more makers and users of electrical equipment are specifying Fiberglas yarns in space-saving insulating materials.

Insulating materials made with Fiberglas yarns combine exceptional strength with minimum bulk and, in addition, have higher thermal conductivity than conventional yarn insulations; thus permitting the design of smaller, lighter, high temperature electrical equipment.

For example, Fiberglas-braided wires or cables can be as much as 1/3 less in diameter than conventional products. Fiberglas tapes, varnished cloths, sleeving and tubing, cords and laminates, as used in electrical apparatus, save space . . . deliver top service far longer than conventional materials.

So, if you're a maker or user of electrical equipment, remember to specify FIBERGLAS.

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### FIBERGLAS YARNS ALSO GIVE YOU THESE COST-SAVING ADVANTAGES



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RESISTANCE **Fiberglas** insulating materials resist break-down under heat.



HIGH TENSILE STRENGTH Even in small diameters. Fiberglas yarns have higher tensile strength than other insulating textiles.

# GOOD GUIDE TO A GOOD BUY!

\*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation.

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featuring the lowest Noise Level and highest Zero Stability of any commercially-available amplifier. It is replacing many ultra-sensitive galvanometers and permits direct recording.

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which have transformed many critical measurements from the impractical to the routine





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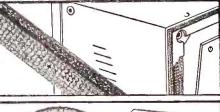
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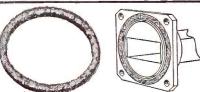
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### Resilient...Conductive...Compressible...Cohesive

From closures for cabinets to gaskets for waveguide couplings, Metex Electronic Shielding assures lasting metal-to-metal tact to prevent leakage, without the need for costly machining to secure precise surface-to-surface contacts. Metal wire — knitted, not woven or braided — gives Metex Electronic Strips and Gaskets that combination of conductivity and resiliency which makes them so effective and economical for shielding.

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When buying, or requesting product information be sure to mention ELECTRONIC BUYERS' GUIDE.

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No mechanical damage or changes greater than 1.0% will be apparent on Radell Deposited Carbon Resistors when subjected to temperature cycling ranging from plus 25°C to plus 100°C for 30 minutes, return to plus 25°C for 15 minutes, then to —55°C for 30 minutes and return to 25°C.

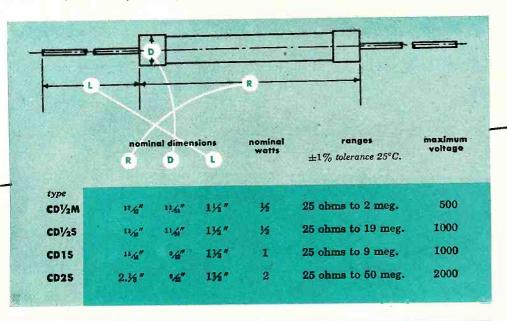
temperature cycling

At a temperature of 40°C and a relative humidity of  $95 \pm 5\%$ , a change in the basic resistance will not exceed 1%.

high relative humidity

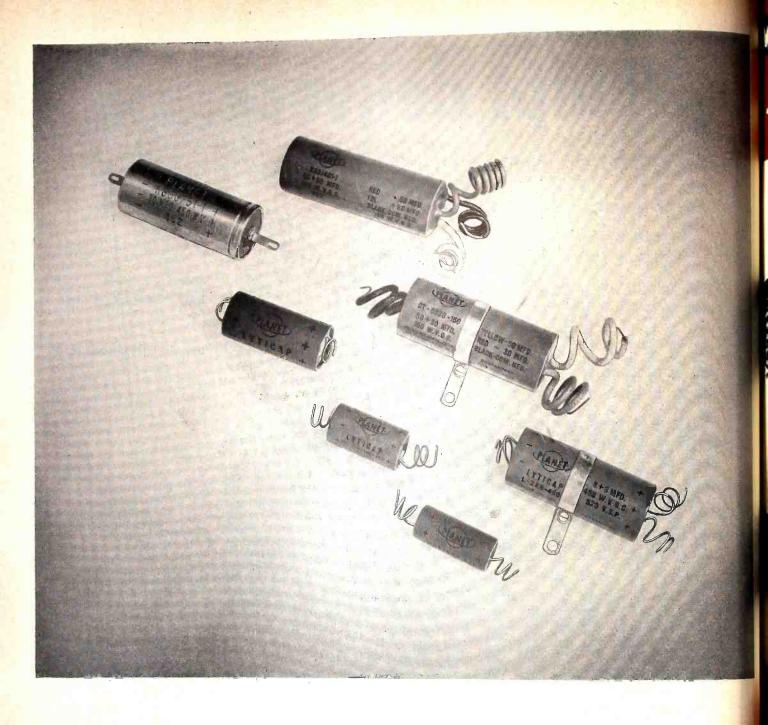
Load life tests conducted at 75°C for 500 hours consists of intermittent application of calculated rated continuous working voltage. The voltage is on for 1.5 hours and off for 30 minutes during the entire 500 hours. The initial resistance of Radell Deposited Carbon Resistors subjected to the test, will change on the average less than 1.0%.

the load life characteristic



	continuous	maximum	de	erating ch	aracteris	ic	
	rating	body temp. rise(°C)	80°C	100°C	125°C	150°C	
уре					187	4000	
CD1/2M	1/2	45°C	90%	60%	30%	10%	
CD1/25	34	50°C	90%	60%	30%	10%	
CD15	1	65°C	90%	60%	30%	10%	
CD25	2	75°C	90%	60%	30%	10%	

For complete specifications write Radell Corporation, United States Sales Office, 7900 Pendleton Pike, Indianapolis 26, or phone Cherry 2466.



# 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 our unconditional one-year guarantee possible. But making Planet capacitors right from the start means reasonable prices too!

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FLOATING CONTACTS

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> The following products, illustrated here, are now in production:-

- Cable to Panel Connectors - 4 to 100 contacts
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- Miniature Stand-off Terminals
- Feed-thru Terminals
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STANT RELIABILITY



contacts with

customer's d design.

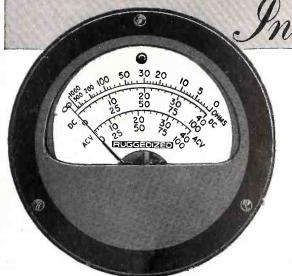
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DeJUR Amsco Corporation announces the addition of the new Series R-210 and R-310 Ruggedized Instruments. In meeting government specification MIL-M-10304, DeJUR has incorporated features heretofore unobtainable in ruggedized instruments. They have been designed to meet and even surpass the exhaustive tests required by the armed services. They perform perfectly under the severest service conditions that would destroy conventional instruments.

 $2\frac{1}{2}$  AND  $3\frac{1}{2}$ 

RUGGEDIZED D. C. INSTRUMENTS

MODEL R-210

MODEL R-310



# MEETS MIL-M-10304

- Mechanism suspended by internal live rubber ring mounts for maximum shock displacement and protection.
- External live rubber grommet for shock mounting with interlocking part of front bezel eliminates glass breakage and bezel distortion.
- Water-tight seal to panel provided by rubber grommet.
- Glass to metal seal for perfect hermetic sealing.
- Drawn steel case with heavy cadmium plate provides high degree of magnetic shielding.
- High-grade fusion seals for terminals and window glass withstand thermal shock of extreme temperature changes.
- Rugged glass-to-metal seal terminals withstand a 3000 volt breakdown test under extreme humidity conditions.
- Entire mechanism has complete ruggedized construction for high shock and vibration resistance.

Ranges from 250 microamperes to 8 milliamperes D.C. available for immediate delivery in  $2\frac{1}{2}$ " size. Other ranges in  $2\frac{1}{2}$ " and  $3\frac{1}{2}$ " being submitted for government approval.

A complete line of Standard Meters, Precision Potentiometers, Power Rheostats, and Precision Miniature connectors available. Catalogs on request.

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The new C-200 high precision potentiometer has been engineered and designed by DeJur-Amsco to fulfill the exacting requirements of contemporary instrument, computer and similar electronic equipment.

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WITHIN ± 1/2°

- 2" Diameter
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- 10 to 200,000 Ohms Accuracy up to 1%
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"HEAVY DUTY"
By-Pass DISCAPS
GMV Type .. Rated at 1000 V. D. C.

POWER FACTOR: INITIAL 1.5% @ 1 KC

AFTER HUMIDITY 2.5% @ 1 KC

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INSULATION: DUREZ PHENOLIC-YACUUM WAXED

LEAKAGE RESISTANCE: INITIAL 7500 MEG OHMS
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When Ordering Specify "HEAVY DUTY" Type DISCAPS

SPECIFICATIONS

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# HI-VOLTAGE DISCAPS

TYPE F-500

TYPE E-50

POWER FACTOR.....Less than 1% at 1000 CPS.....Less than 1% at 1000 CPS

DISCAP CERAMIC CONDENSERS

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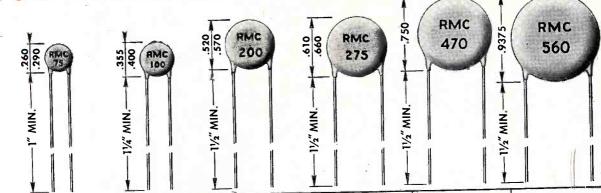
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OW RMC Temperature Compensating and General Purpose ISCAPS are Rated at 1000 Working Volts at NO EXTRA COST



TC	1/4 Dia.	5/16 Dia.	1/2 Dia.	5/8 Dia.	3/4 Dia.	7/8 Dia.
P-100 NPO N- 33 N- 80 N- 150 N- 220 N- 330 N- 470 N- 750 N-1400 N-2200	2- 12 MMF 2- 15 2- 15 2- 15 2- 15 2- 15 2- 15 2- 20 5- 25 15- 50 47- 75	2- 9 MMF 13- 27 16- 27 16- 27 16- 30 16- 30 16- 30 21- 40 26- 50 51-100 76-100	10- 30 MMF 28- 60 28- 60 28- 60 31- 60 31- 75 - 31- 75 41- 80 51-150 101-200 101-200	61- 75 MMF 61- 75 61- 75 61- 75 76-100 76-100 80-120 151-200 201-250 201-275	76-110 MMF 76-110 76-110 76-110 101-140 101-140 121-170 201-290 251-470 276-470	111-150 MMF 111-150 111-150 111-150 141-190 141-190 171-240 291-350 480-560 471-560

### SPECIFICATIONS

POWER FACTOR: LESS THAN . 1% AT 1 MEGACYCLE

WORKING VOLTAGE: 1000 VDC-TEST VOLTAGE: 2000 VDC

DIELECTRIC CONSTANT: P-100 14K N-750 88K N-2200 265K

CODING: CAPACITY, TOLERANCE AND TO STAMPED ON DISC

INSULATION: DUREZ PHENOLIC-VACUUM WAXED

LEAKAGE RESISTANCE: INITIAL 7500 MEG OHMS

AFTER HUMIDITY 1000 MEG OHMS

LEADS: # 22 TINNED COPPER (.026 DIA.)

LEAD LENGTH: 1/4" BODY 1", 1/4" BODY 1 1/4", 1/2" AND LARGER BODY 1 1/2"

TOLERANCES:  $\pm 5\%$ ,  $\pm 10\%$ ,  $\pm 20\%$ 

# Specify RMC Type 2KV DISCAPS

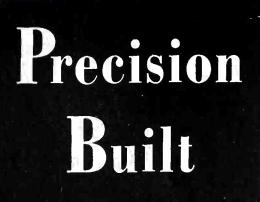
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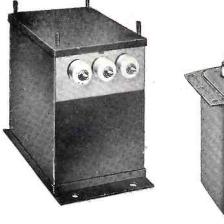


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for the Finest Equipment









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Our long experience in building all types of transformers, including hermetically sealed units, qualifies us as a dependable supply source for transformers used in military applications. We offer sound engineering and faultless craftsmanship... custom design with the economy and speed of modern mass production methods.

Hermetically Sealed Types for MIL-T-27 applications . . . Special Cores . . . High Temperature Insulation . . . as well as all normal types for every purpose.

FERRANTI ELECTRIC, INC.

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There is No Finer Name in Transformers than



# **ELECTRONIC TUBES**

# Dependable Electronic Tubes for ...

# TRANSMITTING · RECTIFYING · INDUSTRIAL **SPECIAL PURPOSE • TELEVISION**

## Basic Technical Data Covering The Complete Line of FEDERAL POWER TRIODES

WATER COOLED

TYPE	DESCRIPTION	Maximum Plate Dissipation	Mυ	Maximum Plate Input	Maximum DC Plate Voltage	Frequency for Maximum Ratings	Filament Voltage
F-6C22	UHF General Purpose	1 KW	9	2 KW	3,000 V		6.5
F-8002	VHF General Purpose	1.2	21.5	3	3,500	150 110	16 7.5
F-5917	VHF Amplifier	5	20	8	4,000 8,000	3	21.5
F-328-A	General Purpose	5	16	8	8,000	3	21.0
F-328-B	General Purpose (Two Phase Filament)	5	16	8	8,000	3	21.5
F-889-A	HF General Purpose	5	21	16	8,500	50	11
F-6009	HF General Purpose	6	25	12	6,000	30	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		
F-220C/			40	22.5	15,000	4.0	21.5
320-B	General Purpose	10	40 40	22.5 36	18,000	4.0	21.5
F-343-A	General Purpose	10 10	50	30	15,000	1.6	11/22
F-892-A	General Purpose Industrial, HF	10	50	30	.0,000	.,,	
F-5666	General Purpose	12.5	21	20	10,000	22.5	11
F-893-A	General Purpose	20	36	70	20,000	5	10 per section
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	7.5
F-5771	HF General Purpose	22.5	20	60	12,500	25 4.0	20
F-342-A	General Purpose	25	40	50	20,000 15,000	20	22
F-9C23	HF General Purpose	25	32	50	13,000	20	
F-5512	VHF General Purpose	25	38	80	9,000	110	6.2
F 104 A	Oscillator HF General Purpose	40	42	135	20,000	20	13.6 per section
F-124-A 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 28.5
F-5918	HF General Purpose	70	37	300	17,500	22	33
F-862-A	General Purpose	100	45	200	20,000	1.6 1.6	16.5 per section
F-898-A	General Purpose	100	45 21	200 450	20,000	22	25
F-134	HF General Purpose	150 A	IR COC		20,000		
			14.5	375 W	2,000	30 MC	: 10
F-123-A	HF General Purpose	125 W 200	38	950 W	3,000	30	10
F-127-A	HF General Purpose	250	23	690	2,500	3	11
F-204-A	General Purpose General Purpose	275	16	700	2,000	4.5	14
F-212-E F-849	General Purpose	400	19	875	2,500	3.0	11
F-450TH	HF General Purpose	450	38	3 KW		40	7.5
F-128-A	HF General Purpose	600	36	. 3	3,500	30	11
F-132-A	Audio Amplifier	600	10	1.8	3,500	1.50	11
F-7C26	VHF Amplifier	1 KW	17	3	3,000	150 120	9.0 16
F-8002-R	VHF General Purpose	1.2	21.5	3	3,500	5	11.0
F-7C23	Pulse	1.2	25		17,000 17,000	5	13.0
F-5680	Pulse	1.2	25 25	12	6,000	30	13.0
F-5680	HF General Purpose	2.5 2.5	25	12	6,000	30	13.0
F-5996	HF Industrial HF Industrial	2.5	25	5.6	4,500	50	11
F-7C25	3 VHF Amplifier	2.5	20	8	4,000	110	7.5
F-3X2500A	General Purpose	4	8.5	1.5	10,000	1.6	11/22
F-892-R	General Purpose	À	50	18	10,000	1.6	11/22
F-129-R	HF General Purpose	5	26	18	12,000	30	18
F-889-RA	HF General Purpose	5	21	16	8,500	25	11 21.5
F-343-AA	General Purpose	5	40	20	18,000	4	21.5
F-220CA/		_	40	22.5	15,000	4	21.5
320BA	General Purpose	5	40	10	5,000		7
F-8C25	Audio Amplifier	5	6	10	3,000		
F-5667	Industrial, HF General Purpose	7.5	21	20	10,000	22.5	11.0
F-124-R	HF General Purpose		42	100	20,000	20	13.6 per section
F-124-K	HF General Purpose		42	100	15,000	20	7.5 per section
F-9C29	Audio Amplifier	20	4.7		15,000		7.5 per section
F-893-AR	General Purpose	20	36	70	20,000		10 per section
F-895-R	General Purpose	20	37	110	17,000	6	19 per section

Federal also manufactures vacuum tubes for Rectifying and for Special Purpose; for Television (round and rectangular)



е	Description	Frequency MC	Peak Power Output KW
5	Fixed frequency-pulsed	9003-9168	14
ŠΑ	Fixed frequency-pulsed	9003-9168	28
,	Fixed frequency-pulsed	9345-9405	65
	Tunable-pulsed	1220-1350	400
	Fixed frequency-pulsed	2820-2860	240
	Fixed frequency-pulsed	2780-2820	240
	Fixed frequency-pulsed	2740-2780	240
	Fixed frequency-pulsed	9345-9405	40
	Fixed frequency-pulsed	9215-9275	40

Used in 5 and 10 KW AM transmitters.

Par Musik	FEDERAL SUB	MINIA'	TURE 1	<b>TUBES</b>	
10	Description	Fita- ment Voltage	Plate Voltage	Plate Resis. Meg.	Mutual Conduct. μmhos
2	Pentode RF Amplifier	1.25	22.5	0.35	500
21	Triode-Heptode Converter	1.25	22.5	0.5	60
3	Triode-UHF Oscillator	6.3	120		5000

### DBOOK OF TUBE OPERATION

ge booklet giving complete tech-data on efficient operation of in service. Write Dept. K-613 for сору.



Federal Telephone and Radio Corporation

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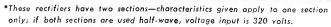




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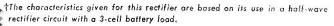
Cat. No.	Federal . Code No.	Output MA-DC	Inpu Volts	(RMS) MA	Inverse Volts	Peak MA	Plate Size	Application
1097	1097	20	130	50	380	200	1/2 " Sq.	B+ Boosters; Bias
1002	402D3452A	65	130	160	380	750	i" Sq.	B + AC-DC (5 tube)
1003	402D3150A	75	130	220	380	900	1" Sq.	B + 3-way Radios
1101	1101A	100	130	160	380	750	1" Sq.	B + Radios, Television
1004	403D2625A	100	130	325	380	1200	1 1 <b>3</b> /64" Sq.	B + Radios, Television
1005	403D2787A	150	130	425	380	1200	1 13/64" Sq.	B + Radios, Television
1006	404D2795A	200	130	550	380	2000	1 17/ <b>3</b> 2" Sq.	B + Television
1010	404D3450	250	130	625	380	2000	1 17/32 Sq.	B + Television
1087	1087A	275	130	700	380	2000	1 17/ <b>3</b> 2" Sq.	B + Television
1090	1090A	300	130	750	380	2000	1 17/32" Sq.	B + Television
1023	1023	350	130	900	380	3000	13/4" Sq.	B + Television
1130	1130	400	130	1000	380	4000	2" Sq.	B + Television
1021	439D4200	450	130	1150	380	4000	2" Sq.	B + Television
1014	403D2889A	100	160	325	440	1200	1 9/32" Max.	Vibrator
1022	439D4300	450	160	1150	440	4000	2" Sq.	B+ Television
1007	402D3239A	75	160*	220	440	900	1" Sq.	Vibrator Doubler
1008	403D3240A	100	160*	325	440	1200	1 13/64" Sq.	Vibrator Doubler
1009	404D3241A	200	160*	550	440	2000	1 17/32" Sq.	Vibrator Doubler
1015	402D3550	150	25	270	35	1800	1" Sq.	Bridge Rectifier
1016	403D3551	300	25	540	35	2400	1 13/64" Sq.	Bridge Rectifier
1017	404D3552	600	25	1080	35	4000	1 17/32" Sq.	Bridge Rectifier
1013	4D2814AS	700	18†				1 17/32" Sq.	Battery Charger
1018	104D2943S	2000	18‡				4 1/4 " lg. (Mtg. Plt.)	Battery Charger
							11 .	



20

N.T.C. Resistor (Resistance: Cold, 1400 ohms, Hot, 200 ohms)

220



\$The characteristics given for this rectifier are based on its use in a full-wave rectifier circuit with a 3-cell battery load.



Sq. (Mtg. Plt.)

### FEDERAL'S MINIATURE SELENIUM RECTIFIER HANDBOOK

Bias Rectifier

48 pages of valuable design, characteristics and application. Available for 25 cents (coin only).



900



# CENTRAL STATION BATTERY CHARGERS

75

The battery charging equipment used in central station operation must be reliable. Federal equipment is engineered to provide charging power necessary to keep the battery bank in peak condition at all times. The components are full-capacity and are capable of withstanding high momentary overload.

Code Number	A-C Input	Cells	D-C High Rate	Amps. Low Rate
FTR 1256-BS	115/230—1 Phase 50/60 cycles	60	2.0 Auto	.1-1.0 matic
FTR 1257-BS	115/230—1 Phase 50/60 cycles	60		.2-2.2 matic
FTR 1249-BS	115/230—1 Phase 50/60 cycles	60	6.0 Auto	.3-3.0 matic
FTR 1248-BS	115/230—1 Phase 50/60 cycles	45 to 60	6.0 Ma	.3 nval

**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	Α-	C Input		D-C O	utput
	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 3339-85	115/230	1	50/60	6-24	18
FTR 3341-AS	115	1	50/60	28	5
FTR 3128-85**	115	i	60	22-30	
FTR 3300-DS	115	1	60	2-32	10
FTR 3340-85	115	i	50/60	5-70	50 12
	11	NDUST		2,0	12
FTR 3115-JS	115	10031			
FTR 3116-BS	115	,	50/60	115	1
FTR 3117-HS	115	1	50/60	115	5
FTR 3117-JS		i	50/60	115	10
FTR 3152-AS	230	1	50/60	115	10
FTR 3153-AS	220/440	3	50/60	115/230	4.4/2.2
FTR 3154-AS	220/440	3	50/60	115/230	6.6/3.3
	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

<sup>\*\*</sup>Filtered and regulated equipment. \*Filtered.





### THE SELENIUM RECTIFIER DIVISION

Offers Its Outstanding Engineering & Manufacturing Facilities to

### **GOVERNMENT CONTRACTORS**

# Consult us for Aircraft, **Ground and Naval Requirements**

e Selenium Rectifier Division of Federal—the nation's headquarfor selenium rectifiers—is ready to serve you with start-to-finish juction of power supplies, battery chargers, voltage regulators, e starters, cathodic protection and other units—compact, rugged, 🎎 dependable power equipments designed for any DC output.

deral knows selenium rectifiers. Federal has unmatched power ersion experience . . . an experience backed by years of successmeeting the rigid requirements of contracts for military equips. And Federal has the capacity to deliver your orders—when you

Mil us your specifications today!

America's Oldest and Largest Manufacturer of Selenium Rectifiers



Heavy-duty Federal Selenium Rectifier



**Ground Aircraft** Power Supply

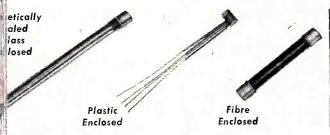


FTR 3146-BS Aircraft Power Supply



Clip-in Voltage Regulator

# HIGH VOLTAGE SELENIUM RECTIFIERS

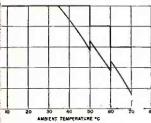


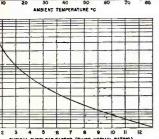
for Photo-Flash Power Supplies—Cathode Ray Oscilloscopes— Television Circuits - DC Power Supplies - Bias Supplies - High Voltage Testing Equipment — and other applications requiring high voltage at low current.

Federal Code Number	DC Output Voltage	Max. Peak Inverse Voltage	AC Input Voltage	Max. Eff. Inverse Voltage
123D1101	1400	4000	1400	2000
123D1071	1050	3000	1050	1500
123D1126	700	2000	700	1000
123D1182	350	1000	350	500

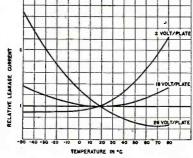
# IIIM RECTIFIERS for Industrial Service From AC to DC... Millowatts to Kilowatts

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.





COMPLETE DATA

**FOR** 

Complete design and application data available in Federal's Data Book, Write Dept, F-913 for



# Federal Telephone and Radio Corporation

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In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q. Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.

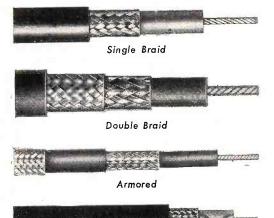
# HIGH-FREQUENCY CABLES

A complete line of quality cables for every electronic application by

# Federal

America's largest Producer of Solid Dielectric HF Cables

Approved Army-Navy and Special Types for . . .



Air Spaced Low Capacitance

HF COMMUNICATIONS

- TELEVISION
- **INDUSTRIAL ELECTRONICS**
- AVIATION

- TEST EQUIPMENT
- RADIO AND TV LEAD-IN
- RADAR, PULSE AND EXPERIMENTAL EQUIPMENT

Diversity is only one factor that has helped make Federal America's leading manufacturer of solid dielectric cables. Behind Federal's enviable reputation is a continuing program of research, development and improvement... close cooperation between producer and user...rigid quality control... efficient production — all these and more play an important part in maintaining Federal's leadership in the field.

You can rely on these Federal standards of superiority to give you "A Better Cable for Every High-Frequency Application!"

### COMPLETE COAXIAL CABLE ASSEMBLIES

A New Service Offering "PRECISION PRODUCTION" by Federal

More than good cable and good connectors are needed to make good assemblies. The secret of their efficiency and dependability is the skill with which the two are joined! And that's where Federal's new coaxial cable assembly service is tops. Federal has the experience to meet the highest requirements of connector installation . . . a know-how based on years of experience.

An important feature of this new service is that Federal holds approval of U.S. Signal Corps and U.S. Air Force for new low-temperature, non-contaminating thermoplastic jacketed cables. Send us your detailed drawings for quotations with full information on requirements. Address inquiry to Dept. R.



### SPECIAL CABLE PROBLEMS

Federal Telephone and Radio Corporation maintains a stock of most of the types listed in this folder. Cables not stocked will be manufactured to order, with charges based on quantity. Federal also manufactures many types of plastic-insulated wires and multi-conductor cables for television, intercom and numerous special purposes.

In addition, Federal's engineering and laboratory staffs are readily available for consultation on special problems of cable design and application. Facilities permitting, Federal will be pleased to enter the production of cables to meet such problems.

Federal's consulting service is yours for the asking.



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# HIGH-FREQUENCY CABLES

# It's Federal for ... EVERY H-F TRANSMISSION LINE REQUIREMENT

Typ cket	Low Temp. Blk. Jacket	Zo	Capacitance Per Foot Micro-Micro Farads	Db/100 Freq./Mc 100 (Max.)	Inner Conductor Strands	Braid +	Jacket ×
<b>/</b> U	RG-5B/U	53.5	28	2.6	C1	C264	V339
<b>/</b> U	RG-6A/U	76	20	2.4	CW1	CS264	NCV339
/ <b>U</b>		100	12.5	2.0	C1	C304	V379
新/U	RG-8A/U	52	29	2.0	C7/#21	C340	V415
A/U	RG-9B/U	52	29	2.0	CS7/#21	CS355	NCV430
o/u††	RG-10A/U	52	29	2.0	C7/#21	C340	NCV475
ı/u	RG-11A/U	75	20	2.1	T7/#26	C340	V415
2/U††	RG-12A/U	75	20	2.1	T7/#26	C340	NCV475
3/U	RG-13A/U	74	20	2.1	T7/#26	C355	V430
I/U	RG-14A/U	52	29	1,4	C1 "	C463	NCV558
U	, .						
<b>/</b> /U	RG-17A/U	52	29	.85	Cl	C760	NCV885
3/U††	RG-18A/U	52	29	.85	C1	C760	NCV945
PU	RG-19A/U	52	29	.69	C1	C990	NCV1135
)/U††	RG-20A/U	52	29	.69	C1	C990	NCV1195
H/U	RG-21A/U	. 53	29	16	Res.	C\$264	NCV339
·2/U	RG-22B/U	95	16	3.6	*C7/0.0152"	T340	V415
⊉A/U	NO 125/ 0	95	16	3.8	*C7/0.0152"	T345	NCV426
3/U	RG-23A/U	125	12	1,7	*C7/#21	C830x440	V960x670
4/UT†	KO-23A/ 0	125	12	1.7	*C7/#21		1034x735
/U		53.5	28	4.1	C1	C150	PE184
II/U	RG-34A/U	71	21	1.8	C7/#21	C540	V645
5/U††	RG-35A/U	71	21	.85	C1	C760	NCV945
IA/U	KG-33A/ 0	58	27	2.6	C7/0.0152"	T220	PE250
5/U		53.5	28	4.5	C1	C176	PE206
r/U	RG-57A/U	95	16	3.0	*C7/#21	T540	V640
∦/U	RG-58B/U	53.5	28	4.2	C1	T150	V200
,, 0	RG-58C/U	33.3	20	7.2	· ·		
•/U	RG-59A/U	73	22	3.8	CW1	C191	V250
	RG-62A/U	93	13.5	3.1	CW1	C191	V250
1/U	RG-63B/U	125	10.0	2.0	CW1	C340	V415
5/U	RG-65A/U	950	44	2.0	C1	C340	V415
/U	KG-03A/ 0	93	13.5	3.1	CW1	T198	PE238
/U††	RG-74A/U	52	29	1.4	CI	C463	NCV605
.∍U††	KG-/4A/U	125	10	2.0	CW1	C340	NCV475
B/U		125	10	2.0	J., .		
₩ <b>5</b> /U		200	7.8	.56	*C7/#21		
98/U		76	25		*T7/0.0126"	<b>T</b> 177	V240
1/U††		95	16	3.8	*C7/0.0152"	T345	NCV490
TYPES		75	10	5.0	27 / 0.0102		
TES		71	21	.85	C1	C760	NCV885
		71 72	21	3,8	C7/#30	C200	V250
L		72 72	22	6.1	*C7/0.012"	C191	NCV250
7			8.3	8.0	B1	T232	V282
		160	0.3	0.0	J1		
		300	4.2	3.4	*B1	C435x235	V490×290
1		34	39	4.5	T41/#34	C150	V 200
E.							
					Phos. B7/0.0	254"	PE185

An Original Development
by Federal

# RG TYPE CABLES

# WITH THE NEW LOW-TEMPERATURE NON-CONTAMINATING THERMOPLASTIC JACKET

The 25 Federal RG type cables listed to the left are identical to regular R3 type cables in every electrical and physical characteristic, with the exclusion of the jacket.

This new low-temperature, non-confaminating thermoplastic jacket—an original development by Federal—is manufactured to meet the "Exceptions to Specification JAN-C-17A," dated March 21, 1949, and amendments thereto dated January 9, 1950.

Federal's new RG type cables are outstanding for their longer service life under adverse conditions. Their non-contaminating feature means that there is no reduction in dielectric strength due to molecular migration. Moreover this feature is retained throughout the period they are in use.

# TEFLON DIELECTRIC HIGH TEMPERATURE CABLES

Teflon dielectric high temperature cable for application where temperature requirements are 250° C. Available in a complete range of types and sizes. Send for further details.

# ALL-PLASTIC MULTI-CONDUCTOR CABLES

For intercommunications, power and control applications. Available up to  $1\frac{1}{2}''$  in diameter. Also made to specifications.

Copper, T—Tinned Copper, S—Silver Plate Copper, B—Bronze, OD in mils.

information in Column to right under RG Type Cables.

r Conductor Strands column indicates material by same abbreviation as +

ored.

nner Conductors.



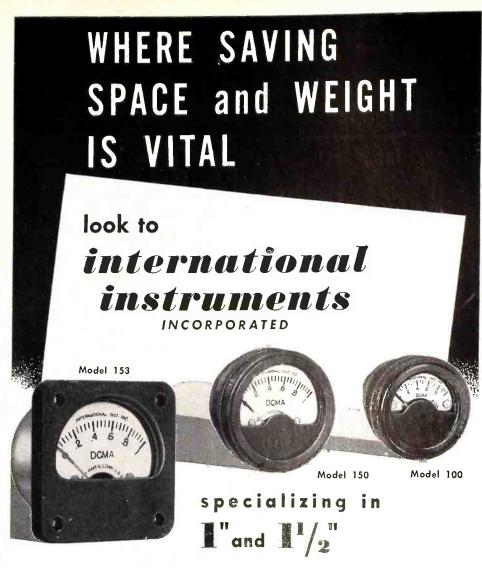
### FOR COMPLETE DATA

Write for Federal's Data Booklet 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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# miniature meters

FOR AIRCRAFT, GUIDED MISSILES, COMMUNICATIONS, ELECTRONICS and INDUSTRY

- PROMPT DELIVERY
- WIDE SELECTION OF RANGES
- METERS DESIGNED TO SPECIAL REQUIREMENTS

These meters feature a special D'Arsonval type movement. Expert design, fine materials, and rigid quality control throughout manufacture permit extreme miniaturization while retaining high performance standards. Accuracy is held to  $\pm 3\%$  of full scale deflection. The light, strong metal cases are easily mounted in any panel. Waterproof models designed to meet applicable sections of government specifications are available. Special scales, ranges and other characteristics can be provided adapting these instruments to practically any electrical measuring requirement.

If your instrument problem demands the smallest possible size and weight combined with accuracy and dependability, we can help you. Write for engineering data sheets covering our standard instruments—or simply submit your specifications to our engineering department.



# . . . tube clamps

STANDARD SIZES
AND SPECIAL ADAPTATIONS
TO CUSTOMER REQUIREMENTS.

WRITE FOR TUBE CLAMP CATALOG AND PRICE LIST

AUGAT BROS. INC.

31 PERRY AVENUE
ATTLEBORO, MASSACHUSETTS
TELEPHONE ATTLEBORO 1-2202

# 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.

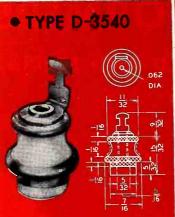
# olve your hermetic seal problems with

eneral Ceramics low-loss STEATITE sealed leads feature suprior mechanical strength that insures permanent, positive heretic sealing under practically any operating condition. Immune severe thermal shock, they are easily soft-soldered to closures ithout developing the strains that are an incipient cause of ouble in many other types of leads. There are no rubber or lastic gaskets to deteriorate. Resistance to mechanical shock and ibration is excellent. The types shown are standard and can be applied promptly from stock. For complete information on these nd for consultation on custom-made terminals to your specificaon, phone, call or write today.

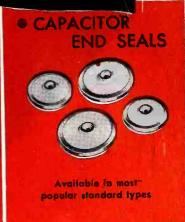
# SOLDER-SEAL OFFERS:

- EASE OF ASSEMBLY SUPERIOR STRENGTH
- NON-DETERIORATION
- PERMANENT SEALING
  RESISTANCE TO HEAT EXTREMELY LOW-LOSS









### OLDER LUG TYPES



GLAZE SURFACE METALLIZED SURFACE

				1
PART NO.	D-3342	D-3346	D-3350	D-3349
A	1 1/32	1 1 1/32	29/32	33/16
В	.490	5/8	15/16	3/4
C	3/8	.490	11/16	%16
D	.095	.095	.130	.130
E	3/16	1/4	3/8	1/4
F	3/16	3/8	3/8	5/16
G	1/2	7/8	3 15/32	27/16
Н	1/16	3/32	1/8	1/8
J	3/32	1/8	1/8	1/8

### THREADED STUD TYPES

PART NO.	D-3856	D-3857	D-3962	D-3638
Α	17/32	151/64	215/32	215/32
В	.490	5/8	15/16	15/16
С	3/8	.490	11/16	11/16
D	1/16	1/16	.055	1/16
E	1/4	1/4	3/8	3/8
F	3/16	3/8	3/8	3/8
G	1/2	7/8	1 15/32	1 15/32
Н	1/16	3/32	1/8	1/8
J	3/32	1/8	1/8	1/8
К	6-32	6-32	8-32	10-32





RAMICS AND STEATITE CORP.

GENERAL OFFICES and PLANT: KEASBEY, NEW

S OF STEATITE, TITANATES, ZIRCON PORCELAIN, FERRAMICS, LIGHT DUTY REFRACTORIES, CHEMICAL STONEWARE, IMPERVIOUS GRAPHITE



# KENYON TRANSFORMERS

FOR STANDARD AND SPECIAL APPLICATIONS

### KENYON TRANSFORMERS FOR

JAN Applications
Radar
Broadcast
Atomic Energy Equipment
Special Machinery
Automatic Controls
Experimental Laboratories

For more than 25 years, Kenyon has led the field in producing premium quality transformers. These rugged units are (1) engineered to specific requirements (2) manufactured for long, trouble-free operation (3) meet all Army-Navy specifications.

Write for details

# KENYON TRANSFORMER CO., Inc.

840 Barry Street, New York 59, N. Y.



• TYPE-F-210

General Ceramics' FERRAMICS are soft magnetic materials featuring:

- HIGH PERMEABILITY
- HIGH VOLUME RESISTIVITY
- HIGH EFFICIENCY
- LIGHT WEIGHT
- **ELIMINATION OF LAMINATIONS**



Ferramics offer many important advantages as an electro-magnetic core material. The result has been wide adoption of this material in commercial and military electronic applications. We would welcome an opportunity to tell you how Ferramics can improve your components. For complete information call or write today.

For .445" hole, order F260







DOODEDTY		T	YPE OF	FERRAMIC	MATERIA	L	
PROPERTY	UNIT	B-90	C-159	E-212	H-419	1-141	J-472
Initial permeability at 1mc/sec	_	95	250	750	850	900	330
Maximum permeability	<u> </u>	183	1100	1710	4300	3000	750
Saturation flux density	Gauss	1900	4200	3800	3400	2000	2900
Residual magnetism	Gauss	830	2700	1950	1470	700	1600
Coercive force	Oersted	3.0	2.1	0.65	0.18	0.30	.80
Temperature coefficient of initial permeability	%/°C.	0.04	0.4	0.25	0.66	0.3	0.22
Curie point	°C.+	260	330	160	150	70	180
Volume resistivity	Ohm-cm	2x10 <sup>5</sup>	2x103	4x10 <sup>5</sup>	1x10 <sup>4</sup>	2x10 <sup>5</sup>	
Loss Factor: at 1 mc/sec	_	.00016	.00007	.00008	.00030	.0003	.000055
at 5 mc/sec	_	.0011	.0008	.002	.00155	.005	
at 10 mc/sec	_	_	_	_	.00275		-
High frequency mate	erials are avai	lable up to	approximate	ly 150 megac	cles; write fo	r details.	

TYPE F-108 .250

■ TYPE F-268







- - 8 32 x .500
- TYPE F-234
  - 10 32 x .625
- **TYPE F-244**
- $1/4 28 \times .750$
- **TYPE F-245**
- 5/16 20 x 750
- TYPE F-246
  - $3/8 16 \times 750$



IICS AND STEATITE CORP.

GENERAL OFFICES and PLANT: KEASBEY, NEW JERSEY

S OF STEATITE, TITANATES, ZIRCON PORCELAIN, FERRAMICS, LIGHT DUTY REFRACTORIES, CHEMICAL STONEWARE, IMPERVIOUS GRAPHITE

# IEW 24100 SERIES 400 CYCLE, SYNCHRONOUS TIMING MOTOR A.W. Haydon SYNCHRO

GEAR TRAINS - Speeds are available from 3,000 R.P.M. down to 2 revolutions per hour.

MOUNTINGS — Interchangeable mountings with standard D.C. and gov. erned motors.

TORQUE - Starting and synchronous torque in excess of 50 ounce inches at 1 R.P.M.

REVERSABILITY — Balanced windings permit operation in either direction of rotation without loss of torque.

MILITARY SPECIFICATIONS — The design and construction meets basic military requirements.

#### **FEATURES**

- 1. Compact, Hysteresis type.
- 2. High starting and running torque.
- 3. Synchronous from 380-420 c.p.s.
- 4. Low inertia rotor gives quick start and stop.
- 5. Radio filtering not required.





- SERIES #5700 CHRONOMETRIC D.C. GOVERNED TIMING MOTOR ■ Extreme accuracy — 1/10 of 1%.
- Wide range of voltage, temperature,
- Light weight . . . Compact.
- Reversible.

### SERIES 12500 OR D.C. SERIES 7500 Exceptionally compact and accurate.

FLAPSED TIME INDICATOR A.C.

- Registers tenths of minutes, minutes, tenths of hours, hours.
- Also available in aircraft instrument



### SERIES 5300 D.C. TIMING MOTOR

® Rugged, Accurate, Reliable.

- @ Compact . . . Reversible, variable
- 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

REPEAT CYCLE TIMER A.C. SERIES

13600 OR D.C. SERIES 3600

Easily adaptable to meet specific

- Wide selection of time range.
- Features ease of adjustment.
- Flexible, compact design.

Durable . . . Long life.

requirements.

Wide range of time cycles.

Multiple control circuits.

Positive operation.

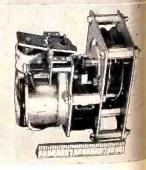
#### HERMETICALLY SEALED TIMER SERIES 6400, 11400, 7900, 12900, 3600

- Maximum protection against weather, humidity, explosive atmospheres, and high altitude.
- **⊕** Light weight, corrosion-resistant enclosure.
- @ Flexible design.



### 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



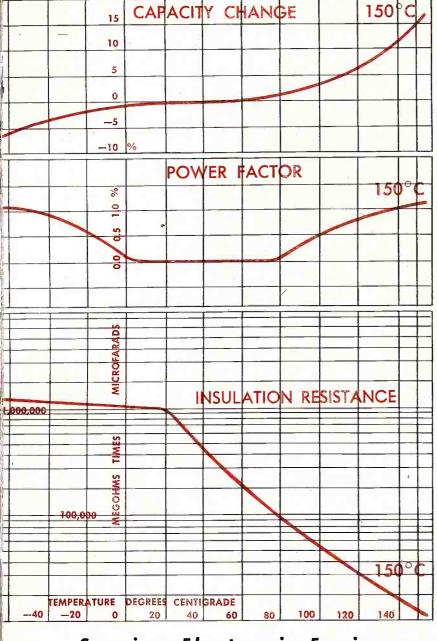
# The 238 NORTH ELM STREET

WATERBURY 20, CONNECTICUT Design and Manufacture of Electrical Timing Devices

# Thermofilm

A new development pioneered by ... **DUMONT** 

# Capacitors



### First choice of Engineers...

- 1. Where insulation resistance of over 1014 ohms is necessary.
- 2. Circuits where "low soakage" is important.
- 3. Coupling high impedance circuits at
- 4. Timing circuits.

### For Use In

- ... Computors
- ... Servomechanisms
- ... Radiosondes
- ... Nuclear Instruments
- ... Van de Graff Generators
- ... Pulse Applications
- ... X Ray Equipment
- ... High Voltage Applications
- ... High Frequency Amplifiers

Hermetically Sealed Metal Tubes and

Size generally the same as 85°C Mineral Oil Paper Capacitors.

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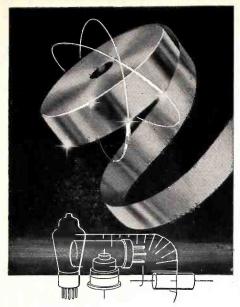
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Republic's capacitor foil with clean, straight-cut edges, accurate gage and uniformly high quality is custom made for your machines and specific applications. Quality control through every step of manufacture provides true economy in holding work stoppages and rejections to the minimum. Production goes up and costs come down.

### ALUMINUM FOIL IN ROLLS SPECIFICATION INDEX

Gage in Inches	Yield in Sq. In. Per Pound	Gage in Inches	Yield in Sq. In. Per Pound		
.0002	51,000	.00080	12,800		
.00023	44,600	.00090	11,350		
.00025	41,000	.0010	10,250		
.00030	34,000	.0015	6,800		
.00035	29,200	.0020	5,100		
.00040	25,600	.0025	4,100		
.00045	22,700	.0030	3,400		
.00050	20,500	.0035	2,930		
.00065	15,700	.0040	2,550		
.00070	14,600	.0050	2,050		

All commercial widths available from 1/4" mounted on standard 1-5/16" I.D. metal cores. Non-returnable steel cores are available without charge.

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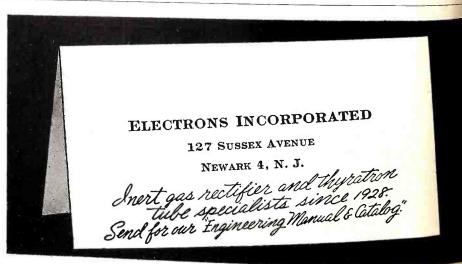
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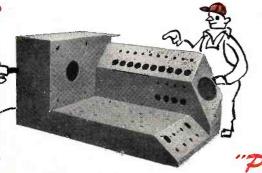
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THE SCREW TERMINAL TYPE



THE A. N. CONNECTOR TYPE



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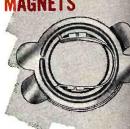
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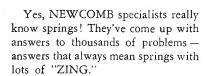




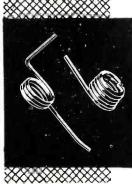
ZING may not be in the dictionary, but here at NEWCOMB it has meaning. To us, "ZING" is that element in a spring which helps improve product performance, makes for longer spring life.



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## SELENIUM RECTIFIERS

A PARTIAL LISTING OF RECTIFIER STACK TABULATIONS TAKEN FROM THE LATEST SELETRON CATALOG

		,15 Amp	s. D.C.	.22 Amps.	D.C.	.30 Amp		.45 Amps	D.C.
SINGLE BRID		्रि व	× • • • • • • • • • • • • • • • • • • •	ि व	B ==	ि% व	AC : AC :	ि. व <u>ि.</u>	5
Approx. D.C. Volts New	Max. A.C. Input	Code No.	B-Dim.	Code No.	B-Dim.	Code No.	8-Dim.	Code No.	1%"
20 40 60 80	26 52 78 104 130	M1B1S1C M2B1S1C M3B1S1C M4B1S1C M5B1S1C	11/6" 21/6" 21/6" 33/6" 33/4"	M1B1S1C M2B1S1C WM3B1S1C WM4B1S1C WM5B1S1C	1%6" 216" 336" 4%6" 5"	P1B1S1C P2B1S1C P3B1S1C P4B1S1C P5B1S1C	1%" 2%" 3" 3%" 4%"	P2B1S1C WP3B1S1C WP4B1S1C WP5B1S1C	2%" 3%" 4%" 5%"

		.60 Amp	D.C.	.90 Amps.	D.C.	1.0 Amp	s. D.C.	1.4 Amps	D.C.
SINGLE PHASE BRIDGE		्रिं व		1/2 d 8		02 4		O 2 - 6 -	
Approx. D.C. Volts New	Max. A.C.	Code No.	B-Dim.	Code No.	B-Dim.	Code No.	B-Dim.	Code No.	8-Dim.
20 40 60 80	26 52 78 104 130	Q1B1S1C Q2B1S1C Q3B1S1C Q4B1S1C Q5B1S1C	1" 2%" 3" 3%" 4%"	Q1B151C Q2B151C WQ3B151C WQ4B151C WQ5B151C	1" 2%," 3%" 4%" 5%"	\$181\$1C \$281\$1C \$381\$1C \$481\$1C \$581\$1C	194" 2"16" 3½" 4%" 5%"	\$18151C \$28151C W\$38151C W\$48151C W\$58151C	134" 2116' 45'4" 512" 638"

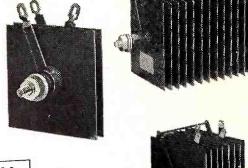
SINGLE PHASE		2.4 Amps. D.C.		3.2 Amps. D.C.		4.5 Amps. D.C.		6.0 Amps. D.C.	
SINGLE	GE	િં: ન		ि ३ व	) AC	10 4 d	B 4	04. 4	B - 3
Approx. D.C.	Max. A.C.	Code No.	B-Dim.	Code No.	B-Dim.	Code No.	B-Dim.	Code No.	8-Dim.
20 40 60 80	26 52 78 104 130	U1B1S1C U2B1S1C U3B1S1C U4B1S1C U5B1S1C	2%" 31%" 5" 6%" 7%"	U1B1S1C U2B1S1C WU3B1S1C WU4B1S1C WU5B1S1C	256" 3'36" 676" 818" 91%"	W1B1S1C W2B1S1C W3B1S1C W4B1S1C W5B1S1C	2%" 3 <sup>1</sup> %。" 5" 6%。" 7%"	W1B1S1C W2B1S1C WW3B1S1C WW4B1S1C WW5B1S1C	2%' 3'% 6%' 8%' 9'%

SINGLE PHASE		6.7 Amp	6.7 Amps. D.C.		D.C.	8.0 Amps. D.C.		10 Amps. D.C.	
SINGLE		िंगू च	AS : AC :	0 4% d	****	16. 4 SS: 4	\$ 1.AC	)	
Approx. D.C. Volts New	Max. A.C. Input Volts	Code No.	B-Dim.	Code No.	B-Dim.	Code No.	B-Dim.	Code No.	8-Dim.
20 40 60 80	26 52 78 104 130	T1B151C T2B151C T3B151C T4B151C	3" 41%;" 6%;" 81%;"	T1B1S1C T2B1S1C WT3B1S1C WT4B1S1C WT5B1S1C	3" 4ነ¼" 7ነ¾" 10¼"	H1B1S1C H2B1S1C H3B1S1C H4B1S1C H5B1S1C	3" 4"%;" 6%;" 8%". 9"%;"	H18151C H2B151C WH3B151C WH4B151C WH5B151C	3" 4"%;" 7"%;" 10%;"

Listed above are full wave bridge rectifiers. Ratings are for continuous duty, resistive-inductive load, in an ambient temperature of 35°C.

For higher voltages and currents, other combinations are available. Send us specifications for other designs ... Our engineers will be glad to aid you in the solution of your rectifier problems without obligation.







Seletron Selenium Rectifiers are the choice of an increasing number of manufacturers in diversified fields because they are so thoroughly dependable under all types of grueling conditions... Available in the miniature sizes required for radio, TV and other electronic circuits, all the way up to heavy duty power stacks used in a wide range of industrial applications.

MODEL No.	PLATE SIZE	STACK THICKNESS	MAX. INPUT VOLTAGE R. M. S.	MAX. PEAK INVERSE VOLTAGE	MAX. D.C OUTPUT CURREN
1M1	1" sq.	3/8"	25	75	100 MA
8Y1	1/2" sq.	9/16"	130	380	20 MA
16Y1	1/2" sq.	15/16"	260	760	20 MA
8J1	11/16" sq.	9/16"	130	380	65 MA
5M4	1" sq.	11/16".	130	380	75 MA
5M1	1" sq.	7/8"	130	380	100 MA
5P1	1-3/16" sq.	7/8"	130	380	150 M
6P2	1-3/16" sq.	1-3/16"	156	456	150 M
5R1	11/2"x11/4"	7/8"	130	380	200
501	11/2" sq.	11/8"	130	380	250 M
601	11/2" sq.	11/8"	156	456	250 M
602	11/2" sq.	13/8"	156	456	250 M
604	11/2" sq.	13/4"	130	380	300 M
5051	11/2"x2"	11/8"	130	380	350 M
6052	11/2"x2"	11/4"	156	456	350 M
551	2" sq.	11/8"	130	380	500 M
652	2" sq.	13/8"	156	456	500 M

For more complete listings write for Bulletin No. 104-BG

# R RADIO RECEPTOR COMPANY, INC. R

Since 1922 in Radio and Electronics

Manufacturers of Seletron Selenium Rectifiers ● Germanium Diodes and Transistors ● Thermatron Dielectric Heating Equinaries Sales Dept.: 251 W. 19th St., New York 11, N. Y. ● Factory: 84 N. 9th St., Brooklyn 11, N. Y.

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HIGH VOLTAGE-HIGH VACUUM DIODES

These new United Graphite Anode Diodes have been developed to fulfill the important aims of the Armed Services program for decreased size . . . increased ruggedness . . and increased reliability of Electron Tubes.

Complete technical data sent on request.



Type **578** 

Max. Dimen.:

Height 6-1/2"
Diameter 2-5/16"

Ratings:

Ef 5.0 volts
If 6.0 amps.
epx 40 kv
Io 100 ma
ib 750 ma

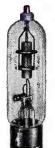
Type **576** 

Ratings:

Max. Dimen.:

Height 7-1/2"
Diameter 2-5/16"

Ef 5.0 volts
14.0 amps.
epx 25 kv
15 500 ma
ib 2.5 amps.



Type 371-8

**Type 577** 

Max. Dimen.:

Ratings:

epx Io Ib

Height 7-3/8" Diameter 2-1/16"

> 5.0 volts 10.25 amps. 25 kv 300 ma

1.50 amps.

Max. Dimen.:

Height 8-3/4" Diameter 2-5/16"

Ratings:

Ef 5.0 volts
If 10.3 amps.
epx 25 kv
Io 300 ma
ib 1.5 amps.



Type3B24WA\*

Max. Dimen.:

Height 4-1/2" Diameter 1-9/16"

Ratings:

Ef 5.0 volts
If 3.0 amps.
epx 20 kv
Io 60 ma
ib 300 ma



**Type 3B29** 

Max. Dimen.:

Height 4-3/4" Diameter 1-9/16"

Ratings:

Ef 2.5 volts

If 4.75 amps.
epx 16 kv

Io 65 ma
ib 250 ma

\*3B24WA is Ruggedized Type employing new Bonded Thoria filament; placed on JAN preferred list October 1951 in lieu of 3B24W.

UNITED



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

# For better controls

through better Hermetically Sealed Relays

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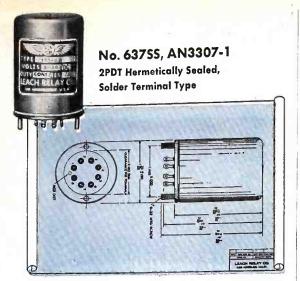


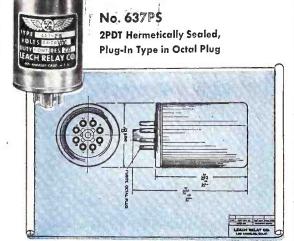
The most advanced hermetically sealed relays can best he designed and produced by a firm like *Leach* which pioneered this field from the beginning.

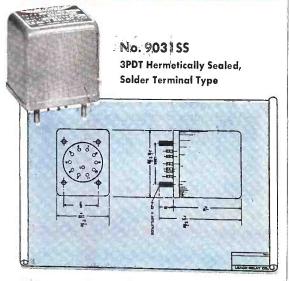
Here at Leach you will find complete engineering, testing and production facilities to help you solve your relay problems in the electrical and electronic fields.

The unsurpassed dependability of Leach Relays has been proved by nearly four decades of leadership in providing all types of relays for maximum performance under competitive operating conditions.

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THROUGH BETTER RELAYS
— Specify Leach







Performance characteristics for the Relays illustrated above are as follows:

- Contacts rated: 10 Amps. Resistive and inductive at 29 VDC.
- 6 Amps. Motor load at 29 VDC.
- 10 Amps. Resistive at 115 VAC, 400 cycles. Coil 24-28 VDC.



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of all types of electronic
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equipment.

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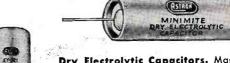
Pioneers in the production of quality capacitors and RF interference filters, Astron is considered by leading radio, television, and electronic nanufacturers as a prime source for a wide range of standard and special capacitor types. The Astron name is their guarantee—and yours—of capacitor dependability far above established industry standards.



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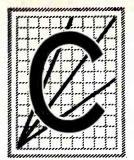
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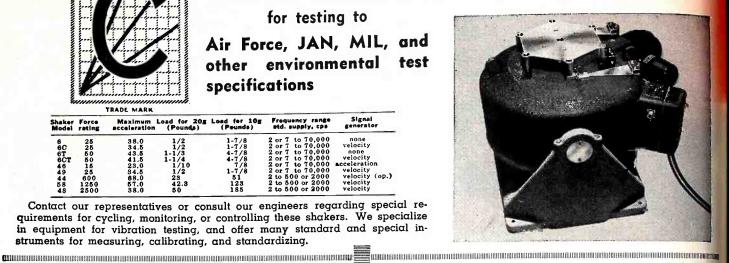


# CALIDYNE VIBRATION TEST EQUIPMENT

for testing to Air Force, JAN, MIL, and other environmental test specifications

	TRADE MARK				
Force rating	Maximum acceleration	Load for 20g (Pounds)	Load for 10g (Pounds)	Frequency range atd. supply, cps	Signal generator
25 25 50 60 15 25 600 1250 2500	38.0 34.5 43.5 41.5 23.0 34.5 68.0 57.0 38.0	1/2 1/2 1-1/3 1-1/4 1/10 1/2 23 42.3 50	1-7/8 1-7/8 4-7/8 4-7/8 7/8 1-7/8 51 123 185	2 or 7 to 70,000 2 to 500 or 2000 2 to 500 or 2000 2 to 500 or 2000 2 to 500 or 2000	none velocity none velocity acceleration velocity velocity (op.) velocity velocity

Contact our representatives or consult our engineers regarding special requirements for cycling, monitoring, or controlling these shakers. We specialize in equipment for vibration testing, and offer many standard and special instruments for measuring, calibrating, and standardizing.





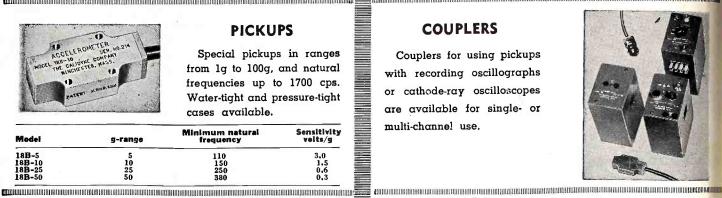
### **PICKUPS**

Special pickups in ranges from 1g to 100g, and natural frequencies up to 1700 cps. Water-tight and pressure-tight cases available.

Model	g-range	Minimum natural frequency	Sensitivity volts/g
18B-5	5	110	3.0
18B-10	10	150	1.5
18B-25	25	250	0.6
18B-50	50	380	0.3

### COUPLERS

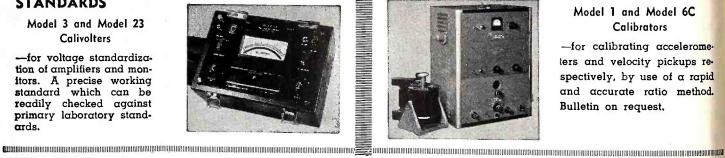
Couplers for using pickups with recording oscillographs or cathode-ray oscilloscopes are available for single- or multi-channel use.



### **STANDARDS**

Model 3 and Model 23 Calivolters

-for voltage standardization of amplifiers and monitors. A precise working standard which can be readily checked against primary laboratory standards.

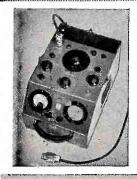


### **CALIBRATORS**



### Model 1 and Model 6C Calibrators

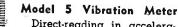
-for calibrating accelerometers and velocity pickups respectively, by use of a rapid and accurate ratio method. Bulletin on request.



### Model 38 Vibrascope

Uses direct-coupled Model 18B pickup as input to combination vibration meter and calibrated oscilloscope for measuring acceleration, velocity, or displacement, and giving frequency and wave form indication.

### **METERS**



Direct-reading in acceleration, velocity, or displacement units when using velocity type pickups. A very compact, battery-operated unit.

### Model 54 Signal Monitor

AC-operated unit for direct measurement of displacement or g output of shakers having velocity signal generators.



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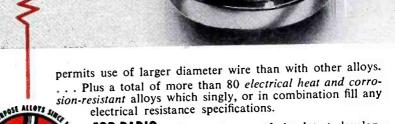
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# RIVER-HARRIS-WIRE AND RIBBON

esistance 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 res where overall size is limited, but dependability must.

Tanganin, for fixed stability and constant resistance

normally variable operating conditions; exes being precision bobbins, potentiometers, Nal Bureau of Standards type resistance standards.

Advance\*, most frequently specified for precision

ors in electric meters and laboratory testing debecause in its finer sizes it has a temperature icient of only ±.00002/°C.

Karma\*, high ohmage, 800 ohms/cmf at 20°C., makes ble extremely small resistors. Especially suitable for serin resistors requiring negligible temperature coefficient of ance. Thermal e.m.f. against copper only .002 millivolts between 0°C. and 100°C. Its higher specific resistance 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 hear 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





RUGGED RADAR LOCAL OSCILLATOR oothly tunable by single shaft, the operates in conventional afc and -supply circuits with dependably ducible characteristics. V-51, simias locknut tuner for even rougher e. Data tabulated below.



C.BAND AMPLIFIER—Arranged for di-ttachment to any Varian x-band osor, the V-27 gives the advantages of operation, can be pulsed to deliver 500 watts. Tube connections are through a new pigtail termination rcuit convenience.



WIDEBAND RELAY OSCILLATOR — Feag low distortion, uniformity of charistics, and long service life, the X-26 s covers the range from 5925 to 7725 300-mc bands, over which each parar tube is tunable. Designed for mitter service, they can also be apas local oscillators.



X-13 STABLE BENCH OSCILLATOR-This x-band reflex oscillator combines stability with high power output and is particularly suited for application as a signal source in many difficult laboratory measurements. The X-12 is similar but covers a higher frequency range.



V-23 TWO-RESONATOR OSCILLATOR pact, rugged, this klystron delivers 5 watts c-w and 100 watts pulsed. The molded base connector withstands wide fluctua tions in temperature and pressure. X-21 is a similar tube of slightly different, more economical construction.



MICA-SEAL WINDOW FLANGES - For use in pressurized or evacuated waveguide plumbing systems, Varian x-band flanges are now available and other sizes can be supplied on special order. Special feature of these precision flanges is the exclusive Varian mica-seal window which combines optimum matching over a wide impedance range with unequalled resistance to damage.

OPERATING AND PHYSICAL DATA — VARIAN KLYSTRONS											
	TYPE	FREQUENCY RANGE (kmc)	BEAM  Yoltage Current  (volts) (ma)	REFLECTOR VOLTAGE (volts)	POWER OUTPUT	DIMENSIONS (inches approx.)	CONNECTION				
-12	Reflex Oscillator #	124 - 175	600 50	100 - 500	10 - 100 mw	41/4 x 13/4 x 13/4	0.702" x 0.391 waveguide				
13	Reflex Oscillator †	8.2 - 12.4	500 50	300 - 700	150 - 500 mw	41/4 x 17/e x 17/4	1" x ½" Waveguide				
-21	2-Resonator Oscillator +	9.1 - 11.0	1100 75 1350 100		3 - 5 watts ‡	31/s x 11/4 x 21/s	1" x ½" waveguide				
/-23	2-Resonator Oscillator 1	9.1 - 11.0	1100 - 75 1350 100		3 - 5 watts ‡	31/8 x 11/4 x 21/a	l" x ½" Waveguide				
-27	2-Resonator Amplifier †	9.1 - 11.0	1350 100		4 - 8 watts ‡	31/a x 17/a x 21/a	1″x ½′ waveguide				
-50	Reflex	8.5 - 10.0	300 28	100 - 180	50 - 70 mw	31/8 x 17/8 x 17/4	1" x ½" waveguide				
-51	Oscillator • • • Reflex	8.5 - 10.0	350 50	150 - 250	100 - 200 mw	31/8 x 1 % x 1 %	1" x ½" waveguide				
13 \$	Oscillator *	8.5 - 10.0	350 50	150 - 250	100 - 200 mw	31/a x 17/a x 17/a	1" x ½" Waveguide				
-26	Oscillator † Reflex	5.925 - 7.725	750 .70	300 - 350	1 watt	45% x 21/2 x 31/8	1 1/2" x 1/4" waveguide				
-17	Oscillator *  Reflex Oscillator †	1.7 - 2.4	1000 200	500 - 700	6 - 10 watts	61/4 x 47/4 x 4	Type N Jack				

signed for optimum performance with a matched load.

‡ 100 to 500 walt peak power may be obtained with 3 to 5 kv pulses at 3% duty cycle.



VARIAN associates

990 VARIAN STREET - SAN CARLOS 1, CALIFORNIA

Representatives in Principal Cities



# KLYSTRON

# AMPLIFIERS

For pulsed and continuous-wave operation in radar and communications transmitters at various powers and microwave frequencies.

# OSCILLATORS

For f-m, a-m, or pulsed applications as relay transmitters, radar and communications local oscillators, laboratory-measurement signal sources, and in rugged-service mobile equipment.

# NUCLEAR RESONANCE

For precise measurement and control of magnetic fields and for exploration into physical and chemical phenomena, Varian Associates manufactures nuclearresonance equipment including research magnets and power supplies, nuclear fluxmeters, and nuclear-resonance spectrometers. A fullyequipped and staffed laboratory is available to undertake research and development in the nuclear-resonance field.

YOUR PARTICULAR microwave tube problem may require one of the many Varian klystrons-both commercial and military - which are necessarily unpublicized. Your inquiry is invited.

### CROLOY RADIO RODS

Replacing usual loops. Spell new reception standards. Permit mounting on chassis, and final test before placement in cabinet. "Q" of order of 250 as against 80 for small loops. Usual Croley radio rod is 8" 1, by ½" d. Other tizes available.

CROLOY CORES
Molded in widest
range of shapes and
sizes. Deflection yokes
expand TV-tube deflection angles without corresponding
voltage increase.
Croloy cores slash TV
transformer bulk.

### CROLOY RADIO CORES

Croloy slug tuners and I.F. coils reduce cost and raise gain. Made in widest variety of designs, sixed and medifications. With screw inserts, with threaded bodies, cup-shaped, ting closed cores, atc. Choice of company them to meet electronic characteristics.

## EXTRUDED CROLITE

From tiny tubes no bigger than pencil lead and with one or two long it udin all holes, to tubes, gods and blocks up to 60 dia. Widest veriety of cross-section at shapes. The Crowley extrasion technique minimizes machining.

#### PRESSED CROLITE

Formed in standard or custom molds into the widest choice of thapes and sizes, thereby minimizing machining. High degree of accuracy to fit with metal parts in any assembly. Plain a plazed finish.

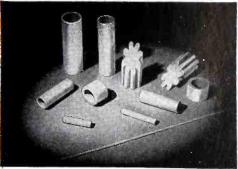
### MACHINED CROLITE

Elaborate shapes, including grooves, bobbins, holes, threads, fins and other features, can be included in Crolite machined pieces. Precision machined tools in the hands of skilled specialists, insure the matching of rigid mechanical specifications.













# parts from powders

Consider Crowley
your No. 1 source of supply for magnetic and ceramic
pieces. For here, under one roof, are specialists who
have pioneered the "parts from powders" art for the
radio-electronic industry.

Crowley means production facilities that have supplied the major portion of magnetic cores in peace and war alike. Here are extrusion, molding and machining facilities that can provide steatite and other severe-service insulators in the widest range of characteristics, sizes, shapes.

By all means try Crowley! You can save time, money and trouble, just as other electronic designers, engineers and production men are doing.

Let us collaborate
on your TV, radio or electronic
problems. Samples,
engineering aid, and quotations,
on request.

HENRY L. CROWLEY & COMPANY, INC.

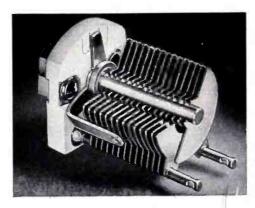
Pionecring POWDER-IRON and STEATITE products

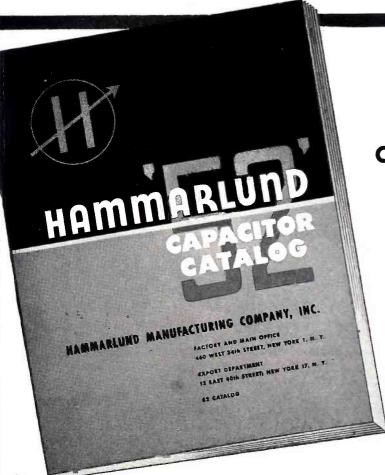
1 Central Avenue

West Orange, N. J.

# JAMMABLUND RECISION-BUILT CAPACITORS

Hammarlund Capacitors, backed by 42 years of design, engineering and production experience, are today recognized by the military services, electronic manufacturers and research engineers, as the finest quality capacitors available. Since the founding of the Hammarlund Manufacturing Company in 1910, it has designed and developed capacitors that today are standard in industry. Millions of them are in use by almost every important manufacturer of electronic equipment.

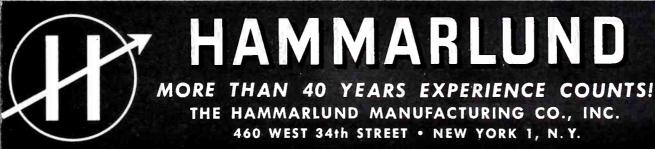




# NOW AVAILABLE! 1952 CAPACITOR CATALOG

This detailed and illustrated 12-page catalog is yours for the asking. It will be a valuable addition to your library of radio parts suppliers, for it includes complete diagrams and electrical and mechanical specifications covering the broadest selection of standard variable air capacitors available to the electronic industry.

FOR YOUR FREE COPY of the 1952 Hammarlund Capacitor Catalog write us today. All capacitors listed in this catalog are stock items which can be purchased from jobbers, dealers everywhere.



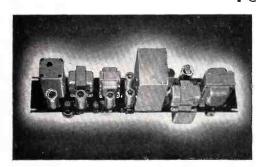
# HAMMARLUND

## DATA TRANSMISSION • SELECTIVE CALLING AND SUPERVISORY CONTROL EQUIPMENT

For the past seven years The Hammarlund Manufacturing Company has specialized in designing and developing electronic control equipment. Based on this experience, and the knowledge gained from 42 years of communications engineering and production, Hammarlund to-

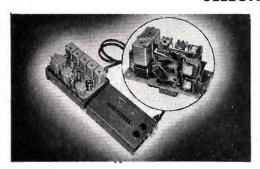
day produces a standard line of equipment for data transmission, supervisory control, telemetering, selective or group calling or signalling, fault alarm and other similar applications. This equipment is designed for use on microwave, radio or wire circuits.

### POINT TO POINT SIGNALLING



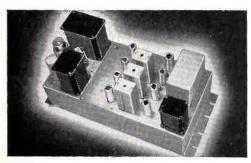
The Hammarlund Standard Duplex Signalling Unit consists of a tone generator and receiver designed to operate over wire lines, telephone or power line carrier, and radio or microwave communications circuits for signalling, dialing, slow speed telemetering, supervisory controls or other information. Transmitters and receivers are available for 33 frequency channels between 2000 and 6000 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.

### SELECTIVELY CALLING OR SIGNALLING



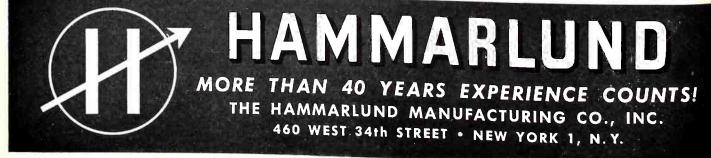
Hammarlund Selective Calling equipment, added to 2-way radio systems used to control large fleets of vehicles, or distant fixed stations, adds privacy, speed, safety, quietness and convenience to day-in-day-out operations. By the push of a button the dispatcher within 0.8 of a second selects the station 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.

### 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, pipelines, 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 signalling tones.

**₩** Write Today For Detailed Information **4** 



## JAMMABLUND VORLD-FAMOUS SUPER-PRO 600

The Hammarlund "Super-Pro 600" comnunications receiver has gained world wide ecognition as the finest, best performing eceiver available anywhere at any price. It s used in large quantities by the U. S. Army, Navy, and Air Force, other governmental agencies, airlines, the press, maritime and commercial services, for both single channel and diversity reception. Only recently has it become available for amateur use where it achieved immediate popularity because of its high performance abilities.

### FIRST CHOICE FOR:

- MILITARY
- COMMERCIAL
- AIRLINES
- MARINE
- AMATEURS



SP-600-JX

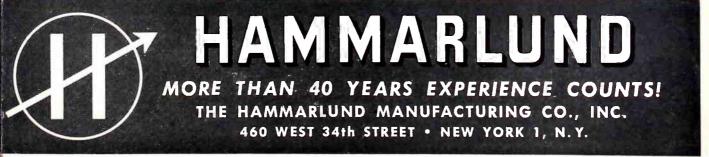
### Designed for Dependable Performance!

The "SP-600-JX" is a completely new receiver in both lectrical and mechanical concept and incorporates the xperience of more than 40 years of manufacturing ommunications equipment. Every component in the flammarlund "SP-600-JX" is conservatively rated to do specific job. Quality performance was the first and only onsideration in its design and manufacture. So flexible a this receiver it would require a number of individual eceivers, each specifically designed to do a certain job, a equal its performance.

This magnificent receiver is a 20 tube dual conversion uperheterodyne covering the range of 540 kc to 54 mc

in 6 bands. 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 at the flip of a switch. 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 multireceiver installations.

Write to the Hammarlund Manufacturing Company for further details.





### PRECISION LABORATORY INSTRUMENTS

Complete Specifications and Descriptions of all Equipment Available upon Request



### GENERATOR

Model MSG-4 7,000 mc — 10,750 mc

Polarad's Microwave Signal Generator, Model MSG-4, is an ideal source of an accurately known signal voltage, precisely modulated. Sensitivity, frequency and performance of radio and radar equipments in the frequency range from 7 to 10.75 kmc can be readlly measured on this continuously variable, direct reading signal generator.

- Continuous tuning
- One tuning control
- Tuning dial accuracy—1%
- No klystron modes to set
- Accurate stable power measurement



- Non-contacting shorts guarantee long life Modulation—Internal Pulse, FM and
- Sync output—delayed and undelayed

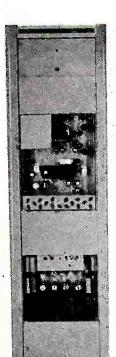


### MICROWAVE SIGNAL SOURCES

Models SSR, SSL, SSS, SSM, SSX, 634 MC to 10,750 MC

For use as a reliable source of microwave ror use as a reliable source of microwave energy in transmission loss measurements, standing wave determination, etc. Unidial Control for accuracy and ease of operation. Direct reading (no mode charts to consult).

Five Microwave Signal Sources are available to cover the frequency range from 634 MC to 10,750 MC. Klystron reflector voltage automatically tracked with tuning of the klystron cavity.



### **TELEVISION** MONOSCOPE SIGNAL SOURCE

Model PT-102

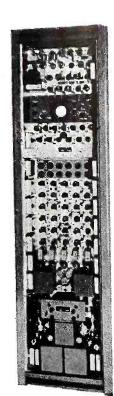
Used in transmitting sta-Used in transmitting startions, laboratories and in receiver factories where a reliable standard video signal in the form of a test pattern is a prime requisite for testing overall video performance.

#### Specifications:

- Composite Video
- Wide Band Video Amplifier, 3db down at 7 mc
- Dual outputs for feeding two 75 or 100 ohm lines Black positive or
- Black negative output
- Resolution greater than 500 lines

INPUT: Vertical and Hori-zontal Driving Pulses, Camera and Kinescope Blanking Pulses

OUTPUT: Composite Video Signat, 2 Volts peak to peak. Complete with tubes, high and low



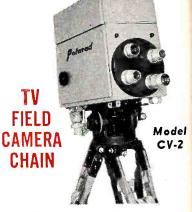
### TELEVISION SYNCHRONIZING **GENERATOR**

Model PT-101

For use in television broadror use in relevision broad-casting studios, laborato-ries and receiver manufac-turing where precise and stable synchronizing sig-nals are an essential re-quirement.

#### Specifications:

- · Fast lock-in action of AC line synchronizing circuits
- Interlaced Fields: 525 lines, 60 fields, 30 frames
- Output Signals: Synchronizing (Neg.); Video Blanking (Pos.); Camera Blanking (Pos.); Camera Horizontal Drive (Neg.); Camera Vertical Drive (Neg.)
- Output Signal Level: 5 volts peak to peak
- Output Termination:
- Power: 115 volts, 60 cps, 750 watts



Excellent picture quality and resolution (over 500 lines) are obtained even under difficult and unpredictable lighting conditions. Camera unit supported on a special scanning mount and tripad provides excellent maneuverability in covering scenes over a wide angle. Electronic view finder plugs into the camera and is readily detachable. Removable four lens turret with interlocking switches for changing scenes rapidly without circuit transients. transients.

Model CV-2 is adaptable to and can operate with existing equipment.

Television Camera Chain Consists of: Camera Cable Field Camera Unit Camera Control Unit Power Unit Electronic View Finder Lens Component 50 mm. f 1.9 90 mm. f 3.5 135 mm, f 3.8

### POLARAD ELECTRONICS C



### All Band, Direct Reading **SPECTRUM**

### ANALYZER

#### 10 MC to 21,000 MC

- · Continuous tuning.
- One tuning control.
- 250 KC to 25 MC display at all frequencies.
- Frequency accuracy 1 percent.
- No Klystron modes to set.
- Broadband attenuators supplied from 1 to 12 KMC.
- Frequency marker for measuring differences 0-25 MC.
- Only four tuning units required to cover entire range.
- Maximum frequency coverage per dollar invested.

### Model LSA

The instrument consists of the following units: Model LTU-1 RF Tuning Unit-10 to 1000 MC. Model LTU-2 RF Tuning Unit-940 to 4500 MC. Model LTU-3 RF Tuning Unit-4460 to 16,520 MC.

Model LTU-4 RF Tuning Unit-15,000 to 21,000 MC.

Model LDU-1 Spectrum Display Unit.

Model LPU-1 Power Unit.

Model LKU-1 Klystron Power Unit.

### WIDE BAND VIDEO AMPLIFIER

Model VT 10 CPS to 20 MC

Designed for use as an oscilloscope deflection amplifier for the measurement and viewing of pulses of short duration and rise time.

- Flat frequency response from 10 cps to 20 mc ±1.5 db.
- Gain of 50 db.
- Frequency compensated high impedance attenuator calibrated in 10 db steps from 0-50.
- Phase linear with frequency over entire band.



### REGULATED POWER UNITS

Electronically regulated power supplies designed to meet the needs of television equipment and other apparatus which require extremely fine regulation, low ripple content and appreciable quantities of D.C. power.

Output impedance less than 1.5 ohms. Regulation better than 0.2%.

The power supplies are built on a dishpan type chassis with transformers, tubes and control panel at the front. All wiring is on the rear of the chassis which is of standard rack width. To insure long life, no electrolytic condensers are used.

A portable carrying case, Model C111, is available.



#### Model PT112

Heavy duty electronically regulated D.C. power source.

Output Voltage: 250-300 volts, D.C. Output Current: 150-800 ma.



### Model PT111D (Dual Regulated)

Consists of two independently regulated D.C. power sources, (isolated from ground), mounted on one chassis. Each power source has its own power switch,

fuse, pilot light and voltage control. Each power supply can be operated with negative or positive ground.

Output Voltage: 250-300 volts, D.C. Output Current: 100-400 ma. (Each power source, two such sources available)

#### Model PT111

Consists of a positive and a negative voltage supply independently requlated.

Output Voltage: 250-300 volts D.C.



### STUDIO **PICTURE** MONITOR



#### Model M-105

Polarad's Studio Pic-ture Monitor, Model M-105, is a high fidel-ity picture monitor of large size, sufficient for ease of observation unease of observation under studio conditions.
It is a high impedance device and may be connected across a video transmission line without affecting the terminal impedance of the line Magachema and line. Monochrome and/ or color signals in black and white reception is provided.



### **PORTABLE** TELEVISION WAVE FORM MONITOR

Model TO-1

Designed for precise waveform analysis and amplitude measurement of video signal in television circuits. Also ideal as a general purpose instrument in many applications, because of its wide frequency response, high sensitivity, excellent synchronizing capability, precision calibrating circuits and unusually large symmetrical horizontal expansion.

- Specifications:
- Maximum Vertical Deflection Sensitivity: 0.1 volts per inch Input Signal Level: 0.25 to 2 volts peak to peak Frequency Response: (V. Amp.) flat to —3db at 4 mcs; (H. Amp.) flat to —3db at 35 kc

Electronics Corporation

### TELEVISION EQUIPMENT

Complete Specifications and Descriptions of all Equipment **Available upon Request** 

#### Features:

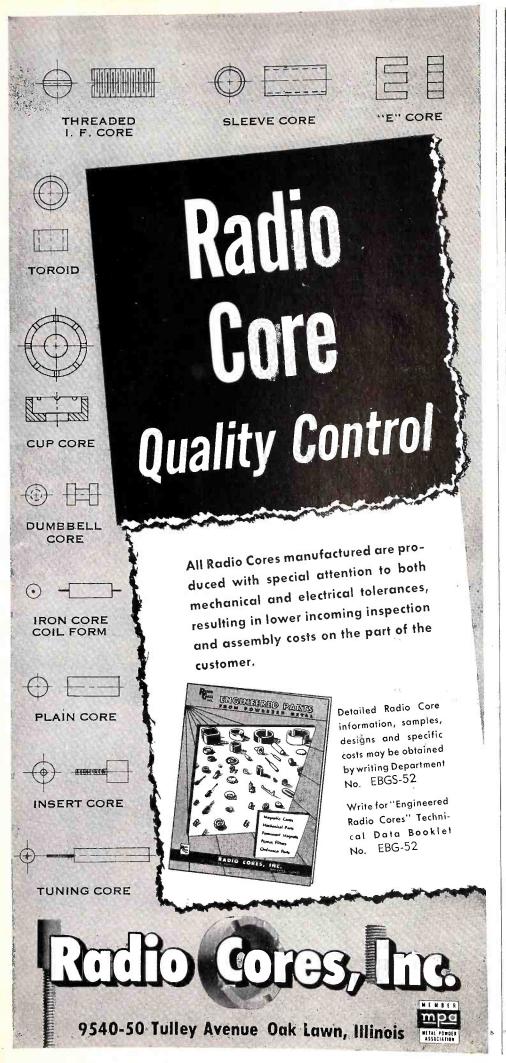
- High resolution, in excess of 450 lines
  12" Kinescope
  Excellent vertical and horizontal linearity
- Light weight
   Compete with internal power supply

Specifications:

0.25 to 2.0 volts Input Video Signal

.0.23 to 2.0 voits
negative
.470,000 ohms
.105-125 voits, 2 amps, 50/60 cps
.Greater than 450 lines
\_Flat to 5.0 Mc ± 1½ db

AVENUE, BROOKLYN N. Y. METROPOLITAN 0 0



### MICRO CIRCLE CUTTER



A well built tool for those odd size holes. Cuts through ½ inch of steel. Has MICROMATIC SIZE ADJUSTOR. Comes complete with tool steel cutting bit for extra long service.

#### At all dealers

#### RUBBER CIRCUIT STAMPS

Provide clear sharp impressions of all the most used circuit symbols. Saves you time and makes better looking drawings.

See your local distributor or send for full details.





### SCALE PRINTING

Prints round or rectangular meter scales, sample labels, decals. Turns out a beautiful looking joh of high accuracy.

Send for full details.

### OTHER 'PRECISE' PRODUCTS: KILOVOLTMETERS to 100 KV.

H. V. POWER SUPPLIES
INFRA RED SNOOPERSCOPES
FLUORESCENT MATERIALS
CESIUM VAPOR LAMPS

Catalogue on request

### PRECISE MEASUREMENTS COMPANY

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### NOT...

until next year will you get another

### electronics BUYERS' GUIDE

Don't let it get away from you. It's the best source of buying information for electronic and allied products that has ever been compiled.

When buying, or requesting product information be sure to mention ELECTRONICS BUYERS' GUIDE.

### Miniature Precision Ball Bearings

are used in aviation instruments, railway and marine indicating and recording devices, cameras, medical appliances, and many other fine mechanisms.





#### RADIAL SERIES

Deep-groove, full-race, radial-type bearings of heavy duty design, combining large load capacity with a minimum of friction.

100						The second second second	The state of the s
ng	No.	100	2	21/2	★ 3	<b>★</b> ▼4	<b>★</b> ▼5
HEAL476	(D)	.100"	.1250"	.15625"	.1875"	.2500"	.3125"
	(B)	.0250"	.0400"	.04687"	.0550"	.07812"	.09375"
	(W)	.03125"	.04687"	.0625"	.07812"	.09375"	.10937"
		7-,65 mm	8-1/32"	10-1/32"	8-3/64"	8-1/16"	10-1/16"
Rati	ng (lbs.) 500		2.1	3.5	4.6	8.0	9.2
	. 6 (	***************************************			· · best Additional commence of the commence o		

RANCES (D) + .0000" - .0002" (B) + .0000" - .0002" (W) + .000" - .001" tricity .0002" Max.



### CONRAD SERIES

For applications of medium speed, light load, low torque and minimum clearances. Stainless steel snap retainers.

g No.	± 4C	<b>★</b> 5C	★ 518C	★ 5632C
. (D)	.2500"	.3125"	.3125"	.3125"
(B)	.07812"	.09375"	.1250"	.1875"
(W)	.09375"	.10937"	.10937"	10937"
AND THE PARTY OF T	5-1/16"	5-1/16"	6-1/16"	7-3/64"
ating (lbs.) 1000 rpm	11.5	11.5	13.2	8.2

RANCES SAME AS STANDARD RADIAL SERIES — RE BEARINGS ALSO AVAILABLE WITH FLANGE OR GROOVE



### PIVOT SERIES

A heavy duty series to withstand heavy loads and shock in applications where jewel bearings do not have sufficient strength. Self-aligning within 4 degrees.

ing	No.	1.5P	3P	<b>★</b> 4P	<b>★</b> ▼5P	★▼7½P	<b>★▼10P</b>
eagleston or	(D)	.0590"	.1181"	.1575"	.1968"	.2953"	.3937"
}	(W)	.0472"	.0709"	.0945"	.1181"	.1772"	.2362"
	(S) Min.	.020"	.030"	.040"	.050"	.075"	.100"
	to province the state of the st	4-1/64"	4-1/32"	4-3/64"	4-1/16"	4-3/32"	4-1/8"
Rati	ng R & T 1000 r	pm .55	2.7	6.0	10.8	25.0	41.0
			0" (110 .	000#			

RANCES (D) + .0000" - .0002" (W) ± .002"

NTRICITY DEPENDS ON SHAFT, RACEWAY AND O.D. CONCENTRIC WITHIN .0004" Series. Consult Engineering Department for



### SUPER-LIGHT RADIAL SERIES

To accommodate larger shafts than above, while retaining minimum a.d. dimensions for utmost reduction of bearing space requirements.

			180			ALCOHOL: NAME OF THE OWNER, THE O	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Bearing	No.	<b>★</b> 418	<b>★▼</b> 518	★ 5532	★ 5632	★ 5732	<b>★</b> 614
O. D.	(D)	.2500"	.3125"	.3125"	.3125"	,3125"	.3750"
Bore	(B)	.1250"	.1250 "	.15625"	.1875"	.21875"	,2500"
Width	(W).	.09375"	.10937"	.10937"	,10937"	.10937"	,1250"
Balls		15-1 mm	11-1/16"	15-3/64"	16-3/64"	26-1/32"	25-1 mm
	ng (lbs.) 500	AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS	9.5	7.2	7.2	4.2	6.5
TOLERAN	CES SAME	AS STANDA	RD RADIAL	SERIES			

### SEPARABLE MAGNETO SERIES

Designed for certain oscillating movements, com-bining radial load and single direction thrust. Consult us concerning application of these pearings.

Bearing No.	<b>★</b> 3M	★ 4M	<b>★</b> 5M	★ 518M
0. D. (	(D) .1875"	,2500"	.3125"	.3125"
114()21111111111111111111111111111111111	(B) .0550"	.07812"	.09375"	.1250"
*M. PANTONIA NEW TOP / POP / P	W) .07812	.09375"	.10937"	.10937"
Balls*	5-3/64	" 5-1/16"	7-1/16"	8-1/16"
Load Rating (lbs.) 500	00 rpm 3.8	6.6	8.2	9.5

\*Subject to variations with non-metallic retainers.
TOLERANCES SAME AS STANDARD RADIAL SERIES



### ANGULAR CONTACT SERIES

Has self-retaining feature eliminating need for retainer or cap. For radial and thrust loads, Greater load capacity than pivot series. For cone or straight through shaft.

Bearing N	o.	★ 2A	<b>★</b> 3A	★▼4A	★▼6A	6A7B
O. D.	-(0)	.1250"	.1875"	.2500"	.3750"	.3750"
Width	(W)	.04687"	.0700"	.09375"	.14062-1	.1406"
	ax. (without cone)		.048"	.063"	.094"	.1250"
P Shaft	(S) Min.	.042"	.062"	.0850"	.124"	.150"
Cone	(C) Max.	60°	60°	60°	60°	60°

fixes indicate material: Standard [no prefix] is chrome bearing steel. [SAE 52100]. ★ Indicates also available in 440 stainless. Order with prefix "SS", ndicates also available in 25 beryllium. Order with prefix "NM".

### MPB ball bearings

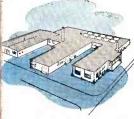
are available in ten series and more than 120 different types and sizes which normally can be supplied from stock. The variety of MPB bearings provides a ready solution to some of the most difficult miniaturization projects.

Manufacturers and users of small precision mechanisms can now enjoy all the well known advantages of anti-friction bearings (accurate alignment, long wear, freedom from attention)

> universally accepted in larger quality equipment.

For more than 20 years MPB bearings have contributed to the operation of precision mechanisms. A pioneer in designs and dimensions now being internationally standardized, MPB has also originated many precision manufacturing techniques. All MPB bearings are ground, honed, lapped and/or burnished in accordance with highest quality practice for optimum operating characteristics.

Complete specifications are given in our new engineering bulletin #52 B. Your copy will be mailed immediately.



Miniature Precision Bearings

Incorporated



Keene, New Hampshire

"Pioneer Precisionists to the World's Foremost Instrument Manufacturers"

save space weight friction

# NOW

SOURCE FOR\_Vulcanized Fibre

Simplify your purchase of electrical insulation, laminated and molded plastics 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. An alert, helpful sales organization. That's C-D-F, the Continental-Diamond Fibre Company, leaders in electrical insulation.

### OF INTEREST TO ELECTRONIC ENGINEERS

#### DOES C-D-FMAKE METAL-CLAD LAMINATES FOR PRINTED CIRCUITS?

YES, a special C-D-F bonding process joins copper, aluminum and other metals to dielectrically strong sheets of Dilecto or Teflon. Where printed circuits must withstand temperatures over 300°F. for extended periods of time, copper-clad Teflon has many advantages. It does not absorb water and is resistant to surface leakage under high humidity. Remember, all C-D-F metal-clad laminates have superior peel strength. Write for technical bulletin.

### HOW CAN C-D-F HELP SOLVE DESIGN AND MACHINING PROBLEMS?

Because we are both manufacturers and fabricators of a wide line of plastics, a wealth of machining information is available. Write for free Plastics Machining Notebook. Contact your C-D-F sales engineer. Write C-D-F, Newark, Delaware for additional engineering advice.

#### WHAT C-D-F PRODUCTS ARE OF SPECIAL INTEREST TO THE **ELECTRONICS INDUSTRY?**

ALL merit the fullest investigation at this time. Competition makes for product improvement, cost reductions. Low cost Vulcanized Fibre or Spiral Tubing may be the answer to a specific problem. Teflon or Dilecto may save your equipment from operational failure. Tapes and plates of Micabond can help you beat the heat with an economical insulator. Vulcoid punched parts possibly can be

used in the equipment you are designing.
Study all the facts. Write for new GF Catalog giving revised data on complete C-D-F product line. For specific information send us the following answers which will be treated confidentially: Your products. Do you have fabricating facilities? Contemplated use of material? Necessary dielectric properties. What would mechanical stresses be? What chemicals would contact material? Estimated consumption. Include blueprint or sample of present material.

An inexpensive, lightweight, electrical insulator of great mechanical adaptability. Finished sheets, tubes, rods of fibre are tough, hard, smooth with great physical strength, high dielectric strength and excellent arc resistance. Easily machined punched, formed. C-D-F makes Diamond Insula. tion, an extra-strong fish paper that stands extreme bending without cracking.

### Dilecto

Name the application and there's a grade of thermosetting laminated Dilecto to fill the bill Punching grades . . . high humidity grades . . . post-forming plastics, C-D-F has complete coverage for the electronics industry and proven experience in meeting military and civilian industry standards. For top quality, dependable laminated plastic accept no substitute for Dilecto, made only by

### Micabond

C-D-F Valparaiso, Ind., is a leading manufac turer of quality mica plates, V rings, segments Also, there are Micabond tapes for every need Backings include fiberglas, silk, cellophane, cotton, Mylar, paper. All tapes are dielectrically strong flexible, and made from the finest mica splittings, carefully placed, bonded and supported to prevent insulation leaks. Write for Micabond catalog.

Half the weight of aluminum, this macerated canvas-filled phenolic material is dimensionally stable with superior electrical and mechanical strength. May be molded to close dimensions. High tensile strength, yet resilient; widely used for silent gear stock and aviation parts. Resists corrosion and ordinary solvents.

### reflon

Sheets and tapes of Teflon resist high heat, chemicals, electric arc, and don't absorb water. C-D-F offers glass fabric supported Teflon and unsupported Teflon in many forms; also makes metal-clad Teflon. Write now for Teflon technical folder complete with samples.

Stiff, sturdy, crush resistant tubing with good tensile strength along with dimensional stability under varying atmospheric conditions. Perfect for coil forms, small spacers, for transformers and switches. Grades for riveting, notching, high har midity applications. C-D-F makes all three round, square, rectangular spiral tubing, can fabricate parts economically for you.

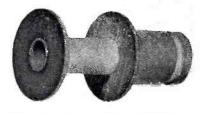


Continental-Diamond Fibre Company



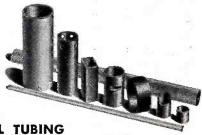
#### RSATILE DILECTO

y to fabricate, C-D-F Dilecto sheets, rods, es have been machined into thousands of tronic parts. Drilling, milling, sawing, sching... Dilecto is a machinist's favorite. ecto is moisture resistant, light weight, and ormed from sheets of impregnated cloth



#### S SPOOL KEEPS ITS HEAD

adio coil manufacturer wanted small spools, aper than those machined down from round k, stronger than molded bobbins. C-D-F plied him with this spool that does not come rt regardless of the outward pressure of the e. A rolled Dilecto tube is grooved on one ... stepped down in the middle ... notch on the other end for a flush fit. A special esive binds the three parts (the body and Dilecto spool heads) together. Write for details.



### RAL TUBING

lio, television, weapons of war, all use C-D-F ing of spiral-wound kraft paper which is r impregnated with phenolic resin. Eleven des offer wide variety of mechanical and ctrical properties. Here may be the low-answer to your immediate construction blem!

### DRUM THAT'S HARD TO BEAT!

s controller contact drum assembly is con-structed of Celoron, Vulcan-



ized Fibre and Brass. It controls a Diesel locomotive's speed. The body is molded Celoron with a brass contact surface. Vulcanized Fibre is used between the contacts because of its arc extinguishing and non-tracking characteristics.

### AND MAKE IT

Why? Because the people at C-D-F talk your language, understand the value of exactness and precision. They know from wide experience what is new and worthwhile in insulation and have an alert interest in helping you make a better product. Get to know the man from C-D-F, your local sales engineer. From drawing board to production line his knowledge can aid you. Sales offices are in these cities. Remember C-D-F makes Vulcanized Fibre. Vulcoid, Dilecto, Celoron, Micabond, Teflon and call up your C-D-F sales engineer . . . he's a good man to know!

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## Continental-Viamond tibre Company

executive offices: NEWARK 100, DELAWARE

Export Department: Bridgeport, Penna., U.S.A.

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### Continental-Diamond Fibre Company



# The Development of CARBONYL IRON POWDERS

Carbonyl Iron Powder is an extremely pure form of iron, the metal content being over 99.99% iron, produced in the form of almost perfect spheres only one to fifteen microns in diameter—the average diameter being 8 microns (.00032 inches). It has been produced commercially for some years, primarily for use in magnetic cores for electronic equipment. Its production is therefore now under perfect control to give absolute reliability in quality and properties.

The production of Iron Carbonyl, from which Carbonyl Iron Powders are made, depends on a unique reaction, which was discovered in 1890 by the distinguished British chemist, Sir Ludwig Mond. When iron is treated with carbon monoxide it reacts to form iron pentacarbonyl, a rare case of a liquid compound of a metal. Each atom of iron combines with five molecules of carbon monoxide to give a compound with the formula Fe(CO)<sub>5</sub>. This reaction leaves behind any impurities in the original iron.

This liquid is vaporized and the vapor heated above 200°C, when it decomposes into its constituents. The carbon monoxide is driven off and the iron separates from the vapor phase, first in the form of free atoms, then as ultramicroscopic crystals, finally as microscopic, almost perfect spheres. The particle size distribution can be controlled by temperature, pressure and other operating conditions.

Controlled purity and distribution of particle size is essential for use of the powder in electronics, where minor variations in these properties have exaggerated consequences in delicate electrical and magnetic effects.

The only other elements present are non-metals such as carbon, oxygen and nitrogen. In G A & F Carbonyl Iron

this new book awaits your request Mwww.Www.W. GARE ...the technical portrait of an unusual product

Powder, they amount to not more than 0.8% carbon, 0.9% oxygen and 0.7% nitrogen.

The first large-scale production of Iron Carbonyl was undertaken in Germany shortly after 1920. By 1928 the process had been adapted to the continuous commercial production of Carbonyl Iron Powder. Subsequently, detailed studies and meticulous laboratory-type controls in the plant permitted accurate regulation of purity and particle size for the needs of the modern electronic industry.

The first commercial Carbonyl Iron plant in the United States was opened at Grasselli, N. J. in 1941 by the General Aniline & Film Corporation, primarily to meet the large wartime demand for electronic equipment. Newer and finer grades of the powder were developed for use in high-frequency electronic equipment for radar and television. Later a second plant was put into operation at Huntsville, Alabama

Thus the GA & F Carbonyl Iron Process is now well established and in steady operation. It is an outstanding case of the successful precision control of a sensitive chemical reaction to produce a unique material that must meet extraordinary specifications of purity, particle shape and size, and uniformity.

Write today for free booklet—the most comprehensive treatment ever given to the characteristics and applications of Carbonyl Iron Powders, fully illustrated with photomicrographs, diagrams, performance chart and tables. Kindly address your request to Department 28.



### ANTARA CHEMICALS

DIVISION OF

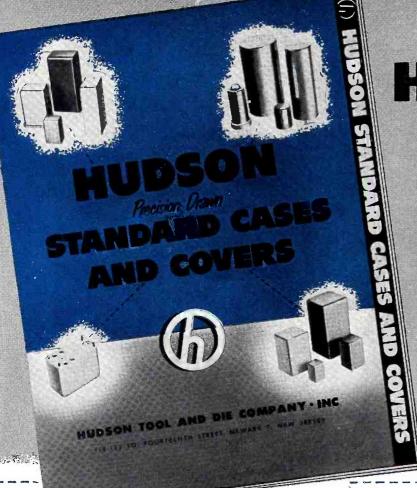
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435 HUDSON STREET . NEW YORK 14, NEW YORK

G A & F<sub>®</sub> Carbonyl Iron Powders . . .



# When SPECIFICATIONS call for TANDARD CASES & COVERS



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- STANDARD DRAWN
   CASES & COVERS
- SPECIAL METAL STAMPINGS
- SPECIAL COVER& CAN ASSEMBLIES

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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 410.

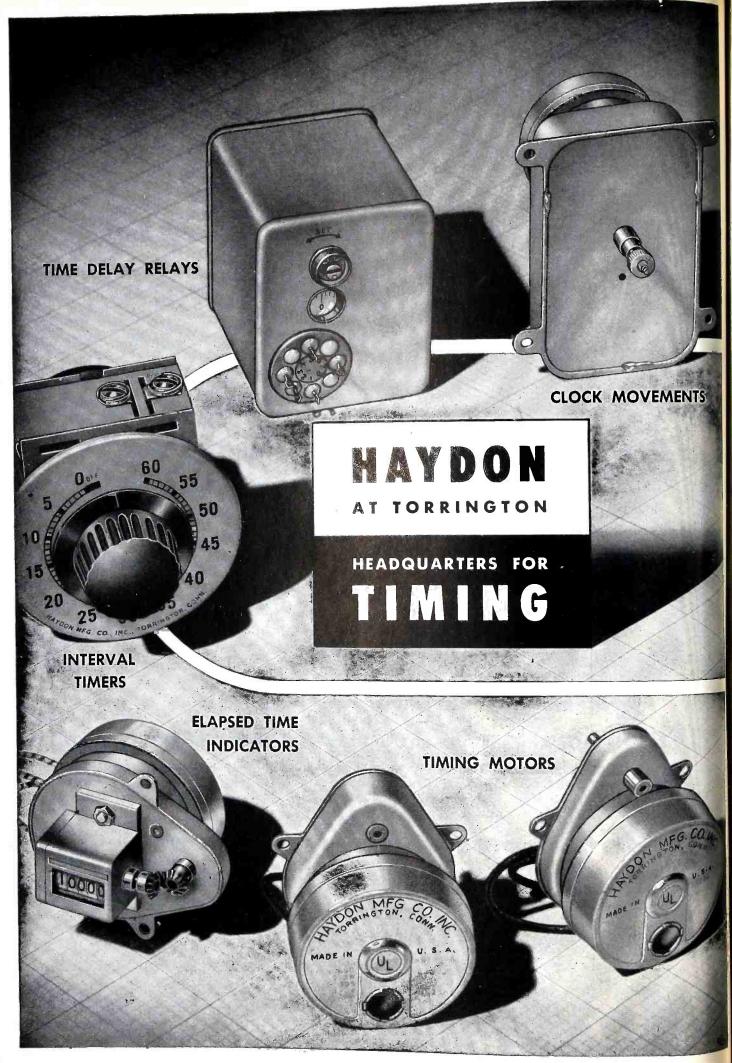


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HUDSON TOOL AND DIE COMPANY · INC

118-122 SO. FOURTEENTH STREET, NEWARK 7, NEW JERSEY



### TIMING MOTORS

HAYDON\* timing motors offer many advantages. Slow rotor speed allows minimum of gearing for various output shaft speeds providing quiet operation and long life. Unusually small size. Motors totally enclosed. Controlled lubrication with separate rotor and gearing lubricating systems permits selection of best method and lubricants. Operates continuously in any position. Simple to mount securely. Interchangeable design in only 2 motor series with standard speed range from 60 rpm to one revolution in 7 days. Write for Motor Catalog.



### 400 CYCLE MOTORS and TIMERS

FOR MILITARY APPLICATIONS

HAYDON research and engineering staffs constantly seek to develop new and build better products. One example is the HAYDON 400 cycle timing motor. This is an hysteresis type synchronous timing motor, for use as a separate motor or in many different types of timers. HAYDON personnel and plant are equipped to build motors and timers using D.C., 60 cycle or 400 cycle for military or civilian applications. Write for Engineering Bulletin No. 2 for complete information on the 400 cycle motor.



### TIMING DEVICES

HAYDON specializes in the manufacture of timing components for standard applications and also in the design and mass production of custom-engineered timers for volume applications. The basic element of all HAYDON timers is our own rugged industrial motor described above. This means that HAYDON timing devices can be depended upon to give long, quiet operation. They are small and compact and offer designers unusual latitude in that they may be mounted and will operate without interruption in any position. Write for Device Catalog.

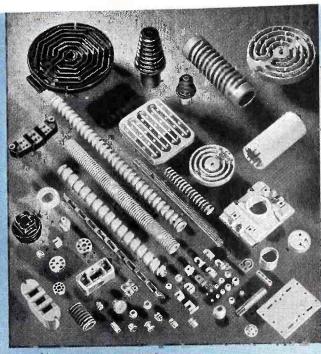


SUBSIDIARY OF GENERAL TIME CORPORATION

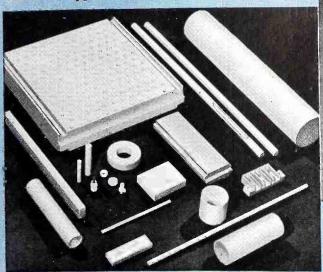
0 ELM STREET, TORRINGTON, CONNECTICUT



# Stupakoff PRODUCTS

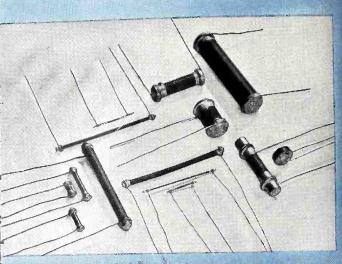


ceramic products—Stupakoff is a leading supplier of pressed, extruded, machined, ground and assembled ceramic products for electrical and electronic applications, for all voltages, frequencies and temperatures. Specialized resistor ceramics, metallized ceramics, high thermal shock resisting ceramics and ceramic dielectrics are described below. Send for information, giving proposed application and approximate requirements.

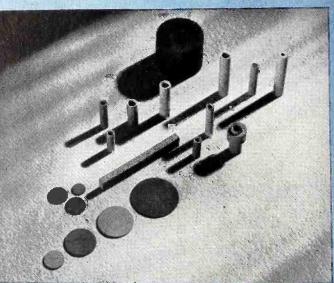


STUPALITH—Where thermal shock conditions prevail, parts made of STUPALITH will withstand extremely severe service. Stupakoff makes parts ranging from a fraction of an ounce to several pounds in weight, in simple or intricate shapes, by pressing, extrusion, casting or ramming.

Two principal compositions are ordinarily employed: "zero" expansivity compositions, and non-porous compositions having near-zero expansivities. For parts requiring a high degree of dimensional accuracy, our production process includes machining or grinding to precision tolerances. Safely used at temperatures up to 2400°F.



RESISTOR CERAMICS—Stupakoff Temperature-Sensitive Resistors are used for temperature indicating or measuring equipment such as Radiosonde, for infra-red light source and for heating elements. Supplied complete with terminals, in the form of rods, tubes, discs, bars, rings, etc.

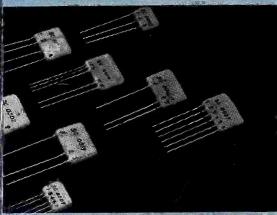


CERAMIC DIELECTRICS—Stupakoff makes general purpose Ceramic Dielectrics for by-pass, lead through blocking, standoffs and trimmer applications. Temperature compensating Ceramic Dielectrics have coefficients from P-100 to N-2700, and high K materials up to K-6000. Made in the form of tubes, discs and special shapes, plain or silvered.

LATROBE,

## r Electrical and Electronic Applications

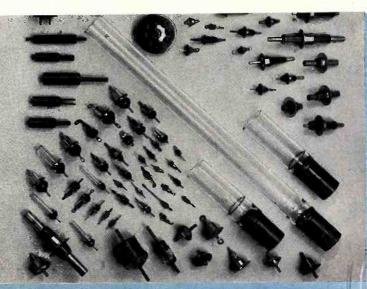
### CERAMIC ASSEMBLIES



ITED CIRCUITS—By combining resistors pacitors of precision values, in circuits designed ordance with the requirements of individual ations, Stupakoff printed circuits save space and, speed assembly, reduce costs, minimize assemtors. Soldered connections are reduced by 25%, assemblies are lighter and more compact, point time is reduced and better products are Sturdy, compact, accurate.

### ALLIZED CERAMICS

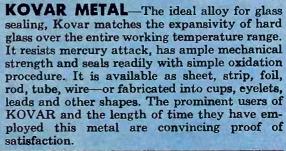
tor shafts shown below consist of metal bands ed securely to ceramic rods and are typical of koff precision manufacture. On a mass pron basis, concentricity of components, for exisheld to less than  $\pm 0.001$  in. dily available in production quantities.

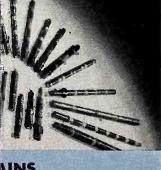


### **KOVAR-GLASS SEALS**

Perfectly closed and durable air-tight assemblies are made with Stupakoff Kovar-Glass Seals. The use of hard glass for these seals provides the highest degree of protection against thermal shock and weathering. Kovar is the ideal metal for such seals because its expansion characteristics closely match those of the hard glass to which it is readily bonded. The resulting seals are uniform in quality and easily assembled.

Stupakoff Seals are available in a wide variety of standard sizes and designs, and can be made in many special forms, as indicated by the illustration above. Extensive experience has given Stupakoff the engineering and manufacturing knowledge and skill to produce Kovar-Glass Seals that are made accurately, uniform and dependable. We will gladly submit samples and quotations.





### AINS, ND-OFFS

metallized strains, lers and standoffs shown and to the right are ion-made, and meet the exacting requirements.





### 

PENNSYLVANIA



### ULTRA-SENSITIVE ELECTRONIC RELAY



### **FEATURES**

SENSITIVE — Relay action initiated by external contact as high as ONE HALF MEGOHM with current as low as 1/10000 ampere.

LOW COST - Electronic sensitivity and features at a cost comparable to ordinary relays.

SMALL SIZE — Mounts on a standard 4 inch electrical connector box.

DEPENDABLE - Simplified circuit plus silver relay contacts assures long service life.

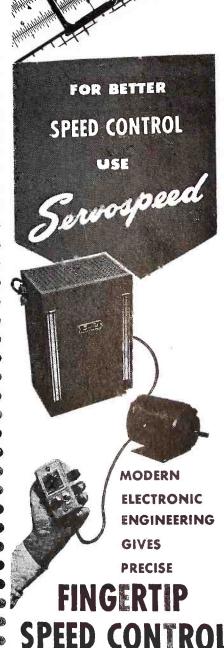
ECONOMICAL - No tube filaments to consume power during "OFF" cycle.

VERSATILE - High contact pressure on silver contacts allows conservative rating of four (4) amperes, with a choice of either opening or closing a circuit, or to simultaneously open one and close another.

AUTOMATIC HOLD CIRCUIT -Connecting terminals provide a choice of conventional relay action, or allow a momentary contact to energize relay and cause it to automatically remain energized until manually reset by "Reset" switch.

#### APPLICATIONS

LIQUID LEVEL CONTROLS SAFETY ALARMS STOP MOTIONS DROP WIRE DETECTION



- SPEED CONTROL
  - TACHOMETER **PROPORTIONING**
  - TENSION OR POSITION CONTROL
  - MOTOR INTEGRATORS
  - **BI-DIRECTIONAL**
  - DYNAMIC BRAKING
  - SERVO CONTROL



### SERVO-TEK



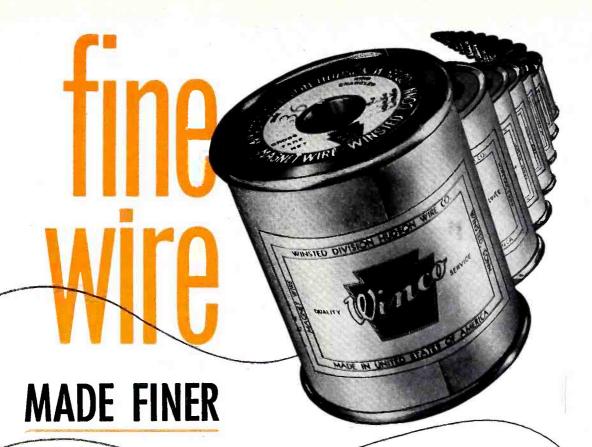
### **ALNICO FIELD MOTORS** AND **GENERATORS**

- Ball Bearings
- Alnico V field
- **Precision Type**
- Light weight
- Small size

#### **APPLICATIONS**

- Telemetering
- Blowers
- Rate Generators
- **Tachometers**
- Servomechanisms

ewo-lek PRODUCTS GODWIN AVE. PATERSON, N.J.



Spool after spool after spool—as much or as little as you require. For our facilities are flexible and extensive enough to serve the largest and the smallest user alike with custom-made fine wire.

Let us have your specifications and requirements. Our Winsted Division will meet and maintain your specifications. Which explains why Winco fine wires are the first choice of radio-electronic and electrical manufacturers whose products are noted for reliability and long life.

custom drawn custom insulated custom spooled

to your most exacting requirements

### hudson wire company





GENERAL OFFICES: OSSINING, N. Y. . WINSTED DIVISION: WINSTED, CONN.

We solicit your wire problems, specifications and requirements. We shall be happy to develop, produce and supply whatever fine wires you need.

### BARE WIRES

opper
rass
inc
insel
lickel-Silver
admium
vygen-free
Copper

Silver-plated Bronze Phosphor-Bronze Silver Lead Wire Fuse Wire Specialty Wires

### TEXTILE COVERED WIRES

Nylon Celanese Silk Cotton Rayon Fiberglas

Available on bare or enameled wire; single or double covered.

### INSULATED WIRES

MATERIALS
Copper
Aluminum
Iron
Copper-clad

Steel

TYPES
Instrument
Tubing
Litz
Multiplied
and Twisted

COVERINGS
Plain and Heavy
Enamel
Formvar
EZsol (Liquid Nylon)

Cement-coated Enamel

### SILVER-PLATED WIRES

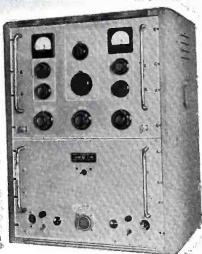
Silver plated wires, in coarse and fine sizes, for highfrequency conduction. Also intended for use in hightemperature applications, taking the place of tinned wire. Available in various sizes and constructions.

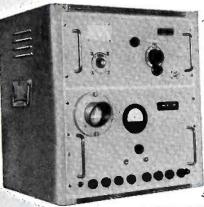
# When you Test, use the By

Type 275 VOLTAGE STANDING WAVE RATIO AMPLIFIER 300-3000 cps.

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 35-900 mc/s





Type 904 VHF-UHF NOISE GENERATOR .01-1.0 kmc/s

### THE STANDARD OF COMPARISON

Augmented by many new components, the PRD line of RF Test Equi is presently the most complete line available covering the entire free range from .01 to 40 kilomegacycles per second. The units listed indig wide diversity and applicability of PRD equipment. In addition to the wide diversity and applicability of the design and manufacture of special equipart to meet special requirements. A skilled staff of engineers is available to lyze your requirements and to assist in the application of standard or components to your test problem. PRD equipment is engineered and factured to the highest attainable standards. No effort has been spe make this equipment the finest available anywhere with the result that equipment is now used in leading laboratories all over the world.

Shirt	FREQUENCY	MEASURING DEVICES				
Frequency Meters	Frequency Range (kmc/sec)	Type No.	Transmission Line Size (Nominal O.D.—inches)	R-Rec		
General	0.47-0.95	584	3/8	1		
-	3.95-5.85	574	2 x 1			
Purpose	4.00-10.0	562-A	3/8	Detector		
	5.85-8.20	575	1 ½ x 3/4			
	7.05-10.0	576	1 1/4 × 5/8			
	8.2-10.0	585-A	1 x ½			
	8.2-10.0	585-B	1 x ½			
	8.2-10.0	586-A	1 1/4 × 5/8			
	8.2-10.0	586-B	1 1/4 × 5/8			

In addition to the General Purpose Frequency Meters listed above, PRD manufactura 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 al standard wave guide sizes from 0.280" x 0.140" I.D. to 2" x 1" O.D. All types at 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 6124 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 ½ × ½ wave For type 2K25 klystrons, 8.50—9.60 kmc/sec, 1 × ½ 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 km/sec
POWER SUPPLIES Type 801-A	Providing all required electrode voltages to operate a wide 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 35 to 900 mc/sec
NOISE GENERATORS Type 904	For the direct measurement of noise factors in the range of 10 to 1000 mc/sec



Type 706 BROADBA MICROWA OSCILLAT 3.6-7.3 km

RCH & DEVELOPMENT COMPAN

## rom VHF to EHF, it's

### TY, ACCURACY, DEPENDABILITY

		TRA	ANSMI	SSION	LINE SIZ	ZE			^
COAX (Nominal O.					WAVEG		ies)		
7/8	3/8	3×1 1/2	2×1	1 1/2 x 3/4	1 1/4 x 5/8	1 x 1/2	0.311	0.420x 0.170 1.D.	

### ATTENUATORS AND TERMINATIONS

							154			
			171	162	161	160	159	189	190	191
			174-A	169-A	177-A	184-A	196-A 196-B	187-A		
			175-A	170-A	178-A	185-A	195-A	188-A	153-A	192
		181, 198					180			
		130 series 135 series	s	s	s	s	140 series	s		
Ξ	141, 143	144								11
	145	139	129	115	121	114	116	131	132	133

### TRANSMISSION LINE COMPONENTS

TRANSMISSION LINE COMPONENTS										
ters			365	357	356	355	354			
	389, 390 391, 392	389, 390 391, 392								
				400	404	401	402	405		
			375-A	376-A	377-A	378-A	379-A	386A	387-A	388-A
es			369-A	369-B	369-B	369-C	369-D	369-E	f	f
10 cm				s	s	s	462 465 481	s	s	s

### ANCE MEASUREMENT AND TRANSFORMATION

200-C 200-D	205-A 215-A	209-A	201-A	204-A	202-A	203-A	210	211	212
	306	309	300	305	302	303	311 314	313	312

e 250-A Broadband Probe is designed for use with the Types 200-C through 209-A 3-A Slotted Sections; Types 210-212 are supplied with built-in tunable probes. The R-F Adapter is available for use with the Type 250-A Probe.

### DETECTION AND POWER MEASUREMENT

	612-A 613		601	616	621	615
	612-A,613 627, 628			616	620 621	618
		N= 1.503	635			

e 650 Universal Power Bridge is designed to be used with any of the bolometers or irs listed for the measurement of absolute power level.

### **BOLOMETERS**

R USE WITH	TYPE No.	FOR USE WITH	TYPE No.	FOR USE WITH
A,612-A, 613	629-A	623	630-B	626
211, 616, 621	629-B	624	631-A	627
618, 620	630-A	625	631-B	628





4.0-10.0 kmc/s



### Precision RF **Test Equipment**

Type 196-A VARIABLE **ATTENUATOR** 8.20-12.4 kmc/s



Type 389 COAXIAL TRANSMISSION LINE ADAPTER 0-4.0 kmc/s

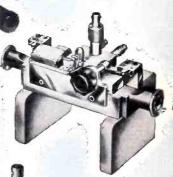
Type 481 E/H TEE 8.20-12.4 kmc/s



Type 312 E/H TUNER 26.5-40.0 kmc/s

Type 211 **PRECISION** WAVEGUIDE SLOTTED SECTION





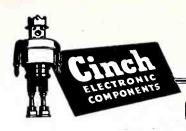
Type 250-A BROADBAND PROBE 1.00-12.4 kmc/s

### NEW ILLUSTRATED CATALOG AVAILABLE ON REQUEST

Contains complete information on the entire PRD line of precision of test equipment. Write for your copy today on your company letterhead — no obligation; address Dept. G-1.



SON STREET, BROOKLYN 1, NEW YORK ALES OFFICE: 737 NO. SEWARD ST., HOLLYWOOD 38, CALIFORNIA



### CINCH MANUFACTURING CORPORATION

1026 S. HOMAN AVE. . CHICAGO 24, ILLINOIS

Subsidiary of United-Carr Fastener Corporation, Cambridge, Mass.

### CINCH PARTS . . . The Standard in Electronics





**Printed Circuit** 

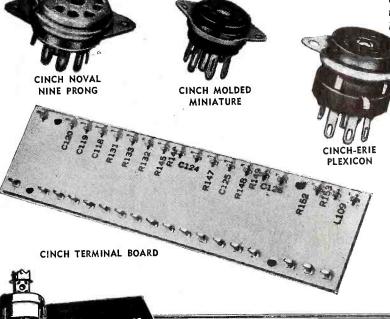
T3 Socket

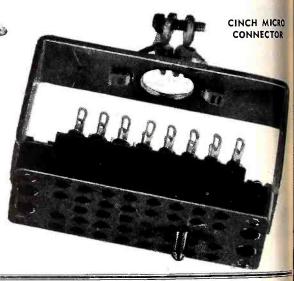
CINCH SUB-MINIATURE

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.

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Cat. No. 51 contains complete data on all of the Cinch electronic components. Requests on company letterheads will be promptly answered.

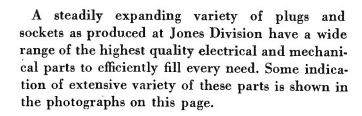




### HOWARD B. JONES DIVISION

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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.





JONES PLUGS AND SOCKETS









PICAL EXAMPLES: The list below comprises the lucts of both Cinch and Jones. They are indicative of their wide and also indicate the myriad of variations and redesigning that possible with this background of production experience.

Tube (Receiver, Transmitter and Special): Battery, all types -R Tube • Crystal • Electrolytic • Glass Type; 4 to 7 prong lamed • Infra-red Ray Tube • High Altitude Airborne Types • Kiness; Magnal, Duodecal, Diheptal • Loktal-Miniature-Multiplugal-Octal (Molded bakelite, steatite, teflon, Kel-F and laminated) • icon • Printed Circuit • Special Sockets to Specs • Sub-Miniature; ring Aid Types • TV; 110V Circuit Breakaway • Vibrator • Pencil • Transistor • Diode

FENNA JACKS
IANA PINS AND JACKS
RIER TERMINAL STRIPS
NING STRIPS
'TERY PLUGS & SOCKETS
DING POSTS
DE SOCKET
INECTORS, MULTI CONTACT
E STRIPS, BLOCKS & BOARDS
D CAPS
D CAP SHIELDS
METICALLY SEALED TUBE

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

MINAL ASSEMBLIES: Blocks, boards in laminated and molded, mbled with lugs, pins, screw terminals, contacts, clips, turret lugs other hardware to specifications.

### . . . TO DESIGN

Military version of any commercial electronic component from their vast resources. Cinch is equipped to produce and is already in production on many variations of standard electronic components for military use, guided missiles, radar, gun fire control, etc. A special staff of engineers are daily working in close cooperation with the military on redesigning components to the most rigid specifications.

### ... TO PRODUCE

Any component assembly needed in electronic mobilization that falls within the engineering and production facilities of The Cinch plant. Cinch organization is extremely flexible, readily adapted to the requirements of military or commercial emergencies. Also readily available are adequate production facilities, development, design and production engineering personnel. Consult Cinch today.

# KEPCO VOLTAGE REGULATED POWER SUPPLIES

### 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, ½% for load at 150 volts.

RIPPLE: 5 millivolts.

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

### MODEL 500-R

OUTPUT DC: 0-500 volts,

REGULATION: 1/2 % 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.

SUPPLY: 0-150 volts, 5 ma.

REGULATION: 10 millivolts for line, 105-125 volts, 1/2 % for load at 150 volts.

RIPPLE: 5 millivoits.

### 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 510



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

#### REGULATION:

1/2 % 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 245



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.



### MODEL 700

OUTPUT DC:

0-350 volts, 750 ma.

#### REGULATION:

1/2 % for both line, 105-125 volts, and load variations, 0-750 mg.

RIPPLE: 10 millivolts.

This unit is available delivering:

1.50 amp.-Model 710

2.25 amp.—Model 720

3.00 amp.-Model 730



### MODEL 315

B SUPPLY: 0-300 volts,

REGULATION: 1/2 % 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. 1/2 % for load at 150 volts.

RIPPLE: 5 millivolts.

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

Available with rack mounting.

### MODEL 750

**OUTPUT DC:** 

0-600 volts, 750 ma.

#### REGULATION:

1/2 % 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



### DEL 800

0 features TWO IN-ENT REGULATED UPPLIES.

#### DC FOR EACH

Y: 0-600 volts, 200 parallel 400 ma.

#### ION:

or both line, 105-125 and load variations. D millivolts.

AC FOR EACH SUPPLY:

s, 10 amp., CT.



### **MODEL 1250**

#### OUTPUT DC:

200-1000 volts, 500 ma.

#### REGULATION:

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

#### RIPPLE:

20 millivolts.



### DEL 815

: 0-600 volts, 200

TION: 1/2 % for line, 105-125 volts, oad variations, 0-

5 millivolts.

: 0-150 volts, 5

ATION: 10 millifor line, 105-125 1/2 % for load at 150 volts.

5 millivolts.

SUPPLY: 6.3 volts AC, 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.



### DEL 1020

C:

volts, 50 ma.

ON:

or both line, 105ts, load variations.

1. (range 100-1000

% for both line, 105-125 volts, and load variations, 0-50 ma. 0-100 volts).

millivolts.

C: 6.3 volts, 10 amp., CT.



### **MODEL 3030**

### OUTPUT DC:

0-30 volts, 30 amp.

### REGULATION:

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

#### RIPPLE:

Less than 0.1%.



### **DEL 1220**

C: rolts, 20 ma.

DN:

r both line, 105s, and load vari-

)-20 ma. (range

d load variations, 0-20 ma. (range 30-100 volts).

millivolts. C: 6,3 volts, 10 amp., CT.

) volts). ½% for both line, 105-125

### **MODEL 3100**

**OUTPUT DC:** 

0-3 volts, 100 ma.

### **REGULATION:**

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

RIPPLE: 1 millivolt.



FOR NEW POWER SUPPLY CATALOG - WRITE DEPT. No. 2



### KEPCO LABORATORIES, Inc.

131-38 SANFORD AVENUE

FLUSHING 55, NEW YORK

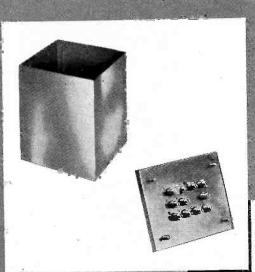


# ONE SOURCE OF SUPPL



### bushings assembly services

Helder offers you money-saving and timesaving advantages on all or any one of its products and services. You owe it to yourself to investigate each one.



# Heldor

When you specify Heldor's MIL-T-27 transformer cans. you save money on these "in-stock" items because you pay no tool or die costs. And you get FAST DELIV ERY

Heldor cans are available in all standard sizes. They can be supplied with or without brackets, weld studs, centrifugal hot tinned or electro-tinned, compression-type hermetic seal bushings on 3/8", 1/2", 5/6", 5/4" centers, and stamped

Custom sizes on these cans are also available. Write for specifications, data and prices.



### HERMETIC SEAL

These steatite-insulator bushings resist thermai and physical shock . high dielectric strength . with new silicone type gland material or a newly-developed Neoprene which meets government specifications and gives excellent results. Easy to install for improved, hermetic sealing. Regularly supplied in 10 styles and 28 types with a choice of 5 different stud types. Ask for the latest bulletin on Heldor Bushings!







### Heldor

Heldor now offers a money-saving assembly service for the assembly of Heldor Terminals in transformer can covers—supplied by the customer or Heldor. Saves time, money and headaches. No unbalanced inventories, either. Find out if this service can be applied to your terminal-can assembly problems. Send specifications or prints, and quantities involved . . . for a money-saving quotation!

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Name		Title	
Company			



Address...

HELDOR MANUFACTURING COMPANY Division of HELDOR BUSHING & TERMINAL CO., INC. 225 Belleville Avenue, Bloomfield, New Jersey

### ABORATORY for ELECTRONICS, INC.

### MODEL 401 OSCILLOSCOPE

- a high gain, wide band, versatile, general purpose instrument for precise, quantitative studies of pulse waveforms, transients and other high or low speed electrical phenomena.

#### **SPECIFICATIONS**

Deflection Sensitivity - 15 millivolts peakto-peak/cm.

Frequency Response – DC to 10Mc.

Transient Response - Rise Time - 0.03 microseconds.

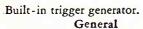
Signal Delay - 0.25 microseconds Input line terminations

#### X-Axis

Sweep range - 0.01 sec/cm to 0.1 microseconds/cm.

Delayed Sweep Range - 0-5000 microseconds in three ranges - continuously adjustable.

Triggers - Internal or External, + and -, 60 cycles, or delayed trigger outputs.



Low capacity probe.

Functionally colored control knobs.

Folding stand.

Adjustable scale lighting.

Facilities for mounting oscilloscope cameras. \$895.00

Ask for Bulletin 052



### ERCURY



E Mercury Delay Lines meet severe military rerements and are precision built under controlled aditions. Used for storage of information, com-ison of two sets of information, correlations and uential timing devices, they are the smallest, est compact lines available. Currently recognized a foremost supplier of mercury delay lines, LFE nishes a wide range of delays and assures quick ivery of all types.

### Ask for Bulletin MDL51



### MODEL 101 MAGNETOMETER

Accurately measures magnetic field strength using the principle of nuclear resonance.

### **SPECIFICATIONS**

Range of Magnetic Field Strength: Proton resonance: 300-8000 gauss. Lithium resonance: 7000-25000 gauss.

Frequency to Field Ratio:

Protons:  $4257.76 \pm 0.10 \, \text{m/gauss}$ . Lithium (Li7):  $1654.61 \pm 0.10 \, \text{m/gauss}$ gauss.

Modulation Sweep Width Range: 1.6 to 16 gauss.

Frequency Range: Probe 1: 1.18 to 2.84 mc. Probe 2: 2.61 to 6.25 mc.

Probe 3: 5.6 to 13.5 mc. Probe 4: 13 to 34 mc.

Area of Sample Material:

Probe 1: 0.5 sq. cm. Probe 2: 0.3 sq. cm. Probes 3 and 4: 0.32 sq. cm. \$725.00

Ask for Bulletin M52

### MODEL 802 STABLE MICROWAVE OSCILLATOR

Provides a highly stable source of microwave signals.

### **SPECIFICATIONS**

Dial Calibration:

Calibrated directly in frequency-5 Mc per divisions. Absolute frequency good to approximately 2 Mc.

Power Output:

5 milliwatts.

Output connection - 1/2" x 1" waveguide.

Frequency Coverage: Model 802-X1: 8950-9325 Mc. Model 802-X2: 9300-9650 Mc.

Frequency Stability:

During short time intervals: One part in 109.

Long term drift: Less than 100 Kc from original frequency setting.



Technical Bulletin

### For complete information, phone or write your LFE engineering representative:

Boston 15, Mass. Walter T. Hannigan Company 43 Leon Street Garrison 7-2650

New York 23, New York Land-C-Air Sales Co. 1819 Broadway Plaza 7-7747

Cleveland 15, Ohio M. P. O'Dell Company 2536 Euclid Avenue Prospect 1-6171

Chicago 45, Illinois Hugh Marsland & Company 6405 N. California Avenue Ambassador 2-1555

Minneapolis 2, Minnesota H. M. Richardson & Co. 2210 Foshay Tower Geneva 4078

Hollywood 28, California Gerald B. Miller Co. 1540 N. Highland Avenue Hollywood 9-6305

Dallas 1, Texas J. Y. Schoonmaker Co. 2011 Cedar Springs Sterling 3335

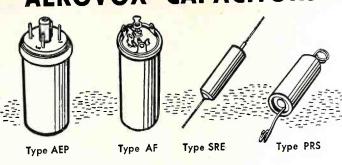
Wichita, Kansas George E. Harris & Co. Administration Bldg. Municipal Airport 62-2731

Alexandria, Virginia W. A. Brown & Associates 3834 Mt. Vernon Avenue Overlook 6100

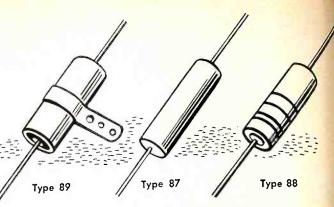


LABORATORY for ELECTRONICS, INC. 75 PITTS STREET . BOSTON 14, MASS.

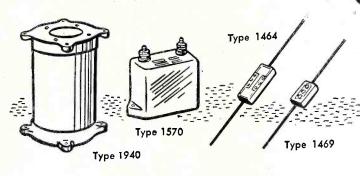




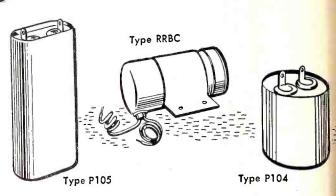
Aerovox offers an outstanding selection of electrolytic capacitors in all designs and ratings for radio-television, JAN and military applications. Typical of such wide variety are: Type AF twist-prong metal-can units; Type PRS metal-can tubulars; Type SRE miniature metal-case tubulars; Type AEP hermetically-sealed plug-in units.



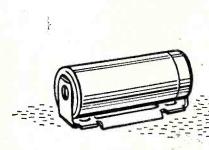
A complete line of paper tubular capacitors is offered by Aerovox. Typical of the many tubulars available are: Type 87, a modified molded tubular with cardboard case and Duranite end-fill; Type 88, a molded-plastic tubular Aerolene impregnated; Type 89 oil-impregnated metal-case tubular.



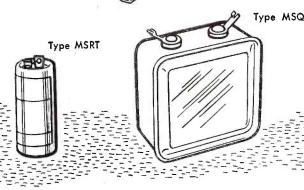
Aerovox has always been the recognized source for the widest selection of mica capacitors ranging from the "half postage stamp" size to the largest transmitting units. Typical are: Type 1469 or "half postage stamp" size for radiotelevision applications; Type 1464 silver mica "postage stamp" size; Type 1570 upright plastic case unit; Type 1940 ceramic-case stack-mounting unit for large transmitters.



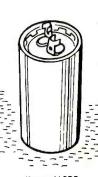
AC industrial paper capacitors are offered by Aerovox for motor-run applications, fluorescent ballasts and low-power power-factor correction. Typical of this line are: Type RRK metal-case capacitors for motor-run applications; Types PIQ and P105 units for fluorescent ballast applications.



Type MSRP



Motor-starting AC electrolytics were first developed by Aerovox and have long been a specialty of this supplier. They are available in sealed metal cases and in plastic-case units. Typical of this line are: Type MSRT metal-case unit with insulating jacket; Type MSQ rectangular metal-case unit; Type MSRP plastic-case tubular.



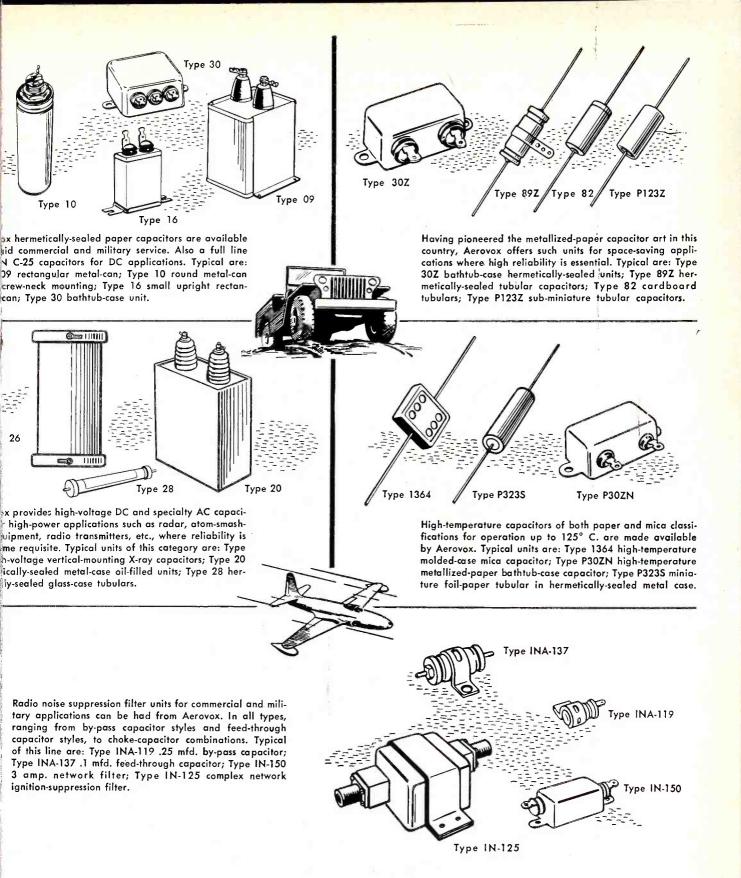
Type MSRP

Presented in these pages are just a few designs typifying the wide choice of capacitor and filter products obtainable from Aerovox.

Thousands of standard types and ratings are listed in Aerovox literature for ready selection. In addition to such standard types, Aerovox is prepared to develop, design and produce special units to meet unusual specifications and applications.

With application "know-how" first in the industry. Aerovox engineers are always ready to collaborate in the circuitry and associated components quite as well as the capacitor requirements in any and all applications.

Lastly, Aerovox has ample production capacity and unusually flexible facilities to take care of the largest or the smallest requirements. Let us quote





Export: 41 E. 42nd St., New York 17, N. Y. \* Cable: AEROCAP, N. Y. \* In Canada: AEROVOX CANADA LTD., Hamilton, Ont.

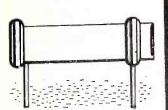
JOBBER ADDRESS: 740 Belleville Avd., New Bedford, Mass.

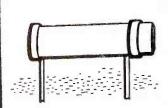
### HI-Q CERAMIC CAPACITORS

Hi-Q Ceramic Capacitors are a product of the Titanate family and consist of a ceramic dielectric fabricated into a variety of shapes such as disks, plates and tubes. The advantages of ceramic capacitors are: low moisture absorption, low power factor, high dielectric strength, high insulation resistance, and mechanical strength. The

silver electrodes are fired directly to the base ceramic, and learner mechanically fastened and soldered to the silver electrod under controlled conditions to guard against alloying of electrod and leads.

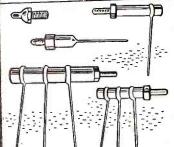
Tubular By-Pass Ceramic Capacitors may be used for coupling, by-passing and filtering where frequency control is not critical. They have a capacitance range of 5 mmf. to 33,000 mmf. They have a working voltage of 500 V.D.C. with a power factor less than 3% at 1 K.C. and insulation resistance 7,500 megohms. minimum.





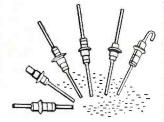
Temperature Compensating Tubin Capacitors are designed for close to ances and temperature compensation. They are available in standard capatance tolerances set up by JAN C20 a RTMA. Hi-Q Ceramic Temperature Capensating Capacitors, are conservation rated for a working voltage of SV.D.C., and flash-tested at 1500 V.D.

Insulation on Hi-Q Tubular Capacitors may be had in three different categories: Clear non-hydroscopic styrene coating (CN), Durez, impregnated with low-loss microcrystalline wax (SI), or by a ceramic (Steatite) tube sealed with a specially developed end seal, which allows the wax impregnant to thoroughly fill all voids inside the cover tube (CI).



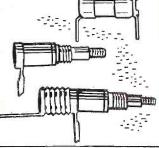
Standoff Capacitors are basically to lar or disk designs with a screw fint for mounting to the chassis or the amon ground. Close coupling and to unique construction make them excel for by-passing high frequencies, units are flash-tested at 1250 V.D with a power factor under 3% and sulation resistance above 7500 mega.

Eyelet Feed Thru Ceramic Capacitors provide the ultimate in miniaturization. They provide excellent by-pass performance where space is critical. Available in capacities up to 1500 mmf. and flashtested at 1250 V.D.C. They are available in many styles and capacities.



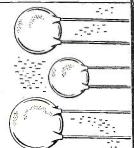
Feed Thru Capacitors by-pass unwar frequencies and provide means of mission through shields at grapotentials. They are excellent units dependable performance under semechanical vibration. Capacities to from 15 mmf. to a maximum of 7000 mith tolerances of ±20%. These units flash-tested at 1250 V.D.C.

Trimmers developed by Hi-Q engineers are available in many many designs including ceramic in molded plastic, ceramic tubulars, disk rotor and stator types, in double and single units. Hi-Q trimmers are noted for their electrical strength and mechanical stability. Each style provides a dependable, easily tuned, adjustable capacitor.



High-Voltage Ceramic Capacitor manufactured by Hi-Q are available many styles and capacities. There disks, plates, tubulars and slug typel voltage capacitors. A complete designed to fit your every not peveloped with special dielectric minds, giving these units high would also with the conditions. Whatever your may be for high voltage capacitors, will find the ideal style and type in Hi-Q line.

Disk Capacitors are available in seven sizes in the range of capacitances from .3 mmf. to .027 mf. and are available for by-passing, blocking and coupling applications. Hi-Q disks are also available for temperature-compensating where high Q and stability of capacitance are essential. There is also a line of Hi-Q disks where extended temperature-compensating applications require a very large gradient of capacitance vs. temperature. A complete descriptive folder of all Hi-Q disks is available for the asking.



Engineering Bulletins and Hi-Q Catalog... Engineering bulletins providing complete technical data, as well as the general catalog, are available to you for the asking.

Our Engineering Department is available for consultation in the application of Hi-Q components and also for the development of new types to fit special requirements.



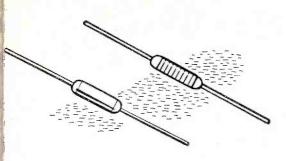
AEROVOX CORPORATION

OLEAN, NEW YORK, U.S.A

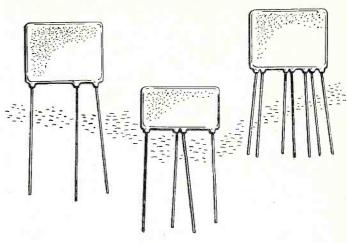
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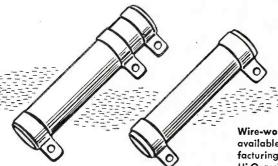
### COMPONENTS



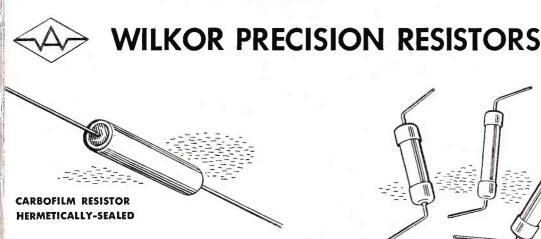
Choke Coils of the solenoid type of winding include forms of mineral-filled molding material, iron powder, metallic oxides, or steatite cores. They are available in non-insulated or insulated types. Insulation such as a steatite cover tube, Durez impregnated with high-temperature crystalline wax, or varnish coating, are available. Special windings are also available, and consultation is invited for assistance on special windings:



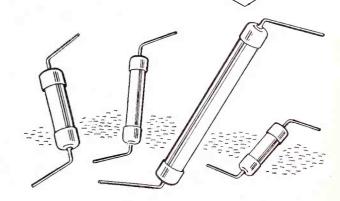
Hi-Q PA Plate Assemblies are the most versatile of electronic components. The number and combination of capacitors and resistors that can be incorporated in a single unit is limited only by the K of the material and physical size. Hi-Q Plate Assemblies contribute dependable miniaturization and simplified assembly by reducing the number of soldering operations.



Wire-wound Resistors, insulated with vitreous enamel, are available in all standard resistance values. Precision manufacturing and time-tested principles of construction assure Hi-Q resistors being the best available.



m Resistors are primarily intended for circuits calling for the and stability of wire-wound resistors but with the marked economy n or composition-element resistors. They are excellent in measurment applications, such as voltage multipliers. They serve a real test equipment and laboratory instruments. They are ideal for



critical oscillograph assemblies. Because of the high voltage ratings, a minimum of Carbofilm Resistors connected in series can replace the usual strings of ordinary carbon resistors with greater accuracy and safety. Carbofilm Resistors meet the requirements of accuracy, stability, economy. Available in ½, 1, and 2 watt ratings. Widest range of resistance values.



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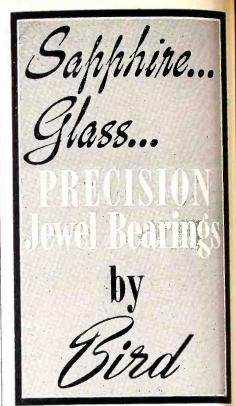
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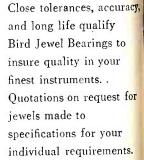




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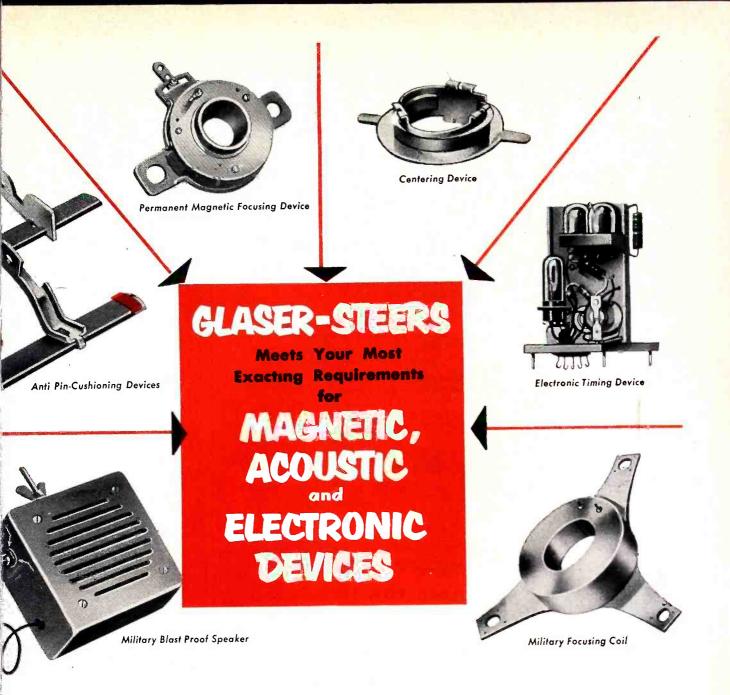


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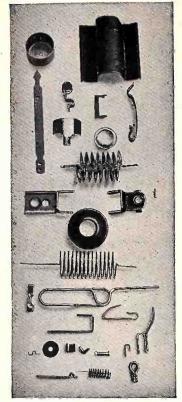
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Mercoid Relays are unlike the common clapper type relays. All noise and residual magnetism are eliminated. Equipped with mercury switches no open contacts used.

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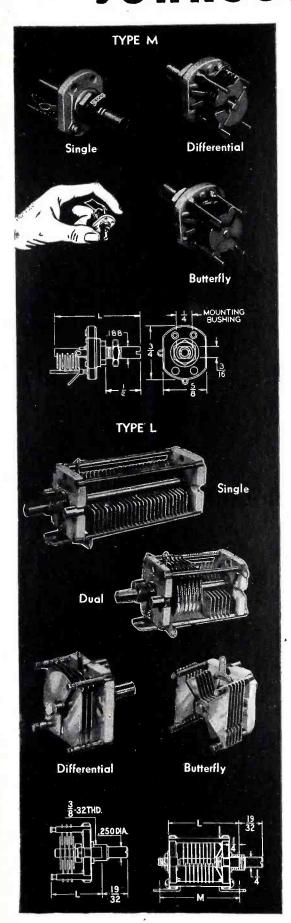
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### CAPACITORS OHNSON



### MINIATURE AIR VARIABLE CAPACITORS (Type M)

Requiring a panel area just 5/8" wide by 3/4" high; these diminutive capacitors provide the answers to many problems encountered in the design of compact radio frequency equipment.

JOHNSON Miniature Air Variables are available in three types: single section, differential and butterfly. Ideally suited for portable, mobile and airborne equipment thru the VHF range of frequencies, they are designed and constructed with features that assure reliable performance throughout long service life.

### **Specifications**

Low inductance. Soldered plates assembled with precision tools. Split sleeve bearings. Beryllium copper tension spring contact for permanent alignment, constant torque and low inherent noise. Differential and butterfly types electrically symmetrical. Excellent vibration characteristic due to low inertia. Steatite insulation impregnated with DC-200. Metal parts brass, nickel plated. Single hole mounting bushing threaded 1/4-32 with flats to prevent turning. 3/16° shaft slotted for screw driver adjustment. Plate spacing .017°. Peak voltage rating, 1250.

### Specials

JOHNSON Miniature Air Variables are available in production quantities with features such as: 1. Locking bearing. 2. With 180° stop. 3. Various shaft extensions, 4. .0135° spacing offering capacities up to 30 mmfd. 5. High torque. We would be pleased to quote on your special requirements.

		SINGLE			
Cat. No.	Туре No.	Nominal Max.	Capacity mmf. Min.	Number Plates	L
160-102 160-104 160-107	5M11 9k411 15M11	5.0 8.7 14.2	1.5 1.8 2.3	5 9 15	1764 1762 11862
160-110	20M11	19.6	2.7	21	137/64
		DIFFERENTIA	\L		
160-303	6MA11	5.0 8.7	1.5 1.8	7 13	11/4 11/4 11/4
160-305 160-308	9MA11 15MA11	14.2	2.3	22	113/2
160-311	19MA11	19.6	2.7	31	13764
		BUTTERFLY	•		
160-203	3MB11	3.1	1.5	.7	1764
160-205 160-208	5MB11 9MB11	5.1 8.0	1.8 2.2	13 22	17/42
160-211	11MB11	10.8	2.7	31	13764

### JOHNSON TYPE "L" VARIABLES (167 Series)

Perfected ceramic soldering assures permanent rigidity and maintenance of capacitance. JOHNSON ceramic soldering leaves a bond which is stronger than the rugged end plates themselves. There are no eyelets, nuts or screws to work loose which would cause stator wobble and fluctuations in capacity.

Split sleeve tension bearing assures silent operation on highest frequencies. Ceramic end plates,  $1\frac{3}{8}$  square with 2 mounting posts tapped for 6-32 screws on  $1\frac{3}{2}$  centers. Mounting (M) dimension is  $\frac{1}{2}$  more than L dimension.

Two sets of stator contacts. Corrosion resistant, bright alloy plating has low electrical resistance.

These new variables are suitable for the severest conditions of portable-mobile operation. Other capacities and spacings on special order in production quantities.

TYPE	L	SINGLE	SECTION
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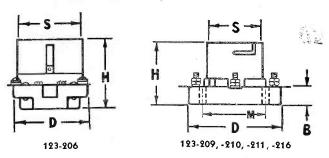
Cat. No.	Type No.	Cap. pe Max.	er Sect. Min.	*Spacing	Plates Per Sec.	L
		Single End		opacing		
167-101	10L15	l i	2.8	.030"	3	15/16
167-102	25L15	27	3.5	.030"	<b>3</b> 7	1%
167-103	50L15	51	4.6	.030"	13	176
167-104	75L15	75	5.7	.030"	19	13/4
44= 4=4		Double En	d Plate			
167-151	100L15	99	6.8	.030"	25	21/42
167-152	200L15	202	11.6	.030"	51	333/64
449		Dual Se	ction			
167-501	25LD15	27	3.5	.030"	7	1 13/16
167-509 167-503	50LD15	51	4.6	.030"	13	22764
107-503	100LD15	99	6.8	.030"	25	35/8
447 204	401.44=	Differe	ntial			
167-301 167-302	10LA15	11	2.8	.030*	3	15/16
167-302	25LA15 50LA15	27	3.5	.030"	7	1 %
107-303	JOEM 13	51	4.6	.030	13	11/16
167-201	401 D4F	Butter	fly			
167-202	10LB15 25LB15	10.5	2.8	.030	5	1364
167-203	50LB15	26	4.3	.030	12	1 15/18
*.09006	50, .080 spacir	51	6.8	.030*	23	1 13/16
	- v . coo spacif	ig also availd	ible.			

### EXPLANATION OF TYPE NUMBERS

The first part of the type number indicates the capacity per section in mmfd. The following letter indicates the frame size or type. A second letter D indicates a two-section type. The final number multiplied by 100 is the approx. peak breakdown voltage.

### F. JOHNSO

### JOHNSON TUBE SOCKETS



No. 123-206 industrial bayonet socket with rugged metal shell for extremely high voltage applications. Will accommodate 8008, 5C22, FG104, GL146 and other tubes with similar, bases. Has steatite insulation, silver plated beryllium copper contacts, screw terminals and three heavy springs in shell insure tube being held securely in place. No. 209 has 4 mtg. holes, -206, -210, -2116 have 2. Nos. -209, -210, -211 and -216 all have heavy phosphor bronze, side wiping type contacts, metal shells and white, glazed porcelain bases. No. -209 is similar to No. -210, but provides greater spacing between contacts and shell, for higher voltages. No. 211, the standard "50-watt" socket, has double filament contacts for carrying heavy currents. No. -216 is for tubes having a GIANT 5-pin bayonet base such as the 803, RK28, etc. Suffix letters "SB" indicate beryllium copper contacts and steatite bases.

Cat. No.	D	Н	M	S	Pins	Tube Base
123-206	25/8×31/2	21/2	23/4	2.250	4	Super Jumbo
123-209	213/16	127/32	25/16	1.386	4	Med. Bay.
123-209SB	213/16	127/32	25/16	1.386	4	Med. Bay.
113-210	21/2	1 1/8	21/16	1.386	4	Med. Bay.
123-211	33/8	29/32	213/16	1.886	4	Stand, Jumbo
123-211SB	33/8	2%	213/16	1.886	4	Stand, Jumba
123-216	33/4	27/16	31/8	2.198	5	Giant Bay.
123-216SB	33/4	21/16	31/8	2.198	.5	Giant Bay.

No. -213 takes Eimac 152TL and 304TL. Contacts for either series or parallel filaments. No. -214 takes Eimac 1500TH.

Cat. No.	Base
124-213	"Eimac"
124-214	"Eimac"

#### MINIATURE SOCKETS

Sockets Steatite insulated, with phosphor bronze contacts.

Cat. No. 120-267	Miniature socket, all ceramic
120-277B	Miniature socket with shield base
133-277S	Miniature shield base only

### JAN MINIATURE SOCKETS

Top mounting, saddle type sockets per JAN spec. S-28A. One piece ceramic insulator grade L-4B or better, top glazed, DC 200 impregnated. Brass shell and center shield nickel plated to withstand salt spray test. Contacts beryllium copper, silver plated. Terminals hot tin dipped. Mounting centers 1/8" on 7 prong type; 11/8" on 9 prong type.

Cat. No.	Military Designation	Type
120-177	TS102CO1	7 prong
120-199	TS103CO1	9 prong

#### MINIATURE SHIELDS

Brass, nickel plated to meet JAN specs.

Cat. No.	Military Designation	Fits Socket	Length
133-278-6	TS102UO1	177, 277	13/8"
133-278-7	TŠ 102U O 2	177, 277	134"
133-278-8	T\$102UO3	177, 277	214"
133-278-9	TS 103UO 1	199	11/2"
133-278-10	TŠ 103ÚO2	199	115/16
133-278-11	T\$103UO3	199	23/8"

### WAFER SOCKETS

JOHNSON wafer sockets are insulated with grade L 4 steatite or better, top and sides glazed, underside impregnated in conformance with latest Army Navy specifications. Contacts are brass with steel spring, cadmium plated and are mounted against phenolic washers in molded recesses to prevent movement. Rivets are countersunk and mounting holes bossed to permit sub-panel mounting. Locating grooves facilitate tube insertion.

Cat. No.		Cat. No.	
122-217	7-pin small	122-226	6-pin
122-224	4-pin	122-227	7-pin med
122-225	5-pin	122-228	Octal

### 7 PIN WITH BUILT-IN BASE SHIELD

The 192-101 is a 7-pin steatite wafer socket incorporating ventilated base shield, five tube retainer springs and provision for mounting button mica capacitors directly to the socket. Socket is specially designed for UHF use with tubes such as the 826, 829 832, 4D32 and 4D22. Contacts silver plated and recessed to prevent movement. Special terminals permit direct mounting of grid coils. Two holes provided for mounting of buss bar neutralizing leads. .185" mounting holes on 25% square.

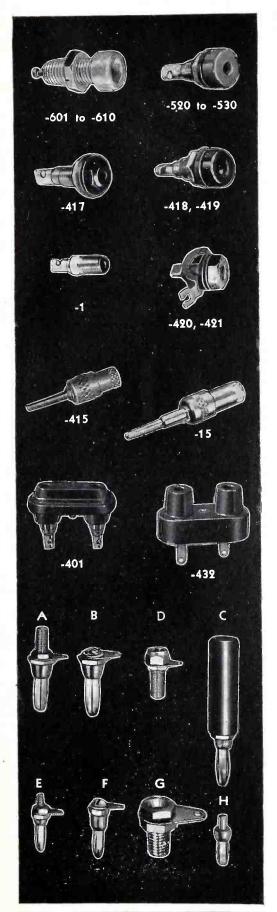
Cat. No. 122-101



### seca, Minnesota



### JOHNSON PLUGS AND JACKS



### NYLON TIP JACKS

Completely insulated jack, body molded from low-loss Nylon. Contact recessed for maximum voltage breakdown and safety. Low capacity to panel. One piece phosphor bronze or beryllium copper silver plated contact for .081" diameter pins with integral solder terminal. Threaded ½4 – 32, jack mounts with single nut. Overall dimensions; diameter ¾", length <sup>23</sup>½".

B. C. Cont.	P. B. Cont.	
Cat. No.	Cat. No.	Color
105-601-1	105-601-2	White
105-602-1	105-602-2	Red
105-603-1	105-603-2	Black
105-604-1	105-604-2	Dark Green
105-605-1	105-605-2	Light Blue
105-606-1	105-606-2	Orange
105-607-1	105-607-2	Yellow
105-608-1	105-608-2	Brown
105-609-1	105-609-2	Light Green
105-610-1	105-610-2	Dark Blue
105-611-1	105-611-2	Ivory

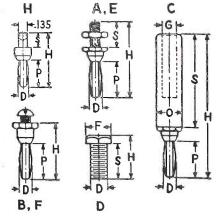
### PLASTIC HEAD TIP JACKS

Plastic heads in choice of colors listed. Supplied with fibre shoulder bushing and nickel-plated hex nut. Standard finish is nickel plate on body. Mounts in 3% hole. Maximum panel thickness 3½" where insulating washers are used, 3½" where omitted. 3½"-32 thread.

Cat. No.	Color	Cat. No.	Color
105-520	Red	105-526	Orange
105-521	Black	105-527	Yellow
105-522	Dk.Green	105-528	Lt. Green
105-524	Brown	105-529	Dk. Blue
105-525	Lt. Blue	105-530	Ivory

Description similar to above type except that brass body is molded integral with head, and additional phenolic washer is furnished. %6"-40 thread.

Cat. No. 105-418 Red 105-419 Black



### ALL METAL TIP JACKS SMALL HEX HEAD

 $\frac{1}{4}$ "-32 thread. Supplied with fibre bushing to fit  $\frac{3}{8}$ " panel hole.  $\frac{1}{12}$ " maximum panel thickness.

Cat. No. 105-417

#### **HEADLESS TIP JACK**

105-1 Body nickel plated. 1/4"-32 thread

#### INSULATED COMBINATION JACK

Supplied with shoulder bushing, phenolic washer and one piece contact and nut. Maximum chassis thickness 1/2". Mounts in 3/3" diameter hole. Provides insulated jack for phonetip plugs and No. 75 series "banana spring" plugs.

Cat. No. Color 105-420 Red 105-421 Black

LONG SOLDERLESS TIP PLUG. For use with all tip jacks including 105-16 and 105-420.

105-15 105-14 Sharpened point

SHORT SOLDERLESS TIP PLUG. For use with all tip jacks except 105-16, -420 and -421.

Cat. No.

#### TWIN TIP JACKS

Twin jacks spaced 1/8". Single hole mounting. Molded black phenolic body.

Cat. No. Marking 105-401 Blank 105-4012 Speaker 105-4015 Phono

#### SHORTING TYPE TWIN TIP JACKS

Circuit closes automatically when tips are removed. Jacks spaced 1/8". Single hole mounting. Molded black or red phenolic body.

Cat. No. Color 105-432 Black 105-433 Red

### "BANANA SPRING" TYPE

Nickel-silver springs and high grade nickel plated brass screw machine parts with accurate threads and milled nuts. Studs extend full length of springs for added support. 75D is designed for riveting. Spring is beryllium

copper. 75BB has 13%\* black plastic handle; 75BR same

but red. 7788 has 1¾″ black plastic handle; 778R same

but red.
75 or 75A can be furnished with beryllium copper spring on special order, and all plugs can be furnished with nickel, cadmium or silver plating if required.

plating if required.

108-7451 is a jack similar to the 108-74 with a red plastic insulated head and furnished with fibre washers. 108-7452 same but black.

Cat. No. Plugs	Illus. Dwg.	S	P	D	Н	G	0	Thread
108-75	Δ	3/	17/	105		~		
108-75A	Ä	3/8	17/32 17/32	.175	11/8			6-32
108-75BB	ĉ	4	32	.175	11/2			6-32
		13/8	17/32	.175	21/2	.215	3/16	
108-75BR	C	13/8	17/32	.175	21/8	.215	1/16	
108-75C	В		17,32	.175	15/16			6-32
108-75D	E	7/2	13 32		16			0-34
108-77	A	7/32 5/8	32	.155	13/16			
108-77A	B	78	2/4	.300	125/32			1/4-28
108-77BB		%8	3/4	.300	11/8			10-32
	C	13/4	3/4 3/4 3/4	.300	225 32		5/6	
108-77BR	C	13/4	3/	.300	225 32	8/8 3/8 B	68	
Jacks		ŕ"	Ď.	S	2 32	28	5/8	56.40
108-74	D	8/	1/		H	В		Thread
108-7451	_	8	74	17/32	5/8	.166		<b>⅓</b> -28
108-7452		16	1/4	1/2	21/32	.166		1/4-28
108-76		7/6 7/6	1/4		21/32	.166		14-28
100-70	D	16	3,6	15/16	19/12	.277		8-24
			/ 0	× 10	1/32	.411		78-24

### E. F. JOHNSON CO.

# JOHNSON PILOT LIGHTS

DHNSON Pilot Lights are built to exacting standards from the finest propriate materials. The listings on these pages include only those standard lits in greatest demand. Many other types and variations from standards cluding those meeting military specifications are available in production variations.

andard finish for jewel holder bezels is polished chrome except for and 3% sizes which are finished in nickel. Black oxide finish is freently supplied to meet special requirements.

### **ENCLOSED 1" LIGHT**



nderwriters' Laboratories approved. One inch friction type jewel holder, zel chrome plated brass. Lamp replaceable from front of panel. Mounting the required 1". Porcelain insulated candelabra screw socket with solder minals.

nuis.	Length		
Cat. No.	Behind Panel	Bulb Shape	Jewel
147-1000	21/2"	S-6	Faceted
147-1001	$2\frac{1}{2}$	Ş-6	Smooth
147-1002	21/2"	S-6 T 4½, NE45	Colored Disc
147-1003 147-1004	2 <sup>3</sup> /16" 2 <sup>3</sup> /6"	T 4½, NE45	Smooth
147-1004	23/6"	T 4½, NE45	Colored Disc

e following assemblies are identical except socket bases are phenolic id equipped with screw terminals.

147-1032	934"	S-6 Faceted
147-1033	934"	S-6 Smooth
147-1034	934"	S-6 Colored Disc
147-1035	976"	T 4½, NE45 Faceted
147-1036	976"	T 4½, NE45 Smooth
147-1037	21/16"	T 4½, NE45 Colored Disc

# ENCLOSED 1" LIGHTS WITH BAYONET SOCKETS

### SEE ILLUSTRATION ABOVE

ne inch friction type jewel holder, lamp replaceable from front of panel. ard rubber insulation, screw terminals. All are Underwriters' Laboratories pproved except 147-1050, -1051 and -1052 which have single contact ayonet sockets. Mounting hole 1".

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Jewel .
147-1050	21/2"	G-6	SC Bayonet	Faceted
147-1051	21/2"	G-6	SC Bayonet	Smooth
147-1052	21/2"	G-6	SC Bayonet	Colored Disc
147-1053	21/2"	G-6	DC Bayonet	Facered
147-1054	21/2"	G-6	DC Bayonet	Smooth
147-1055	21/2"	G-6	DC Bayonet	Colored Disc
147-1056	25/8"	G-6, NE48	DC Bayonet	Faceted
147-1057	25/8" 25/8"	G-6, NE48	DC Bayonet	Smooth
147-1058	25/8"	G-6, NE48	DC Bayonet	Colored Disc
147-1076	25/8"	G-6, NE48	DC Bayonet*	Faceted
147-1077	25/8"	G-6, NE48	DC Bayonet*	Smooth
147-1078	25%"	G-6, NE48	DC Bayonet*	Colored Disc

# DETACHABLE SOCKET 1" LIGHTS



conomy 1" pilot light. Chrome plated friction jewel holder. Lamp replaceble from front or rear of panel. Socket detachable from panel bushing for applications demanding removable panel. Mounting hole 1". Two solder form

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Jewel
147-800 147-801 147-802 147-803	1 <sup>11</sup> /6" 1 <sup>11</sup> /6" 2 <sup>3</sup> /6" 2 <sup>3</sup> /6"	G 3½, T 3¼ G 3½, T 3¼ T 4½ T 4½	Min. Screw Min. Screw Cand. Screw Cand. Screw	Faceted Smooth Faceted Smooth
147-803 147-804 147-805 147-808	111/6" 111/6" 111/6"	G 3½, T 3¼ G 3½, T 3¼ G 3½, T 3¼	Min. Bay. Min. Bay. Min. Bay. Co	Faceted Smooth

In addition to smooth and faceted types, one inch jewels can be furnished with colored, plastic backing discs which impart color to the clear inside frosted jewel only when the lamp is lighted. This prevents external light from giving false indication of illumination. Where required, lettering, numerals or insignia can be printed on the backing disc and arranged to be visible either continuously or only after lamp is lit.

Standard jewel colors are clear, red, green, amber, blue and opal. Be certain to specify jewel color on all orders.

# 1" THREADED JEWEL HOLDER TYPES



Enclosed 1" light assemblies with candelabra screw bases, phenolic Insulated sockets. Underwriters' Laboratories approved. Knurled brass, threaded jewel holder polished chrome plated. Mounting hole size 1".

Cat. No. 147-1200 147-1201 147-1202 147-1209 147-1210	Length Behind Panel 29'6" 29'6" 23'4" 23'4"	Bulb Shape S-6 S-6 S-6 S-6 S-6	Faceted Smooth Colored Disc Faceted Smooth	Screw Screw
147-1210 147-1211 147-1212 147-1213 147-1214	234" 21/6" 21/6" 21/6"	S-6 T4½, NE45 T4½, NE45 T4½, NE45	Colored Disc Faceted Smooth Colored Disc	Screw Screw Screw

### WIDE ANGLE LENS TYPES



Good visibility from extremely wide angles. Lamp extends well into the internally ribbed, 11/8" glass bullseye jewel providing diffused light of good intensity. Chrome plated brass bezel; phenolic or hard rubber insulated socket with screw terminals. Mounting hole 1". 147-1600 and 147-1605 Underwriters' Laboratories approved.

Cat. No. 147-1600 147-1604	Length Behind Panel 2 1/8" 1 13/6"	Bulb Shape S 6 G 6	Lamp Base Cand. Screw SC Cand. Bay.
147-1605	1 13/6"	G 6	DC Cand. Bay.

### WIDE ANGLE LUCITE LENS TYPES

For applications utilizing low powered light sources yet requiring good visibility. Designed for neon or low powered incandescent lamps. While jewels are furnished in all standard colors, only red, amber or clear are recommended for neon lamps. Underwriters' Laboratories approved.

5%" JEWELS



The three types listed below have % threaded Lucite jewels, mounting hole required 11%, length behind panel 11%. Single contact miniature bayonet socket, phenolic socket body, solder terminals.

Cat. No. 147-1142 147-1143 147-1144	Bulb Shape T 31/4 T 31/4 T 31/4	Bulb 47, 49, 149 NE-51 NE-51 1" JEWE	Built in Built in	ohm resistor ohm resistor

Lucite 1° jewels attached to chrome plated, threaded bezels. Hard rubber or phenolic insulation, screw terminals. Mounting hole required, 1°,

ohm -48

For a complete description of Johnson capacitors, inductors, sockets, insulators, plugs & jacks, knobs & dials and pilot lights, write for Johnson Catalog No. 972-A.

# aseca, Minnesota





# HIGH VACUUM PUMPS

MECHANICAL, OIL

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.

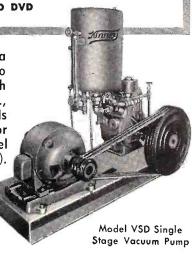
The plungers in Kinney Vacuum Pumps have no contact with cylinder surfaces due to the unique method of automatic lubrication, resulting in a no-clearance pump of extremely long life. Simple and efficient in design, these pumps have established an impressive record for dependability and low cost operation.

### SINGLE STAGE VACUUM PUMP

MODELS VSD AND DVD

Nine pump sizes cover a capacity range from 13 to 1600 cu. ft. per min. with motors from ½ to 75 h.p., respectively. VSD Models respectively. VSD Models are furnished either air or water cooled (except Model VSD 556—air cooled only). All DVD Models fur-

nished water cooled only. Single Stage Pumps on a blank test produce low absolute pressures of 10 microns (.01 mm Hg.) or better.



COMPOUND VACUUM PUMP MODELS CVM 556 AND CVM 8610

THE STATE OF THE S

Four sizes of Compound Pumps are available in capacities of 2, 4.9 (See New Pumps), 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



Compound Vacuum

has an air cooled casing of unique design and special provision for oil sealing and lubricating the high vacuum work ing parts. Both of these compound pumps test to low absolute pressures of 0.5 micron (.0005 mm Hg.) or better.

## **NEW SMALL VACUUM PUMPS** MODELS CVM 3153 AND CVM 3534

These new Kinney Vacuum Pumps combine the advantages of small size and high pumping speed. Model

NAMES OF THE PERSON OF THE PER



Model CVM 3534

It weighs only 70 lbs., complete with its ¼ h.p. motor. Model CVM 3534 has a displacement of 4.9 cu. ft. per min. Its weight: 140 lbs. with 1/3 hp

motor. Both pumps test to low absolute pressures of 0.7 micron (.0002 mm Hg.) or better.

### KINNEY VACUUM VALVES - VACUUM OIL

Kinney Vacuum Tight Valves facilitate testing vacuum instal lations. Special metal bellows eliminate the leakage at the valve stem which occurs with ordinary valves having stuffing boxes. Three types of valves are available — cast steel, cast iron, and bronze. Write for Vacuum Tight Valves Bulletins

The oil supplied with the Compound Pumps is carefully proc essed to insure low vapor pressure and suitable viscosity. is available under the name "Kinney Super X Vacuum Dried Oil."

Ask for Kinney High Vacuum Pump Bulletin V-51

Model

CVM 3153

# KINNEY MANUFACTURING COMPANY

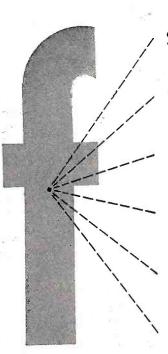
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# VACUUM PROCESSED FOR PERFORMANCE AS RATED

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HIGH-VOLTAGE RECTIFIERS (SE6M Series). Ratings to 5 ma D.C.— 6000 volts maximum peak inverse. Hermetically sealed in glass tubes. Ferrules for fuse type mounting.

POWER RECTIFIERS (SE11 Series). Ratings from 50 ma to thousands of amperes. Available in half-wave. full-wave bridge, volt-



age multiplier, center tap full-wave, polyphase, and special connections to customer's current and voltage requirements. Plate size from 1"x1" to 5"x6".

LIMITER (SR Series). For magnetic amplifier and special applications. Hermetically sealed to meet all specifications.





MINIATURE HIGH. VOLTAGE RECTIFIERS (SE8 Series). Completely sealed in Bakelite housings. Ratings up to 6000 volts peak inverse and 12.5 ma D.C. Size from 1/4" diameter x 1/8" long.

HALF-WAVE RECTIFIERS (SE9 Series). Rated from 50 ma to 500 ma. Peak inverse up to 500 volts. Plate size from 1"x1". Length 1/2" to 11/2".

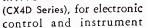


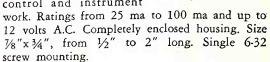
NEW HANDBOOK AVAILABLE

Valuable reference for engineers, Contains design considerations as well as complete descriptions of Bradley Rectifiers and Photoelectric Cells. Available on request to qualified engineers.

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HIGH CONVERSION RATIO RECTIFIERS







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.

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(CX8C Series).

Rated up to 36 volts A.C. 500 microamperes D.C. Size 1/4" diameter x 5/8" long. 21/2" tinned leads.



CONTROL AND TEST EQUIPMENT RECTIFIERS (C014D Series). Rated from 20 ma half-wave to 35 ma full-wave, up to 6 volts

A.C., 4 volts D.C. Single 6-32 screw mounting.

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 7/64" diameter mounting holes. 3" gold leads.



BALANCED BRIDGES AND MODULATORS (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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meters of these assemblies range from .045" to 24" cylindrical flat. Cross-sections may range from .005" to .060" or more. igs are polished to a jewel-like finish and can be held to 4 ro-inches or better. Even the smallest sizes withstand a 1000 LC. breakdown test. Most types easily withstand rotational eds 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.

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# TAST EOUPMENT WESTON

# Mutual Conductance ELECTRONIC TUBE ANALYZER



(Model 686) an "all purpose" tube analyzer that tests tubes under exact operating potentials. Accurately determines true mutual conductance of all tubes both in accordance with manufacturer's rated operating conditions, as well as at other values for non-standard applications.

# High Frequency ELECTRONIC ANALYZER (Model 769)



three instruments in one: a Volt-Ohm-Milliammeter with self-contained power source—a high impedence electronic Volt-Ohmmeter using 115 volt 60 cycle power-a stable, probe type Vacuum Tube Voltmeter for use to 300 megacycles.

for ALL electronic and electrical maintenance needs!

# **Multi-Purpose CIRCUIT TESTER**



(Model 785) a versatile, portable tester for laboratory or maintenance needs. where an ultra-sensitive instrument is required. Provides 28 A-C and D-C voltage, A-C and D-C current, and resistance ranges. (D-C sensitivity 20,000 Ohms per volt.)

# **Mutual Conductance PORTABLE TUBE CHECKER**



(Model 798) for general testing of all receiving tubes, voltage regulator tubes and low power thyratron tubes. Provides proportional mutual conductance ranges 3000/6000/ 12000 micromhos. Compactness and light weight make it ideal for all servicing requirements.

All WESTON Test Equipment is specifically designed to provide time-saving facility and increased efficiency for all electronic or electrical maintenance jobs. For complete information on all equipment in this broad line, consult your nearest WESTON representative, or

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# []-[-F[EX] 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 13/4
878-3	11/2 to 3
878-4	21/2 to 51/2
878.5	5 to 10

# **SERIES 892 UNIT MOUNTING BASE**

100

12

8

6%

(A)

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

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	in Pounds	Pounds
831-1	MT-A1-8	10 24	2.40
831.2	MT-A1-C	10 24	2.45
831-3		10 24	
831-4	MT-A1 D	18.40	2.50
831-5		10-24	0.40
831-6	MT-81-8	18.40	2 60
831.7		10.24	
831-8	MT-B1(2)-C	18-40	2.65
831.9	MT-81(2)-D1	22-50	2.70
831-13	MT-81(2)-D2	40.80	2.70
831-14	MT-C1(21-C	40.80	2.80
831-15	MT-C1(2)-D	40.80	2.85

Mounting Bases to meet your exact dimensional and load requirements are available on special order.



her "Plus Features" exclusive with ET-L-FLEX Mounts and Mounting are: negligible drift rate; wide temre tolerance (-90°C to +175°C); mazingly long service life without ® enance. They completely lack those and weaknesses inherent to tings incorporating organic or materials.

"Plus Features" of Robinson ings, providing performance in of current specifications, pay off ximum protection of the mounted

complete performance and conon details, write for Technical n EB-700 and the telephone numyour local representative.

ET-L-FLEX is the copyrighted desig-ion for the all-metal resilient cushions cloped and pioneered by Robinson.







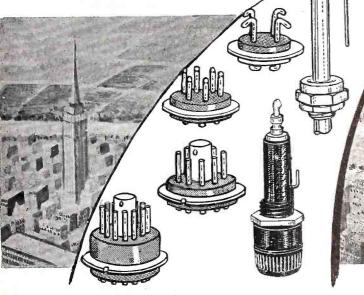


Model Number	Application Range in Lb	
7001-H	1/2 to 1	
7001-J	3/4 to 13/4	
7001-K	11/2 to 3	
7001-L	21/2 to 51/2	
7001-M	5 to 10	

Model Number	Application Range in Lbs.
7002-G	11/2 to 23/4
7002 H	21/2 to 6
7002-J	4½ to 10
7002-K	51/2 to 121/2
7002·L	10 to 20
7002-M	18 to 40
7002-P	35 to 50
7002-R	45 to 75

# ROBINSON AVIATION INC.





HERMETIC SEAL TERMINALS — Applicable on MIL requirements. Will withstand thermal shock, vibrations, mechanical strains, and excessive pressures with no impairment of the seal or other functional characteristics. E-3LW terminals are now being used at 1000 psi static oil pressure and undergo 5000 psi tests for two minutes.

OCTAL TYPE PLUG IN HEADERS — Applicable for MIL requirements. These units can undergo sustained vibrations, large temperature changes, and other strains without impairment to the seal or other functional characteristics. Available with eight and twelve pins,

MULTIPLE PIN HEADERS — Applicable for MIL requirements. Presently being used on MIL-1-27 transformers. These units are available with 2 to 10 pins. These units can undergo conditions mentioned above with no impairment to the seal or other characteristics.

FUSE HOLDERS, HERMETICALLY SEALED — Available for 3-AG and 4-AG fuses. These units are completely sealed from moisture with or without the cap or fuse inserted. They are applicable on pressurized and gas filled components.

CABLES, HERMETICALLY SEALED — The cables are hermetically sealed at the plug on thru to the panel.

ROTARY WATERSEAL PANEL ASSEMBLIES — These units have an excellent seven year customer history on gas filled pressurized components. They are available for 1/4" shafts and for potentiometers and switch bushings.

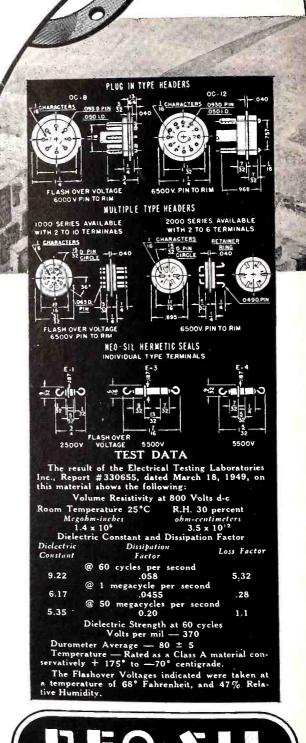
LINE CORDS WITH PLUGS FOR EUROPEAN USE, HERMET-ICALLY SEALED — These units are completely sealed at the plug and are being used on pressurized units.

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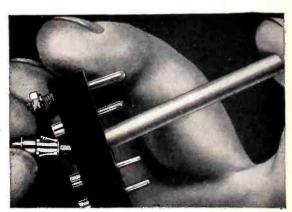
Flexible conduit and ignition assemblies.



Job engineered, weldeddiaphragm bellows.



Aero-Seal vibrationproof hose clamps.



Removable pins in Breeze connectors speed soldering, save time, trouble. Pins snap back into block.

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Universal Servo amplifiers for standard two phase motors and carrier frequency data systems.

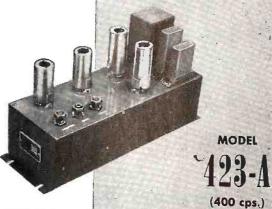
Specifications

- Independent control over gain, damping and carrier phase.
- Maximum Gain: 1000.
- Stock item, with universality of application because of its range of adjustment.
- **Carrier Phase:** variable thru 160°
- Moderate power supply requirements.



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DRIVES BUORD MK 7 and MK 8 MOTORS

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A signal generator that displays the transient or frequency response of a servo loop on a long persistance cathode ray screen.

An instrument that facilitates the adjustment of servo performance in the laboratory and on the produc-

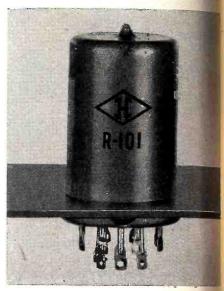
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# Diamond H

HERMETICALLY SEALED

# MINIATURE 4PM AIRCRAFT RELAY



- Operational Shock Resistance: 50 "G" (10-55 cycle vibration with .060" total excursion)
- Weight: 3.76 ounces
- Cubic Displacement: 1.6 cubic inches

Designed for demanding jobs in such applications as guided missiles, rockets, super-sonic and high altitude jet aircraft, radar, geophysical and computer apparatus, this relay is built to meet all requirements of USAF Specification MIL-R-5757A . . . and far surpasses many of them.

Contacts are rated 7.5 A. resistive for 100,000 cycles (30 A. resistive for 100 cycles) at 30 V., D. C., or 115V., A. C., and the relays have run successfully at 10 A. resistive for 100,000 cycles and 30 A. resistive for 100 cycles-Contact resistance at the end of the tests was less than .030 ohms.

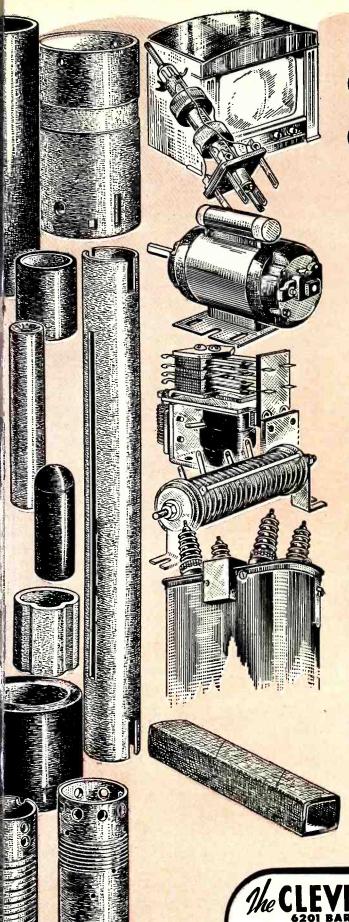
Variations in basic specifications are available to meet a wide variety of specific requirements including temperature ranges from -65° up to 200° C. and coil resistances up to 20,000

Write for certified test data, telling us your application.



"Diamond H" Aircraft Switches Built To Meet JAN-S-23 Specifications (ST40 and 42 A through H) Are Now Available

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of every type for almost

# EVERY APPLICATION

are Preferred because of their Proven Performance and Low Cost!

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Their low dielectric loss is suitable for ultra high frequency applications.

In Electric Motors for armature shaft spacers, insulators, brush holders, and many similar force-fit applications requiring easy machining, Clevelite and Cosmalite are particularly suitable.

In Relays, Controls, Selenium Rectifiers, the various grades of Clevelite Phenolic Tubing have special properties that guarantee complete satisfaction.

In Transformers, X-Ray and Diathermy Equipment, Clevelite and Cosmalite tubing in various grades . . . rectangular and other shapes, supply the exact needs of the engineer.

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\* Reg. U. S. Pat. Off.

# The CLEVELAND CONTAINER CO.

PLANTS AND SALES OFFICES at Plymouth, Wisc., Chicago, Detroit, Ogdensburg, N.Y., Jamesburg, N. J ABRASIVE DIVISION at Cleveland, Ohio

CANADIAN PLANT: The Cleveland Container, Canada, Ltd., Prescott, Ontario

## REPRESENTATIVES

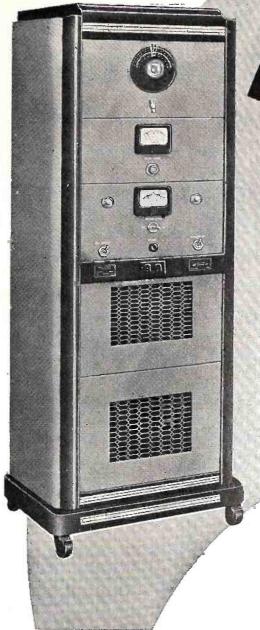
NEW YORK AREA R.T. MURRAY, 604 CENTRAL AVE, EAST ORANGE, N. J.

NEW ENGLAND

R. S. PETTIGREW & CO., 62 LA SALLE RD., WEST HARTFORD, CONN.

CHICAGO AREA

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# AN A.C. POHER SOURCE

50 to 3000 CYCLES

# MODEL VS-500 VARIABLE FREQUENCY POWER SUPPLY

Input: Volts: 115v 2 wire or 230v 3 wire single phase; Frequency: 60 cycles/sec.; Power: 1600 V.A.

Output: Volts: 115v or 230v, regulated; Frequency: 50 — 3000 cycles/sec.; Power: 500 watts.

**Wave Form:** Standard—sine wave; Optional—variable waveform with amplitude factor variation of 1.16 to 1.65. Square wave through sine wave to peaked wave.

Regulation of output voltage: Better than 3% from no load to full load.

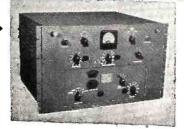
Special Features: Large Voltmeter with a 4" scale mounted on the Front Panel indicates output voltage. A control is provided to vary the voltage ±5 volts about the nominal value of 115 volts. Output Frequency is indicated on a large dial (6" diameter). Frequency is direct reading variable with a two step range switch. Large Milliammeter with a 4" scale, similar to the Voltmeter, mounted on the Front Panel . . . in conjunction with a two-position toggle switch . . . reads individual plate currents of output tubes for ease of balancing Push-Pull output stages.

Size:75" H. 26" W. 27" D. Weight Net: 535 lbs. Furnished with caster base to provide an easy means of moving equipment to desired location.



# MODEL FSK-45 FREQUENCY SHIFT KEYER

Meets all current military and commercial specifications. Operates directly off teletypewriter. Circuits are provided for phototransmission for operation in the frequency range 2.0 megacycles to 4.0 megacycles.



# 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.



# MODEL 25-C SIGNAL GENERATOR

An R.F. Signal Generator operating over the frequency range loke to 50 megacycles. Output voltages adjustable from 0.5 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 1600 cycles. Complete with accessories.



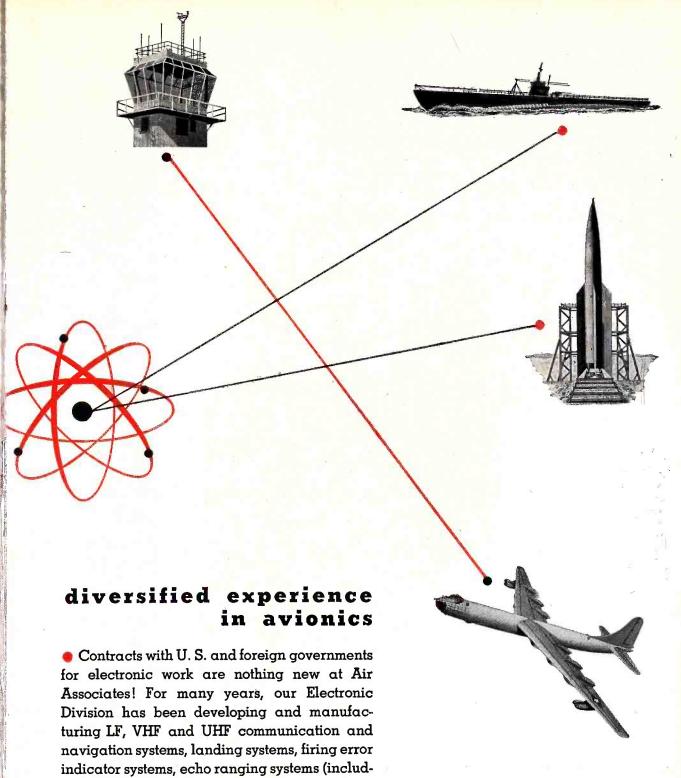
Accurately indicates standing wave ratios 1:1 to 4:1. Operates on 115 volts 50 to 800 cycles. Designed for use with a square law crystal detector or bolometer probe which samples R.F. voltage from a slotted line. Of shock resistant, non-microphonic construction. Complete with carrying case and detachable cover.



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TELEVISION CORPORATION

1001 FIRST AVE., ASBURY PARK, N.J.



ing 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.

TETERBORO, NEW JERSEY

SERVING NATION AVIATION

# "EVEREADY" RADIO BATTERIES

	вк	AND			TERMINALS	SUGGESTED CURRENT RANGE	WEIGHT BATTERY
TYPES	VOLTAGE	LENGTH	WIDTH	HEIGHT			
			"	A-B" PACKS FOR	HOME RECEIVERS	A:200-300 m.a.	14 lb. 4 oz
758	1.5 A	1011"	41/8"	618"	Socket -, +1.5	B:7.0-12.0 m.a.	14 lb. 4 oz
	90 B				Socket -, +90 Socket -, +1.5	A:200-300 m.a.	16 lb. 4 02
759	1.5 A	15 <del>18</del> "	4 52 "	618"	Socket -, +90	B:7.0-12.0 m.a.	
	90 B			DI DACKS FOR	PORTABLE RECEIVERS		
					Socket —, +1.5	A:200-250 m.a.	2 lb. 7 oz
729	1.5 A	718"	232"	337"	Socket —, +1.5	B:5.0-12.0 m.a.	
752	90 B	141"	2 † † "	418"	Recessed Plug —, +9	A:50 m.a.	6 lb. 2 oz
192	9 A 90 B	14 禄 "	216	416	Recessed Plug, +90	B:5.0-15.0 m.a.	
753	7.5 & 9 A	9,72"	233"	4 18"	Socket —, +7.5 & 9	A:50 m.a.	4 lb. 12 oz
	90 B				Socket, +90	B:5.0-12.0 m.a.	Clb 1
754	7.5 & 9 A	1012"	3¼"	4"	Socket -, +7.5 & 9	A:50 m.a. B:5.0-15.0 m.a.	6 lb. 1 oz
	90 B		0.7 "	03/"	Socket —, +90 Socket —, +6 & 7.5	A:50 m.a.	3 lb. 9 oz
755	6 & 7.5 A 75 B	818"	27"	3 3/4 "	Socket, +75	B:5.0-12.0 m.a.	
756	7.5 & 9 A	87/8"	21/8"	335"	Socket -, +7.5 & 9	A:50 m.a.	2 lb. 14 oz
	90 B	~ /,0	- 76		Socket -, +90	B:5.0-12.0 m.a.	
757	9 A	9372"	233"	4 3 72 "	Recessed Plug —, +9	A:50 m.a.	4 lb. 12 oz
	90 B				Recessed Plug —, +90	B:5.0-12.0 m.a.	1
			"A	" BATTERIES FO	R HOME RECEIVERS		
A-1300*	1.25	518"	411"	8 % "	Socket $-$ , $+1.25$	100-600 m.a.	8 lb. 3 oz
740	1.5	438"	3 1/8"	7 3/4 "	Socket —, +1.5	100-350 m.a.	6 lb.
#6 Dry Cell	1.5	25%" D		6%"	Screw $-, +1.5$	100-250 m.a.	2 lb. 2 oz
			"	B" BATTERY FOR	HOME RECEIVERS		
487	45	51/8"	218"	71/4"	Socket $-, +22.5, +45$	7.0-12.0 m.a.	4 lb. 2 oz
			"A"	BATTERIES FOR	PORTABLE RECEIVERS		
713	7.5	333"	53/64"	237"	Socket $-$ , $+7.5$	50 m.a.	6 1/3 oz
717	7.5	232"	1 18"	3 32 "	Socket -, +7.5	50 m.a.	8 oz
726	4.5	318"	1 15 "	218"	Socket -, +4.5	50-100 m.a.	10 ½ oz
736	4.5	318"	1 % "	4 3 2 "	Socket —, +4.5	50-100 m.a.	1 lb.
742	1.5	216"	218"	331"	Socket -, +1.5	100-250 m.a.	1 lb. 5 oz
744	$\frac{6}{1.5}$	231"	231"	331"	Socket -, +6	50 m.a.	1 lb. 5 oz
745 746	4.5	3 78" 3 18"	1 16" 1 16"	1033"	Socket -, +1.5 Socket -, +4.5	100-350 m.a.	2 lb, 10½ oz
747	6	37/8"	176	1035"	Socket -, +6	50-100 m.a. 50 m.a.	$\frac{1 \text{ lb. } 3\% \text{ oz}}{2 \text{ lb. } 11 \text{ oz}}$
					PORTABLE RECEIVERS	00 111,4.	2 10. 11 02
482	45	332"	133"	51/2"	Socket -, +45	T 0 1 T 0	1 2 33 4 2
484	45	331"	232"	518"	Socket —, +45	5.0-15.0 m.a. 5.0-20.0 m.a.	1 lb. 15 oz 3 lb. 2 oz
					PERSONAL RECEIVERS	0.0-20.0 m.a.	1 3 1D. 2 02
720	1.5	233"	13/8"	3 12 "	Socket —, +1.5	05.050	CIV
724	6	132"	1372"	211"	Flat Contact -, +6	25-250 m.a. 50 m.a.	6½ oz 2½ oz
950	1.5	121/64" D		287"	Flat Contact -, +1.5	25-250 m.a.	3 02
			"B"	BATTERIES FOR	PERSONAL RECEIVERS		, , ,
455	45	231"	1"	316"	Snap Type —, +45	10100	7% 02
457	67.5	218"	13/8"	21/2"	Snap Type —, +45 Snap Type —, +67.5	1.0-10.0 m.a. 1.0-8.0 m.a.	7% 02
467	67.5	2 18"	1 % "	345"	Snap Type —, +67.5	1.0-10.0 m.a.	12 oz.
490	90	333"	1 % "	344"	Snap Type —, +90	1.0-10.0 m.a.	15 oz.
			"A'	BATTERIES FOR	POCKET RECEIVERS		
915	1.5	35/64" D		131"	Flat Contact, +1.5	25-100 m.a.	35 oz
935	1.5	11/64" D		2"	Flat Contact - +15	25_100 m a	1% oz
		"B"	BATTERIES F	OR POCKET REC	EIVERS AND SPECIAL EQUIPMEN	7	1 270
411	15	1 32"	5/8"	12%4"	Flat Contact -, +15		44
412	22.5	1 3/2"	5/8 "	2"	Flat Contact —, +15 Flat Contact —, +22.5	0.3-1.0 m.a.	15 OZ
	30	1 32"	5/8"	2,9,"	Flat Contact —, +22.5 Flat Contact —, +30	0.3-1.0 m.a. 0.3-1.0 m.a.	1½ oz.
413						u.a-1.um.a.	1 175 02.
413	15	1 15"	31"	1 18 "	Flat Contact - 15		
413 417 420	15 22.5	1 ½" 1½"	8½"	2 3 "	Flat Contact -, +15	0.5-2.0 m.a.	1 ½ oz
413	15	1 15"			Flat Contact —, +15 Flat Contact —, +22.5 Flat Contact —, +30 Pin Jacks —, +300		

<sup>\*&</sup>quot;Air Cell" Battery

These Battery Engineering Bulletins are available on request: 1. Batteries for Portable Electronic Equipment. 2. "Mini-Max" "A-B" Packs for Portable and Home Receivers. 3. Batteries for Vacuum Tube Hearing Aids. 4. High Voltage Batteries. 5. Flash Photography...and the "B-C" Photoflash System.



The registered trade-marks "Eveready," "Mini-Mas," and "Air Cell" distinguish products of Union Carbide and Carbon Corporation

# NATIONAL CARBON COMPANY

A Division of

UNION CARBIDE AND CARBON CORPORATION 30 East 42nd Street, New York 17, N. Y. Advertisement

# usive Techniques & Serves for Better Design, creased Output — at ower Cost

ro-Processing is an advanced que, exclusively developed by hich permits greater design latibecause the springs are temafter forming. Combined with traordinary spring properties of tum copper, M/P assures an exy high degree of uniformity. arison with conventionally-maders has shown M/P to be 2 to 10 more accurate. With this exclucinque, we consistently predict gidly control the critical shapes, sions and elastic properties defor your specific application.

usands of applications by leadanufacturers of electronic and cal equipment have proven the ny—of both time and actual ct cost—obtained through using icro-Processed beryllium copper is.

### $Quality ext{-}Control$

ssure the high standards of uniy set for all I-S springs, each beryllium copper strip and wire bratory tested and certified beising. Rigid inspection procedre maintained at every phase of ocessing and fabrication.

### Free Engineering Service

specialized experience and adge of our engineering staff is ur disposal on any problem of design. Often you can affect erable economy through our adge of spring fabrication. Then, ir vast experience in limitations ctional properties in spring deleps you meet your production nes. There is no cost or obligator this service.

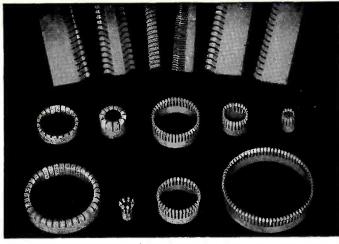
# I-S Short Run Service

pilot model testing, "small-fry"
... You can easily and ecoally check your design performwith regular production line
s of beryllium copper—without
st of regular production quantiwithout resorting to inaccurate
tade springs.

Short Run service was organpressly to handle small quantity tion at low cost—on springs specifically to your own design. bout this service—it's prompt onomical.

rument Specialties Co., Inc.—rgen Blvd., Little Falls, N. J.



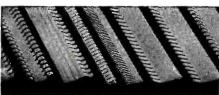


ENGINEER'S MICROWAVE KIT . . . saves time and money in development work. Contains 9 beryllium copper, jighardened circular contact rings and 6 finger contact strips.

# Micro-Processed\*

# Beryllium Copper Springs

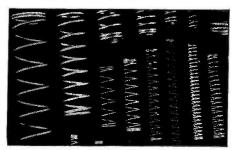
to help solve your radio-electronic problems



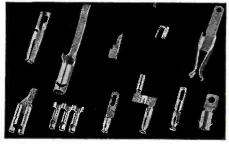
FINGER CONTACT STRIPS . . . for electronic equipment—available in a variety of contours without tool cost. Length—width—mounting holes—and finish optional. For information — Write for Bulletin B-52.



■ CONTACT RINGS . . . standard—and made to order. Truly circular—to insure equal pressure from all fingers. For information — write for Bulletins C-52 and D-52.



COIL SPRINGS . . . the finest available combination of high strength and uniformity. Made to your specifications.



MINIATURE SOCKET AND PLUG BOARD CONTACTS... produced with automatic tooling. Pressure on plug pins and tab ductility controlled within close limits.

 ENGINEER'S ASSORTMENT . . . 100 beryllium copper helical compression springs . . . 50 pairs—all different.

# Instrument Specialties Company, Inc.

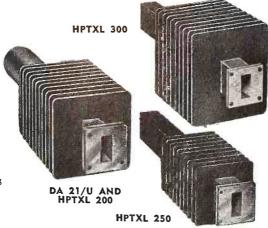
■ 181 BERGEN BOULEVARD, LITTLE FALLS, NEW JERSEY Telephone Little Falls 4-0280

\*For full information on I-S Micro-Processed Springs—write for your copy of Catalog No.7— "Micro-Processed Springs of Beryllium Copper".





These waveguide loads use waveguide walls which are poor conductors. construction facilitates more effective removal of the heat generated in the load, and is not as subject to pulsepower breakdown (arcing) as are the designs which use filling materials in the waveguide. The lossy material consists of a mixture of Portland cement and graphite, which adequately handles the thermal shock, is highly durable, and provides a highly adhesive bond to the metal waveguide walls.



Туре	DA21/U	TS338	HPTXS250	HPTXL250	HPTXL200	HPTXS100	HPTXL300
Freq. Range	7-10KMC	2.4-3.7 KMC	8,2-12,4 KMC	7-10KMC	7~10KMC	8.2x12.4 KMC	7-10KMC
Waveguide	11/4"x5%"	1.5"x3"	½"x1"	11/4"x5%"	11/4"x5%"	½"x1"	1 1/4"x 5/8"
Nominal* Average Power Dissipation	280 Watts	700 Watts	250 Watts	250 Watts	200 Watts	100 Watts	350 Watts
Maximum V.S.W.R.	1,15	1.1	1.15	1,15	1.15	1.15	1.15
Size	115/6x 3½x3½	24x53/8x 53/8	107/8x 31/2x31/2	11½x 3½x3½	11½x2¾x 2¾	9x2" diameter	11½x4½x 4½
Weight	6 lbs.	13 lbs.	31/4 lbs.	31/4 lbs.	2 lbs. 4 oz.	14½ oz.	51/4 lbs.
Flange * Without th	UG 51/U	UG 438/U r or forced air o	UG 40/U	UG 51/U	UG 138/U	UG 40/U	UG 51/U

# X BAND POWER & FREQUENCY METER

- SEALED AGAINST HUMIDITY
- DIRECT READING FREQUENCY METER WITHIN 25 MEGACYCLES WITH CALIBRATION CHART-WITHIN 4 MEGACYCLES.

FREQUENCY RANGE 8,500 to 9,600 megacycles

FREQUENCY MEASURING ACCURAGE

±4.0 megacycles absolute ±0.5 megacycle on frequency difference

TEMPERATURE COEFFICIENT OF CALIBRATION

0.05 megacycle/degree C

AMBIENT TEMPERATURE RANGE

-40 to +55 degrees C -40 to +122 degrees F.

POWER MEASURING RANGE 0.1 to 1,000 milliwatts

POWER MEASURING ACCURACY

0.1 to 1.0 mw 1.0 to 1,000 mw ±1.0 db ±1.5 db

MAXIMUM INPUT POWER 200 watts peak or 2 watts average

MINIMUM INPUT POWER

0.1 mw average

POWER SOURCE

Internal—6 volts, D-C External—24-30 volts D-C, 0.19 ampere, 5 watts

**ELECTRO IMPULSE Laboratory** RED BANK, N. **RED BANK 6-0404** 

HERE'S AN

# LLINOIS ELECTROLYTIC CAPACITOR OF Time Tested Zuality

OR EVERY ELECTRONIC APPLICATION

Seventeen years of successful production experience, making millions of quality capacitors, has created this complete, outstanding line.

his engineering and manufacturing experience has enabled ILLINOIS ONDENSER COMPANY to meet every demand for new capacitor pes, whether for peace or defense applications, with components f exceptional value and dependability.

lustrated are but a few of the many capacitor types now manufactured y ILLINOIS CONDENSER. There is a guaranteed ILLINOIS Con-ensertor every electronic application. Whatever your requirement recity ILLINOIS CONDENSER. Benefit by the years of engineering id manufacturing experience behind these condensers of "Time ested Quality".

HT This popular pigtail type in luminum can features internal riveted onstruction that assures immunity to rock and vibration. Available with or without outer cardboard insulating leeve, with brass-tinned wire leads or older lugs in capacity ranges from 1 to 700

HC Ideal for replacement or riginal equipment, this type has flexle wire leads, is sealed with high emperature compound, has electro-rtic grade cardboard tubes and has adial or tangential clamps attached. upplied in common negative, four ection types or dual negatives with eparate cathodes. Available in capa-ity ranges from 25 to 250 MFD and rom 5 to 500 W.Y.D.C.

Has screw neck type mounting, extruded aluminum cans and is available in 1" to 1½" diameters. Capacity anges from 8 to 80 MFD and from 150 to 600 W.Y.D.C.

UMP UMP Ideal for communication, adio and TV. Standard twist prong hounting. Uses recently developed nolded capacitor construction and will perate efficiently under wide tem-perature ranges. Remains stable under all operating conditions. Available in capacity ranges from 10 to 3,000 MFD and from 10 to 525 W.V.D.C.

(Bathtub) Developed for fixed and portable communication equipment. Has hermetically sealed, drawn metal case with corrosion resistant finish. Will stand shock and vibra-tion. Manufactured to conform to all Government 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.

UMT Specifically designed for use in high quality equipment. Complete line manufactured to conform to all Government Specifications. Hermetically sealed, shock resistant. Newly designed molded capacitor design and

UMS Specifications.

terminal construction. hermetically sealed. Entire line manufactured to conform to all Government UMC 3 to 600 volts, 1 to 10,000 MFD. Power factor correction. Voltage stabilization. High current energy storage. Discharge types. Motor starting, strobe light and photo flash types. Audio and power. Filter networks.



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ILLINOIS CONDENSER 1616 N. THROOP ST., CHICAGO 20, ILLINOIS





MODEL 101

SUPERSONIC FREQUENCY RANGE 20 cps to 200,000 cps

MODEL 102

LOW POWER FACTOR RANGE 20 cps to 20,000 cps

### VOLTS - AMPS - WATTS FOR MEASUREMENT of

### MODEL 101

- POWER RANGE: 100 z/W to 9 Kw. INPUT IMPEDANCE: 1 MEGOHM. VOLTAGE RANGE: FULL SCALE 0.1V to 300V. CURRENT RANGE: FULL SCALE 0.01 to 30A.

### MODEL 102

- READS WATTS AT FULL SCALE AT BOTH 10% AND UNITY POWER FACTORS.
  INPUT IMPEDANCE: 1 MEGOHM.
  POWER RANGE: FULL SCALE, 225 xW to 18 KW.
  VOLTAGE RANGE: FULL SCALE, 1.5V to 600V.
  CURRENT RANGE: FULL SCALE, .0015A to 30A.



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FOR POWER and LOSS MEASUREMENTS -FOR POWER and LOSS MEASUREMENTS —
Copper, Core and Impedances • in Classes A, B, C
Amplifier Inputs and Outputs • at Aircraft Upper
Power Frequencies • in Underwater Sound Equipment • in Loud Speakers • in Synchro, Motor, and
General Servo Circuitry • in Carrier Current Equipment • in Complex Waveforms • in Circuit Analysis, both Linear and Non-linear • in Sound and
Noise Analysis • These are but a few of the nearly
unlimited analizations of the VAW meters. unlimited applications of the VAW meters.

Our Engineers will be happy to discuss the application of the VAW Meter to solve your particular problem. Write Dept. E42. Literature available

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P. O. BOX 755 — SPRINGDALE, CONN. York, Boston, AND, Chicago; M. P. BURLINGAME ASSOC, New York, Boston, Wash., D. C.; HUGH MARSLAND, Chicago; GERALD B. MILLER CO., Hollywood; M. P. ODELL, Cleveland, Dayton; JAMES L. KEARNS, Portland, Ore.; EARL LIPSCOMB ASSOC., Dallas, Houston.

For the First Time Anywhere

# **POWER SUPPLIES** REGULATION STABILI

MEASURED IN

\* PARTS PER MILLION

- Regulation within 20 PPM\* for line voltages of 105 to 130V.
  Load regulation better than 40 PPM\* from zero to 500 ma.
  Stability within 100 PPM\* per day under average conditions.
  MORE STABLE THAN BATTERIES.
  Short warmup period of 20 minutes.

MODEL 301A. — Voltage: 7.5 to 750 volts.
Current: 0 to 500 ma. Ripple: less than 10 millivolts. Auxiliary voltages of —350 and —700 vdc. at 10 ma. —1/2% regulation, less than 4 millivolts ripple: and 6.3 volts centertapped at 10 amperes.
MODEL 300N. — Performance same as 301A but voltage range 750 to 3000 vdc. at 0 to 30 ma. No auxiliary outputs.
MODEL 300E. — Performance same as 301A but voltage range —1000 to —1500 vdc. at 0 to 100 ma. Auxiliary output of 6.3 vdc. at 1.5 amp.
SPECIAL MODELS. — Special models are available with output voltages from millivolts to-kilovolts either positively or negatively grounded and at currents from milliamperea

grounded and at currents from milliamperes to amperes.



SERIES 400 PRECISION POWER SUPPLIES

For nuclear work.
High stability — close regulation.
Electronically regulated.
High voltage — low current.

MODEL 4008. — 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 4008 except output: 500 to 1500 vdc.

ODEL 400C. — Sc 500 to 1500 vdc.

These models available with positive side grounded.



# JOHN FLUKE ENGINEERING COMPANY

P. D. BOX 755-G - SPRINGDALE, CONN.

# THIS

the 12th

Annual

*electronics* 

# **BUYERS**' GUIDE

the first completely verified directory

# How LORD MOUNTINGS approve product performance

# MULTIPLANE MOUNTINGS -

bration from all directions. weight, small in size, they ly used to mount electronic

# PLATE FORM MOUNTINGS-

-isolate steady vibration. ompact — easily installed. to 120 pounds per mount.

# PLATE FORM VERTICAL SNUBBING MOUNTINGS -

eady vibration plus severe ads up to 610 pounds per

small meters and instrued models.

TION-CONTROL

UNTINGS AND D-RUBBER PARTS

om destructive vibration. e construction, easily in-. many sizes for most com-

# MOUNTINGS —

# Vibration Control Increases Sales—

Equipment purchasers appreciate smooth performance . . . they like the "feel" of effortless power which makes any product easier to use-more comfortable to live with. Vibration Control puts a star salesman in every demonstration-with every buyer.

### **Vibration Control Reduces** Operating Costs—

Gears and bearings last longer when protected from high vibratory stresses. Instruments and controls require less maintenance and fewer replacements . . . are more accurate and dependable."

## Vibration Control Increases Efficiency—

Worker fatigue is reduced, resulting in more production and greater accuracy. Constant vibratory disturbance prevents full efficiency from both men and machines. Vibration Control improves working conditions and boosts production.

### LORD BONDED-SILICONE PARTS

Lord engineers have developed successful techniques for bonding silicone to metal. This extends the advantages of bonded rubber into the wider temperature range from  $-100^{\circ}$  to  $+500^{\circ}$  F.



# 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



# 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 I fiftleth to I hp.



RADIOFOCAL MOUNTING

Maximum Protection for Airborne Equipment

- Insure protection at sfeep inclinations.
- Dampers prevent excessive motion.
- Equipment does not sag or droop.
- Made to fit JAN-C-172A cases.

### 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.

LORD MANUFACTURING COMPANY, ERIE, PA

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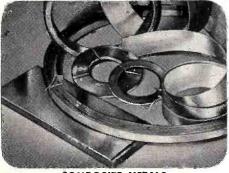


# GENERAL PLATE PRODUCTS FOR THE ELECTRONIC INDUST

General Plate Composite Metals, made by metallurgically bonding one metal to another, are available in strip, sheets, bars, tubing or wire in various sizes and thicknesses. Silver, gold, platinum on base metals give solid precious metal performance at a fraction of the cost of solid precious metal. The precious metal provides specific

COMPOSITE CONTACTS

General Plate can supply all types of fabricated composite contacts, buttons, rivets, contact assemblies made to customer's specifications. These contacts give high electrical conductivity at reduced costs.



COMPOSITE METALS

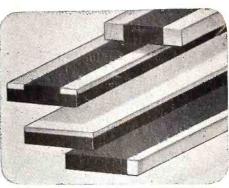
Available in practically any combination of precious to precious, precious to base or base to base metals. Combinations for electronics include aluminum clad iron, nickel clad iron for anod



TRUFLEX METALS

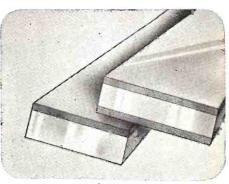
These thermostat metals are manufactured in a wide variety of types, each with a different reaction to temperature. Precision parts fabricated to exact specifications. performance requirements such as electrical conductivity and corrosion resistance while the base metal provides workability, strength, and solderability.

Composite base metals available in variety of combinations to provide properties not possible with a solid metal. Typical General Plate clad metal combinations are copper



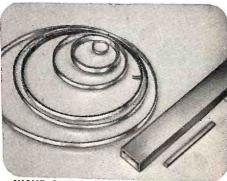
COMPOSITE CONTACT MATERIAL

Precious metals and alloys bonded to base metals available in following types — overlay, single and double edgelay, single and double inlay, toplay, ready for you to fabricate into contacts.



ALCUPLATE

Copper clad aluminum for small chassis, cooling fins, etc., light weight, excellent conductivity. Copper provides ideal surface for soft soldering.



WAVE GUIDE and COLLECTOR RINGS

RECTANGULAR WAVE GUIDES. Solid silver, silver lined brass or aluminum. Sizes to government specifications.
COLLECTOR RINGS. Solid silver or silver on base metal. All sizes. on Monel; copper, brass, aluminum Monel, nickel on steel; steel, con. per, silver on aluminum. Special combinations include titanium on steel, molybdenum on cupro nickel calcium on nickel, copper and silver on magnesium, etc.

General Plate manufactures all grades of silver solder, solder filled wire, solder clad base metal, etc., with various melting ranges for all types of electronic applications, General Plate Engineers will gladly help you with your problems.

## **General Plate Products**

- ALFER, ALNIFER, NIFER Aluminum and Nickel clad Steel for anode plates.
- ALCUPLATE Copper clad Aluminum for chassis and cooling fins, cans la hermetically sealing, etc.
- ALSIPLATE Silver clad Aluminum in lightweight condensers, etc.
- BRONCO Phosphor Bronze clad Copper for high conductivity springs.
- #720 MANGANESE, AGE HARDENABLE ALLOY — Corrosion resistant spring material for diaphragms, springs, finger stock, etc.
- PLATINUM Sheet, wire, tubing, parts of all types. Complete assay and no fining facilities for plotinum metals.
- BONDWICH Solder clad brazing ship. for carbide tipped tools.
- THIN GAUGE METALS Beryllium cop per, nickel, pure beryllium, Hayns Stellite alloys, etc.
- WAVE GUIDE MATERIALS and COLLEG TOR RINGS — Full range of sizes and to exact specifications.
- COMPOSITE CONTACTS and CONTACT MATERIALS — Increased strength and wearing qualities at reduced cost
- TRUFLEX THERMOSTAT METAL Sheet strip, formed elements and assemblish produced to specification.

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# GENERAL PLATE Division of Metals & Controls Corporation 300 FOREST ST., ATTLEBORO, MASSACHUSETTS

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Erie "GP"\* Molded Insulated Ceramicons 5 MMF--- 5,000 MMF

Erie "GP" Dipped Insulated Ceramicons 5 MMF--- 5,000 MMF

"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 3130

7 MMF 5-30 MMF MMF 8-50 MMF MMF 65-95 MMF 150-190 MMF

04



1.5-7 MMF 5-20 MMF

3-12 MMF 4-30 MMF 3-13 MMF 7-45 MMF







# ERIE FEED-THRU CERAMICONS



5 MMF-1,500 MMF



Style

# ERIE DISC CERAMICONS

Temperature Compensating and By-Passing



STAND-OFF CERAMICONS



5 MMF-5,000 MMF



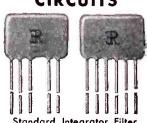
Style 323 and 324

# ERIE BUTTON MICA CONDENSERS



15 MMF-6,000 MMF

## ERIE PRINTED CIRCUITS



Standard, Integrator, Filter, and Coupling Circuit

### VOLTAGE CERAMICONS

# Style

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\*Ceramicon, Hi-K, GP, and Plexicon are regis-tered trade names of Erie Resistor Corporation.

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Custom Injection Molded Plastic Knobs, Dials, Bezels, Name Plates, Coil Forms, etc.

Electronics Division LONDON, ENGLAND TORONTO, CANADA.



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BRASS • STAINLESS STEEL • STEEL

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We can supply the design you want, the accuracy and quality you must have at a mass-production cost!



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RADIOACTIVE FOILS

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IONOTRON STATIC ELIMINATORS

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WILL NOT TANGLE OR STICK TOGETHER

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Approved SILICONE BUSHING capacitor, oil impregnated, hermetically sealed. Featuring SILICONE BUSHINGS for peak performance at high temperature operation.



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20 cycle
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Reliable-Fast Starting-Efficient

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INVERTER

This new 20 Cycle Inverter was designed and developed in Kellogg Laboratories for military use. Now, in addition to military application, it is available for commercial purposes. Check your requirements against the features, exclusive with Kellogg, that are listed below.

 A miniaturized, hermetically sealed inverter designed to provide a 20 cps output from a DC source.

Suitable for a variety of applications where a source of 20 cps ringing signals is required.

• Incorporates a special noise suppression filter.

Operates over a wide range of DC input voltages from 80 to 140 volts.

• Reaches full output in less than 0.25 sec.

Output voltage (p. to p.) : DC input voltage
Output frequency:20 cps ± 1.5 cps
Contact rating:30 VA25 amps. max.
Contact dwell:74% min.
Operating Temp.:40°C to 85°C
Overall size (approx.):3-11/32 Lr 2-1/32 W x 2-7/8 H
Mounts: 4 No. 4-40 x 1/4 studs
mtg. Dimensions:1-23/32 x 2-29/32
Dielectric strength200 V. DC each terminal
to case

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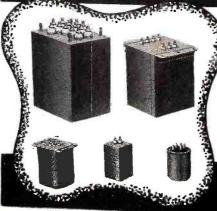
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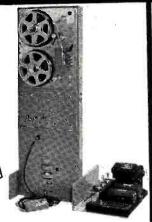


# telemetering • Data Recording ith AMPEX and Magnetic Tape!

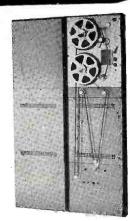
emetering ata Recording hock Analysis Vibration Study

odel 307.

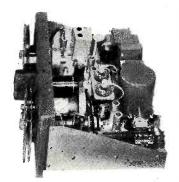
There's an AMPEX project.



Multi-channel recorder for seismograph data recording in the field with remote control. Custom construction by AMPEX.



Multi-channel continuous loop reproducer. Custom construction by AMPEX.



Model \$3079 Air-borne recorder: a minigturized Model 307

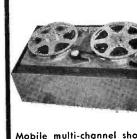


low frequency data recorder. Custom construction by AMPEX.



Model 500 high stability multi-track recorder and playback.

Dept. EB.



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Ask for Bulletin #5202-17 which gives dimensions and prices of 3-M PRE-SELECTED TAPE FOR TELE-METERING . . . \( \lambda'' \ \circ \lambda''' \ \circ \lambda'' \ \circ \circ \circ \circ \circ \lambda'' \ \circ \

VE IN CANADA: Canadian General Elec. Co., King Street, West, Toronto, Canada.

84-Standardized By AFMTC-is a special dual-

ding system. One track records pulse width modurand preserves an accuracy of ± 2 microseconds on the second track records all RDB-approved tele-

ub-carrier channels and duplicates the specifications

**06** is designed to record low frequency data within an of 0 to 5,000 cycles.

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75 is a 60 watt Capstan Motor-Power Amplifier

3079 Air-borne recorder operates from 24 volt dc cle aircraft supply; self-contained tuning fork fre-abilizer; 2 speeds: 60" and 30"; same specs as for 7, except record only; can be modified for multi-

100 Low Flutter and Wow of less than .1% peak ver the spectrum of 0 to 10,000 cycles is achieved clusive-with-Ampex drive system. Complete specs describing this and all other special AMPEX equip-

a precision, 60 cycle compensated tuning fork.

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# plasticord-plasticote IRES and CAB

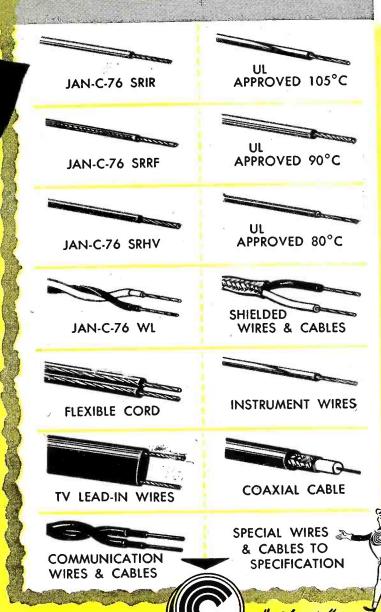
\*Quality Control works 2 ways at CHESTER

It's a fact and here's why! First, Chester quality control engineers certify every phase of manufacture from raw material to finished product packed for shipment. No detail is too small or unimportant to merit their full attention. Second, quality in turn governs production not a single foot of Chester wire or cable is ever "hurried through" to meet a shipping date or heavy schedule. Extra shifts, not faster production is the method used to break bottlenecks at Chester.

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### FOR EVERY APPLICATION -

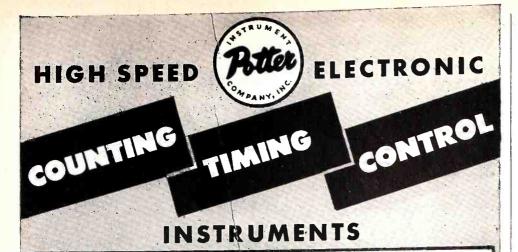
JAN-C-76 • 80°-90°-105°C • Hook-Up Wire • Shielded Wire and Cable Flexible Cords • Coaxial Cable • Television Lead-In Cable • Gas Tube High Tension Cable • Oil Burner Ignition Cable • Blasting Wire • Thermostat Cable • Bell and Office Wire • TW Building and Fixture Wire



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# FOR APPLICATIONS INVOLVING THESE BASIC MEASUREMENTS

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For business, industrial and scientific applications requiring computation, data handling, memory and high speed printing, the Potter Instrument Company can supply complete systems. Some of the newly developed equipments include simplified electronic arithmetic units, multipurpose shift registers, storage devices, photoelectric readers, tape handlers and high speed line-at-a-time printer.

# QUANTITY



Pills, buttons, bottle caps, hardware, etc., can be counted and batched in precise predetermined quantities at speeds up to 60,000 per minute. Important savings in labor and overages are assured by the speed and accuracy of the Potter Electronic Counter. Count Detectors for any product are available.

# LENGTH

Wire or strip material can be automatically sheared or marked in precise predetermined lengths at high rates of speed, and if required, automatically stacked in predetermined quantities. Practically any definition of measurement can be obtained.

### TIME



Time intervals can be easily measured or generated with extremely high accuracy through the use of Potter Counter Chronograph Interval Timers. Registration of measurement is retained until reset. Accuracy of one part in 8,000,000 can be provided.

# SEQUENCE



Since the electronic counters can be arranged to predetermine any sequence of selected counts, they can be readily and advantageously substituted for cams, gears, patterns, chains and other systems of timing control. Control by absolute count assures high accuracy, faster operating speeds, since there are no moving parts to wear.

# FREQUENCY 4



Potter Electronic Counters provide an exact ratio of division which is maintained even though the input frequency is varied. If the input frequentcy is stopped the output also stops. Frequencies can be measured or generated with high precision. Square waves of variable frequency, pulsewidth and number can be easily generated.

## **REVOLUTION**



Through electromagnetic or photoelectric pickup, shaft rotation can be accurately counted or timed without physical contact. Fractional parts of a revolution can be measured or used to control automatic machine processes as a function of predetermined counts.

### **PROBLEMS**



Your specific counting, timing or control problem, explained on our data sheet, will result in a prompt and efficient solution by our engineers.

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113 CUTTER MILL ROAD, GREAT NECK, NEW YOR

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- E. 600V—Synkote insulated, 1/64"—nylon jack-
- eted or glass braided F. 600V—Synkote insulated 2/64"—with or

# K. INTERCOMMUNICATION CABLES

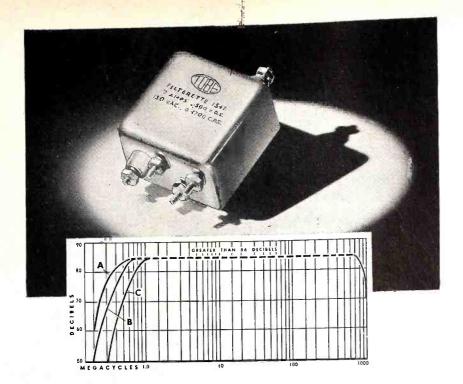
Will operate at 300° C. without deterioration; excellent abrasion resistance; not affected by oil, hydraulic fluids, acids or moisture; non-

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Many standard constructions as well as cables made to your specifications or special instal-

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NICS BUYERS' GUIDE - June, 1952 - MID-MONTH



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# CAPACITORS for ALL USES

• oil-impregnated paper • stabilized wax paper • molded paper • glass-terminal metal tubular • plastic film • molded tubular 125C • metallized paper • high temperature. Call on us for capacitors to meet specifications JAN-C-25 and JAN-C-91.

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Broad-band interference filters for aircraft, marine, mobile, and screen-room service. • small size • light weight • high attenuation • wide temperature range • low voltage drop • low self-heat • single-or multi-circuit. Also low-pass, high-pass, band-pass, and audio filters.





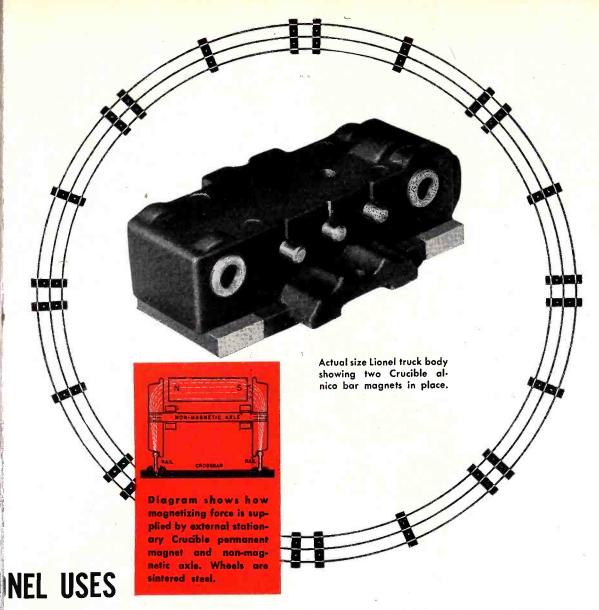
ASK ANY "OLD TIMER" what his first capacitors were, and he'll probably

This graph shows

E DEUTSCHMANN

NORWOOD, MASSACHUSETTS

tell you "Tobe's". And the first military specification for broad-band noise filters was based on Tobe filter #1107. YOU CAN HAVE the benefit of all this experience; just ask a Tobe engineer.



# **ECRUCIBLE ALNICO IN NEW LOCOMOTIVE DESIGN**

The Lionel Corporation, big name electrical toy manufacturer, has pioneered in the design of miniature locomotives for table-top railroading. One of the principal aims of this design is to achieve the highest possible degree of adhesion between the driving wheels and the track.

Lionel experimented with a conventional method of increasing the traction (i.e. load up the driving axles with ballast weights) . . . and then turned to magnetic materials.

Crucible alnico specialists were called in. Working in close cooperation with Lionel engineers, the Lionel "Magne-Traction" locomotive was born. As the name implies, "Magne-Traction" utilizes magnetic attraction between powerful Crucible alnico bar magnets placed in close proximity with the wheels. By varying the number and strength of the magnets, almost any

desired degree of adhesion can be obtained.

Crucible's part was twofold. Not only were Crucible metallurgists and engineers active in the initial design, but Crucible production experts precision cast these bar magnets using plastic patterns. This is an innovation in alnico magnet mass production. Commonly, alnico is made in sand molds, and usually requires a great deal of finishing, but with precision-cast alnico magnets expensive machining is cut to a minimum.

Engineering Service Available — Your permanent magnet problem will receive the same experienced consideration from Crucible's unsurpassed staff of metallurgists and production specialists. Please give full details. Crucible Steel Company of America, General Sales Offices, Oliver Building, Pittsburgh, Pa.

CRUCIBLE

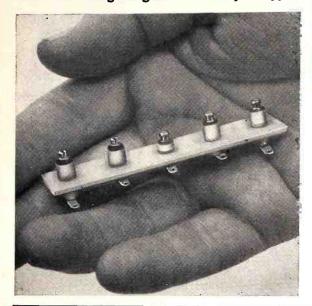
first name in special purpose steels

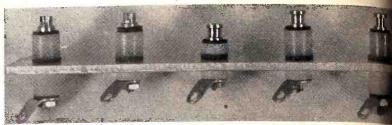
ars of Fine steelmaking

PERMANENT ALNICO MAGNETS

ESS • REX HIGH SPEED • TOOL • ALLOY • MACHINERY • SPECIAL PURPOSE STEELS

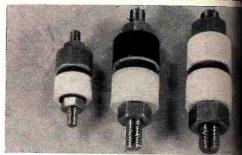
# The Lundey Line of ceramic compression type feed-thru HERMETIC TERMINA offers the Design Engineer a variety of types for other than routine applications. Some of these types are sh





The above photographs show our #200 series terminals design to fill a specific need for a small terminal with maximum ciency for the space occupied. They are being widely used miniature audio and pulse applications, etc. Silicone rub insulating members are supplied as standard with this ser The space requirement is a minimum of 15/64" on center operating voltages from 750-1000 Volts RMS; the current ea city is 5 amperes; heights above panel from 17/64" to 21/6 Clearances below panel from 3/16" to 5/16". Alternate co available for indexing purposes.

This group of terminals, employing solid copper electrodes, is designed for high current applications such as oil-immersed rectifiers and other applications where high current and intermediate voltage is indicated. The current carrying capacities of the types shown are: #4780-25, 75 amperes; #4785-37, 200 amperes; #4785-50, 400 amperes. This group is available with color-coded top ceramics.



#4780-25

#4785-37

#4785-50



#1375-2 #1375-3

This group offers a compact multiple type assembly. It is essentially designed for the intermediate voltage range of plate/filament transformers and reactors. It is also useful in applications involving high-potential isolated windings. The operating voltage to ground, 12 KV RMS; current capacity 25 amperes. The amperage rating can be increased by using solid copper electrodes.



#HV-1000-3 Lundey Terminals are manufactured and sold under patents U. S. 2,447,489; and Canada 435,516.

This assembly is designed for applications in the upper range of plate/filament transformers or where highpotential isolated windings are involved. It is available with two or three electrodes. The operating voltage to ground, 27,500 volts, RMS; current capacity 15 to 25 amperes, depending on the size and material of electrodes. We suggest that you write to us on your company letterhead for our latest engineering catalog. It contains a lot of basic information including electrical and machanical

Our laboratory and field engineering facilities are available whether standard or special designs are involved. We have field representatives throughout the United States and in the Toronto-Montreal area in Canada.

Lundey Associates

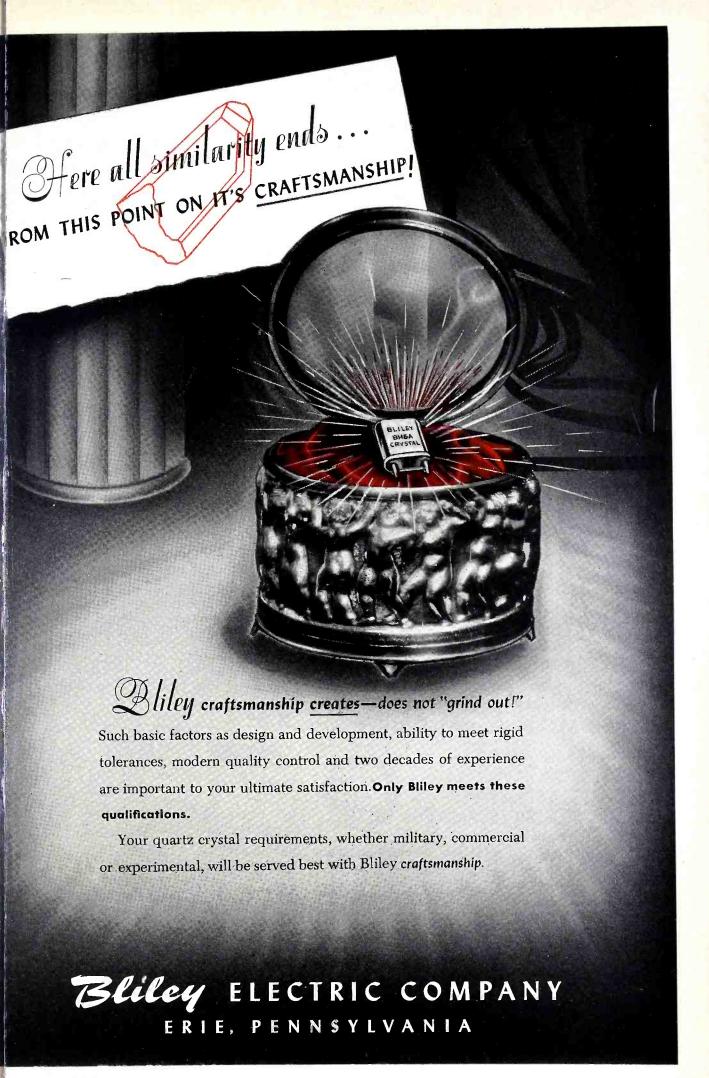
WALTHAM 54, MASSACHUSETTS



#CT-500

This terminal type is designed low internal clearance, such as denser applications. It differs f our standard terminal construc inasmuch as the flange of the i ating member is inside the hea also, the top ceramic is \*Te coated to provide a surface w is relatively free from sur tracking tendencies. shown has an outer ceramic diameter. It carries an oper voltage rating of 2,000 volts and a current capacity up to amperes.

\* Teflon is DuPont's trademark polytetrafluoroethylene resin. Patent ing (R. U. Clark, Chief Engineer, La Associates) covering the coating of co terminal components with fluoro-car



# Marion

# means the most in meters



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Exceptionally accurate and sensitive even under extreme conditions of Shock, Vibration, Mechanical Stress, Strain, Weather Conditions and Climate. Give faster response time, more sustained accuracy, lower bearing friction and longer life. Built to requirements of JAN-I-6, MIL-M-6A and MIL-M-10304. Completely interchangeable with A.S.A. standard  $2\frac{1}{2}$  and  $3\frac{1}{2}$  types. Available in  $1\frac{1}{2}$ ,  $2\frac{1}{2}$  and  $3\frac{1}{2}$  sizes.



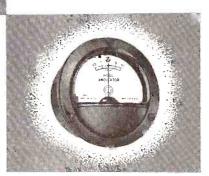


ALLIAMPERE!

Series HM

Magnetically shielded.  $2\frac{1}{2}$ ",  $3\frac{1}{2}$ " and  $4\frac{1}{2}$ "sizes available. Hermetically sealed, offering longer accurate life under adverse conditions of humidity, dust, acid fumes, etc. Round and square colored flanges available for different panel applications.  $2\frac{1}{2}$ " and  $3\frac{1}{2}$ " types interchangeable with A.S.A. standard  $2\frac{1}{2}$ " and  $3\frac{1}{2}$ " sizes.







## **NULL INDICATORS**

Ruggedized, Hermetically Sealed. Available in models HS2 and HS3. Used primarily as bridge and potentiometer balance indicators and in any application where an instrument with very high sensitivity about the zero or balance point is desired. The sensitivity at this point is 1 microampere per mm or higher; the meter's shaded pole face and shielded core construction gives sharply logarithmic attenuation as it departs from null point, and provides ample overload protection.

# RUNNING TIME METER

Tamper-proof because it is hermetically sealed, this Meter registers operating time of machine tools, electrical or electronic equipment. Available in 1/10 hour steps to 9999.9 or hour steps to 99999. Self-starting synchronous motor, available for use on 110–125 or 220–250 volts... 50 or 60 cycle A. C. current.

# MARION STANDARD INSTRUMENTS

MODEL 52N (MR25) Type

Space saver, yet has superior damping characteristics. Dependable, extra strong — has well-aged Alnico magnet and heavy flanged construction. Popular for pocket test, portable radio, medical equipment and general electrical service where size and dependability count. Available in standard 2½" square (Model 52S).

Standard commercial 3½" rectangular type. All Alnico construction. Excellent scale distribution characteristics. Ideal for portable test equipment and

general electronic equipment application.

Also available in 3½" round MODEL 53RN (MR 35).

MODEL 53SN











### MODEL 55

Large, 45%" x 41%". Gives critical readability on 100 scale. Alnico V magnets for sensitive range; has Alnico for standard ranges. Extremely accurate For permanent and portable test equipment.

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6½" x 5¼" bakelite cased meter. Easy reading lidistance. Large open face has 1000 scale in 5½" to Room for multirange scale if needed. Milliamp are Alnico II constructed, Alnico V for microsoft Strong, accurate, efficient, dependable.

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keeping with the current industry miniaturization pro-Rome Cable engineers have developed a small-size

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ene Synthinol 901 Rome Synthinol 901, a resin plassed polyvinyl chloride thermoplastic compound, is a Rome e development offering definite advantages of greater tance to heat deformation, baking embrittlement, shrinked cracking, oils, solvents, moisture and flame, plus immed solderability. Underwriters' approved for temperar up to 105° C., as a special thin wall insulation with no specific production of the specific produc

All Rome Cable hook-up wires are in strict conformance with specification standards and carry proper approval for required use.

### It Costs Less to Buy the Best

hook-up wire with an  $8\ mil\ wall$  of insulation and exceptionally small overall diameter. Approved for use above or below the chassis, with no assigned voltage, at temperatures up to  $105^\circ$  C., this item is a real space saver.

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Abetted by increasingly wider use of thermoplastic materials such as polyvinyl chloride, polyethylene and nylon, Rome Cable manufactures a wide variety of multiple conductor cables for use in radio, television, electric computers and other electronically operated devices. Rome engineers will be glad to design a cable fitted to your particular requirements.

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In addition, a variety of wires and cables for electronic use are available as follows:

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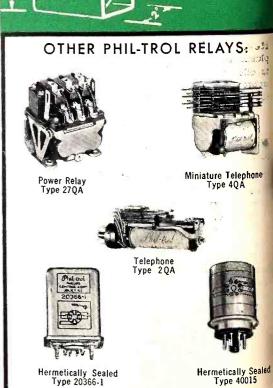
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	400	450	500	######################################	700 *	
	800	850	900	950	1250	
	1260	1270	1300	1400	1500	
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	PLASTIC BASE			
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300 Ft.	4" Plastic	Red	350	351
600 Ft.	5" Plastic	Black Red	640 650	641 651
1250 Ft.	7" Plastic	Black Red	1240 1250	1241 1251
2500 Ft. {	Std. NAB Aluminum Hub Complete 10½" Aluminum Reel	Red Red	2550H 2550R	2551H 2551R
5000 Ft. }	Std. NAB Aluminum Hub Complete 14" Aluminum Reel	Red Red	5050H 5050R	5051H 5051R
	PAPER BASE			
150 Ft.	3" Plastic	Red	120	121
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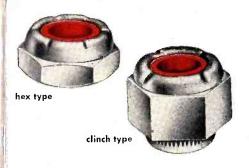
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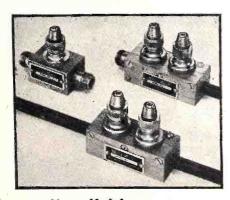
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MM 570 SERIES

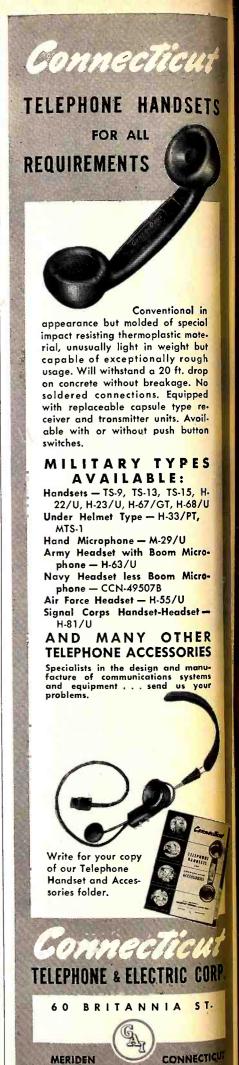
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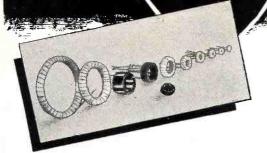
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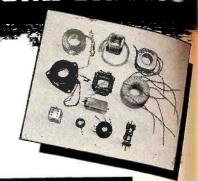


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neasures complex waves from 0.2 00 volts, peak-to-peak. Has an over-city for dc measurements of ±3% Measures dc voltage from 0.02 volt Olvolts . . . rms values of sine-wave e rom 0.1 volt to 1500 volts. Has 7 dranges for both resistance and voltripency response flat from 30 cps to ately 3 Mc on low ranges. AC operiplete with cables and probes.



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		WATTS	JAN-R-93	DIMEN		RESIST	ANCE
STYLE	TYPE	Max. Jan- R93	STYLE	Length	Diam.	Minimum	Maximum Megohms
WIRE WOUND PRECISION RESISTORS % Tolerances 1, 0.5, 0.25 0.1, 0.05, 0.02	AFB* AFC* AGC* AFF* AGF* AJS ALP	0.25 0.33 0.33 0.50 0.50 0.50	RB10B RB11B RB11B RB12B RB12B RB13B RB14B	15/32 5/8 5/8 1 1 1 9/32 2 1/16	17/32 17/32 5/8 17/32 5/8 11/16 13/16	0.1 Ohm 0.1 Ohm 0.1 Ohm 0.1 Ohm 0.1 Ohm 0.2 Ohm 0.5 Ohm	0.75 1.5 2.0 3.0 4.0 5.0 7.5
AXIAL WIRE LEADS	CAB CAF CCD	0.15 0.25 0.25	RB51B RB51B	1/2 3/4 13/16	9/32 9/32 3/8	2.0 Ohm 1.0 Ohm 0.5 Ohm	0.15 0.40 1.0
HERMETIC SEALED AXIAL WIRE LEADS	SCB SCF SED	0.15 0.25 0.25	RB51A RB51A	9/16 13/16 7/8	$\begin{array}{c c} 11/32 \\ 11/32 \\ 15/32 \end{array}$	2.0 Ohm 1.0 Ohm 0.5 Ohm	0.15 0.40 1.0
STYLE	TYPE	WATTS  Max. (com-	VOLTS MAX.	DIMEN		RESIS	TANCE
		mer- cial)		Length	Diam.	Minimum	Maximum Megohms
HIGH VOLTAGE RESISTORS % Tolerances 15, 10, 5, 3 Matched Pairs 2%	BBF* BBM* BBR* BBV BFQ BFT BFW	1. 2 3 5 4 6 10	3,500 7,500 15,000 30,000 15,000 25,000 40,000	$ \begin{array}{c} 1 \\ 1 \\ 3 \\ 5 \\ 1/2 \\ 2 \\ 1/2 \\ 4 \\ 6 \\ 1/2 \end{array} $	11/32 11/32 11/32 11/32 19/32 19/32 19/32	.05 Meg. .10 Meg. .20 Meg. .40 Meg. .20 Meg. .40 Meg. .70 Meg.	10,000 25,000 25,000 25,000 25,000 25,000 25,000
Type D — Bands & Ferrules	DPW DPX DVY DZW DZZ	20 30 50 30 90	35,000 65,000 90,000 40,000 125,000	6 1/2 10 1/2 14 1/2 6 1/2 18 1/2	1 1/8 1 1/8 1 1/2 2 2	1 Meg. 2 Meg. 4 Meg. 3 Meg. 7.5 Meg.	50,000 50,000 100,000 35,000 100,000
Type T — 20% Only	TBR TFQ	2 3	15,000 20,000	$\begin{bmatrix} 3 \\ 2 & 1/2 \end{bmatrix}$	5/16 9 1/6	1 Meg. 1 Meg.	
HIGH MEGOHM RESISTORS % Tolerances 10, 5	HBF* HBM HBR	* 2	3,500 7,500 15,000	1 1 3/4	11/32 11/32 11/32	10 Meg. 10 Meg. 10 Meg.	10 Million
HIGH FREQUENCY RESISTORS  % Tolerances 20, 15, 10, 5	FACE FBF* FBM FBR* FBV FFQ FFT FFW	* 2	250 375 750 1,400 2,600 1,100 1,900 3,100	9/16 1 1 3/4 3 5 1/2 2 1/2 4 6 1/2	0.10 5/16 5/16 5/16 5/16 5/16 9/16 9/16	30 Ohm 20 Ohm 35 Ohm 65 Ohm 120 Ohm 30 Ohm 50 Ohm	s 25 s 50 s 100 s 100 s 75
Type G — Bands & Ferrules	GPW GPX GVY GZW GZZ	20 30 50 30 90	2,750 4,750 6,750 3,000 8,500	$\begin{array}{c c} 14 & 1/2 \\ 6 & 1/2 \end{array}$	$\begin{vmatrix} 1 & 1/2 \\ 2 & \end{vmatrix}$	35 Ohn 60 Ohn 65 Ohn 25 Ohn 60 Ohn	100 100 100 100

<sup>\*</sup> Furnished with lugs or wire leads. All others, lugs only unless otherwise noted □ Axial wire leads only.

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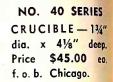


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#### TEMPERATURE RANGE

	Degre	es F.	
MODEL	MAX.	MIN.	MODEL
11	1200	800	41
12	1000	700	42
15	800	500	43
16	600	400	44

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DECADE INDUCTORS 30 CPS TO 300 KC



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COMPONENTS



SLUG TUNED



O UNIVERSAL RIDGE IDGES IN ONE UNIT



NO 1010 COMPARISON BRIDGE FAST. ACCURATE, RELIABLE



MODULATORS



PULSE TRANSFORMERS FROM WATTS TO MEGAWATTS



POWER
TRANSFORMERS
RUGGED, DEPENDABLE,
INEXPENSIVE,



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NO. 1110 A INCREMENTAL INDUCTANCE BRIDGE A NECESSITY FOR EVERY LAB



PRECISION FILTERS



CHANNEL MOUNTING



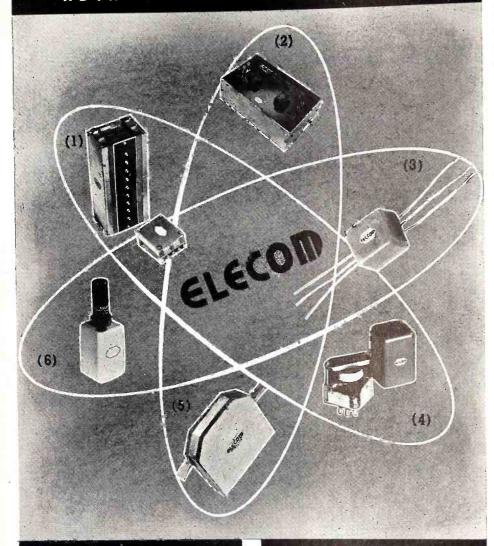
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1722B WEIRFIELD ST., (RIDGEWOOD) BROOKLYN 27, NEW YORK

#### Outstanding Components + ADVANCED ENGINEERING SERVICE



#### (1) DELAY LINES

Delays from 1.5 to 400 microseconds with  $\alpha$  wide range of impedances are available in our standard lines. Attenuation is quite low. Delay to rise time ratios up to 50 are obtainable.

#### (3, 4) PULSE TRANSFORMERS

For high frequency application we supply (3) a small molded transformer assembly, as easy to mount as a mica capacitor. Larger units available with plug-in or, (4) open bracket mounting. All use ferrite cores for low losses.

#### (2) DECADE DELAY LINES

Three units, having delays adjustable in 1% steps, cover the range from 0.1 to 1100 microseconds with ample overlap. Variable-length rather than tapped construction permits use with low impedance loads.

#### (5, 6) OTHER COMPONENTS

Our standard component line also includes (5) a dual magnetic recording-reproducing head for use with magnetic drums, and (6) a carrier-type d.c. amplifier for on-off service in switching circuits and similar applications.

We are designers and producers of digital computers and data-handling equipment. Our engineers will gladly assist you in evaluating the possible application of such equipment in your organization.

Literature on all our standard components is available for the asking. Our engineering staff is always ready to design components to suit your specific requirements, in cases where our standard items cannot be used.

#### ELECTRONIC COMPUTER CORPORATION

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Complete line of Wire Wound

#### Resistors

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Available in three coatings
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- Rheostats

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Special and non-standard components can be developed for specific applications. Do not hesitale to get in touch with us



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- Scheduled Deliveries—When orders are booked, they are scheduled and shipped as nearly as possible to anticipate customers' production requirements.

We will be glad to work with you on your current or future requirements and to furnish samples and quotations on a strictly confidential basis. Our experience is at your disposal. Write for Bulletin 26.



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### MACHLETT ELECTRON TUBES

	CATI	HODE			MAX. AN	ODE RATII	IG	FULL	
ТҮРЕ	VOLTS	AMPS	MU	VOLTS	AMPS	INPUT WATTS	DISS. WATTS	FREQ. MCS.	COOLING
1L-2C39A	6.3	1.0	100	1000	0.125	125	100	2500	Forced-Ai
1L-207	22.0	51.0	20	15000	2.0	30000	10000	1.6	Water
AL-212E	14.0	6.0	16	3000	.350	_	275	1.5	Convectio
1L-220C	21.5	41.0	40	15000	1.5	. –	10000	4	Water
1L-220CA	21.5	41.0	40	15000	1.5	_	5000	4	Forced-Ai
1L-228A	21.5	41.0	1,6	6000	1.5	_	5000	3	Water
L-232B	20.0	60.0	40	20000	3.0	_	25000	3	Water
1L-240B	21.5	41.0	40	12000	1.7	_	10000	20	Water
L-241B	14.0	6.0	16	3000	.350	_	275	7.5	Convectio
1L-242C	10.0	3.25	12.5	1250	.150	188	100	6	Convectio
1L-279A	10.0	21.0	10	3000	.800	_	1200	20	Convectio
L-298A	27	225	32	20000	11.0	_	100000	4	Water
1L-298B	27	225	57.5	20000	11.0		100000	4	Water
L-342A	20.0	67	40	20000	2.5	_	25000	4	Water
L-343A	21.5	57.5	40	18000	2.0		10000	4	Water
L-343AA	21.5	57.5	40	18000	1.5	_	5000	4	Forced-Ai
1L-356	7.5	170	20	12500	6.0	60000	22500	25	Water
1L-357B	10.0	10	30	4000	0.5	1600	400	110	Convection
	10.0	21.0	10	3000	.800	_	1200	20	Convectio
1L-379A		1.0	100	3500	0.01*	35*	35*	3000	Forced-A
L-381	6.3		38		0.6	33	450	40	Convectio
1L-450TH	7.5	12.0		6000		-			
1L-805	10.0	3.25	Var.	1500	0.210	315	125	30	Convection
1L-813	10.0	5.0	8.5	2000	0.180	360	100	30	Convectio
1L-814	10.0	3.25	_	1250	.150	180	50	30	Convectio
1L-833A	10.0	10.0	35	4000	0.50	1800	400	20	Forced-A
1L-846	11.0	51	40	7500	1.0	7500	2500	50	Water
1L-880	12.6	315	20	10500	6.0	60000	20000	25	Water
1L-889A	11.0	120	21	8500	2.0	16000	5000	50	Water
1L-889RA	11.0	120	21	8500	2.0	16000	5000	40	Forced-Ai
1L-891	22.0	60	8.5	12000	2.0	18000	6000	1.6	Water
1L-891R	22.0	60	8.5	10000	2.0	15000	4000	1.6	Forced-A
1L-892	22.0	60	50	15000	2.0	30000	1 <b>0</b> 000	1.6	Water
1L-892R	22.0	60	50	12500	2.0	18000	4000	1.6	Forced · A
1L-893A	20.0	183	35	20000	4.0	70000	20000	5	Water
1L-893AR	20.0	183	35	20000	4.0	70000	20000	5	Forced-A
AL-5530	5.0	55	26	5000	1.75	8750	3000	110	Forced-A
AL-5541	7.5	57	26	8500	2.75	23000	10000	110 .	Forced-A
AL-5604	11.0	176	19:5	12500	3.0	32500	10000	22.5	
AL-5606	22.0	60	50	15000		30000	10000	1.6	Water
AL-5619	11.0	176	19.5	12500		32500	20000	22.5	Water
AL-5658	12.0	310	20	12500		60000	20000	20	Water
NL-5666	11.0	120	21	10000		20000	12500	22.5	Water
ML-5667	11.0	120	21	10000		20000	7500	22.5	
ML-5668	22.0	60	50	14000		28000			Forced-A
NL-5669	22.0	60	50				20000	5	Water
				14000		28000	10000	5	Forced-A
ML-5681	12.0	220	23	15000	12.U	150000	75000	30	Water

\*Duty cycle: 0.0033

## for Broadcasting and Industry

	n-1-	H-VOL	ANODE	RATINGS		
1	UAI	THODE	INV.	PEAK		
TYPE	VOLTS	AMPS	PKV.	AMPS	INSULATION	COOLING
ML-102	20	19.0	75	750	Air	Convection
ML-103	10	11.5	125	78	011	Convection
ML-106	11	19.0	140	157	0i1	Convection
ML-108	13	12.5	140	200	Oil	Convection
ML-110	10	11.5	140	78	Air	Convecti
ML-115	10	11.5	125	100	Air	Convecti
ML-120	13	12.5	140	200	Air	Convecti
ML-121	10	11.5	140	100	0il	Convect
ML-126	13	12.5	150	200	Air	Convect
ML-170	13	12.5	200	200	Air	Convect
ML-180	13	12.5	200	200	0il	Convect
ML-222A	21.5	41	25	5000	Air	Water
ML-5575/100	20	24	150	1000	Air	Convect
ML-5576/200	20	32	150	2500	Air	Convect

	CAT	HODE	TUBE			AN	ODE RATII	HGS
TYPE	VOLTS	AMPS	VOLT. DROP	Fil. Excit.	COOLING	INV. PKV	PEAK AMPS	AY.
ML-255B	5.0	19	15	Quad.	Forced-Air	20	20.0	5.0
ML-266B	5.0	42	15	Quad.	Forced-Air	22	40.0	10.0
ML-267B	5.0	6.75	10	Quad.	Convection	7.5	8.0	2.0
ML-315A	5.0	10	15	Quad.	Convection	12.5	8.0	2.0
ML-319A	5.0	6.75	10	Quad.	Convection	7.5	8.0	2.0
ML-321A	5.0	10	15	Qvad.	Convection	12.5	8.0	2.0
ML-575A	5.0	10	10	In-Ph.	Convection	15	6.0	1.5
ML-673A	5.0	10	10	In-Ph.	Convection	15	6.0	1.1
ML-857B	5.0	30	15	Quad.	Forced-Air	22	40.0	10.0
ML-866A	2.5	5.0	15	In-Ph.	Convection	10	1.0	0.2
ML-869B	5.0	19	15	Qvad.	Forced-Air	15	20.0	5.6
ML-872A	5.0	7.5	10	In-Ph.	Convection	10	5.0	1.1
ML-8008	5.0	7.5	10	In-Ph.	Convection	10	5.0	1,5

Machlett Electron Tubes are distributed in the United State by Graybar Electric Company, 420 Lexington Avenue, New York 17, N. Y. and in South America, Europe, Asia and Africa by Westrex Corporation, 111 Eighth Avenue, New York 11, N. Y.

Note: For additional technical data or prices, write to Mach lett Laboratories, Inc., Springdale, Conn., or contact you nearest Graybar or Westrex office.



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12th
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electronics

## BUYERS' GUIDE

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#### "The World's Smallest Hermetically Sealed Transformer"

Miniaturization has become increasingly important in the design of all types of electronic equipment. Use of improved core materials and better winding techniques in our JAF series permits these great reductions in size and weight of low level audio transformers. TRIAD JAF Transformers, as listed below, are "the world's smallest hermetically sealed transformers." All have 45 db. shielding and are available in MIL standard AF case as shown above. Carried as stock items at all Triad jobbers.

Туре	Impe	dance	Req.	List			
No.	Primary	Secondary	Resp.	Price			
JAF-1	600/250/60	50000	100-10000	14.50			
JAF-2	600/250/50	250000	300-3000	15.30			
JAF-3	600/250/50	60000 C.T.	100-10000	15.30			
JAF-11	15000	50000	100-10000	13.60			
JAF-12	15000	60000 C.T.	100-10000	14.50			
*JAF-13	15000	95000 C.T.	350-5000	15.30			
JAF-21	15000	600/250/50	100-10000	14.50			
*JAF-22	15000	600/250/50	350-5000	14.50			
JAF-23	20000 C.T.	600/250/50	100-10000	15.30			
JAF-31	600/250/50	600/250/50	100-10000	14.50			
JAF-101	50 h1 Ma.		F	11.60			
Maximum level +10 dbm. *DC in primary.							

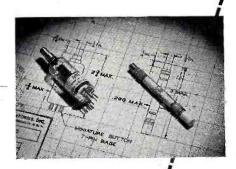


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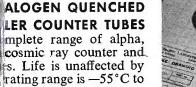


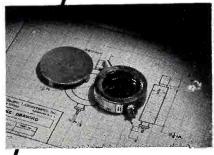


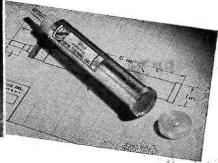
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#### ANTON CORONA DISCHARGE VOLTAGE REGULATOR TUBES new freedom for circuit and equipment designers. Stabilized voltages from 300 V to 40 KV. Current range from 2 microamperes to 10 milliamperes.









#### ANTON HIGH INTENSITY RADIOLOGICAL MONITORING INSTRUMENT

portable - accurate range of 5 to 500,000 MR/hr on a single, six inch scale. Independent of gamma ray energies from 80 KEV to 2 MEV. Completely designed, developed and produced for the U.S. Navy by Anton Electronic Laboratories, Inc.

#### ANTON SHIELDED SAMPLE CHANGERS

and allied radiological laboratory equipment designed and produced as a result of practical knowledge gained through our own research and in cooperation with government, medical and commercial organizations.

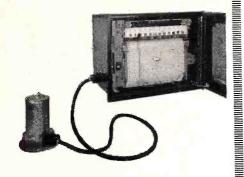
#### advanced electronic products

CATALOGS and valuable data available upon request on your letterhead. In addition to standard tubes listed in our catalog we can produce custom items according to your specifications.



ANTON ELECTRONIC LABORATORIES, INC.

#### Instruments



#### BROWN ELECTROMETER

For recording currents as low as  $10^{-15}$  ampere, in connection with ionization chambers, vacuum phototubes, mass spectrometers, and similar applications. Use of a-c amplification in servo system eliminates zero drift problems of d-c amplifiers. The only such system that incorporates a recorder as an integral part of the circuit.

#### **Electrical Characteristics**

Full Scale Current Ranges: using 10<sup>11</sup> ohm input resistor, minimum range is 10<sup>-13</sup> amperes. With other resistors, ranges up to 10<sup>-7</sup> amperes are available. Selector switch provides scale multiplications of 1, 10 and 100 times the basic range for the input resistor in use.

Input Resistor: 10<sup>11</sup> ohms for highest current sensitivity. Also supplied in values down to 10<sup>7</sup> ohms.

Overall Accuracy: Approx. 1% of scale.

Zero Stability: Drift is less than 0.3 my per day.

System Noise: 5 microvolts or less.

Speed of Response: 90% of change recorded in 5 seconds, with preamplifier located at source, and using 4½ second instrument. 12 and 24 second instruments (full scale travel time) also available.

For further information, send for Data Sheet No. 10.0-4.



#### FUNCTION PLOTTER

Automatically plots the relation between any two variables, showing one as a function of the other. Saves time and labor of manual transcribing of data, and gives continuous curve without interpolation. Has two independent measuring systems, one to drive the pen, one to move the chart.

#### **Electrical Characteristics**

Pen Traverse Time: full scale in 24, 12, 41/2 or 2 seconds.

Pen Travel: Full scale width 11 inches. Chart Traverse Time: 24, 12 or 4 seconds for

Chart Traverse Time: 24, 12 or 4 seconds for full travel.

Chart Travel: 15 inches maximum.

Standardization: Push Button, for both pen

Input Signal: d-c voltage from any type of transducer.

Optional Features: Inductance bridge actuation for pen circuit, auxiliary operations pen, Selsyn drive for chart.

For further information, send for Data Sheet No. 10.0-5.

## Special Instruments

#### **BROWN EXTENDED RANGE PRECISION INDICATOR**

Ideal for measurements where a variable changes through a wide range, and where precise evaluation is essential. Five-range indicator has an effective scale over ten feet long, readable to one part in five thousand. Range changes automatically when measurement reaches either extreme of the scale. Supplied with two to five ranges, calibrated in millivolts or in force, torque, temperature or other variable. For further information, send for Data Sheet No. 10.0-3.

#### NARROW SPAN RECORDERS

Measures spans as narrow as 100 microvolts, readable to 0.1 microvolt, without need for external pre-amplifier. Applicable to temperature-difference measurements, precise radiation pyrometry, and other tasks requiring high resolution of measurement. Supplied as precision indicator, strip chart recorder, and circular chart pneumatic controller. For further information, send for Data Sheet No. 10.0-8.

#### **DUPLEX TWO PEN RECORDER**

Simultaneously measures any two independent variables on a single chart, for convenient comparison of related functions (voltage, current, power, temperature, pressure, etc.). Has two independent measuring systems with associated pens. Each pen can traverse the full 11-inch chart. Both measuring circuits are standardized simultaneously by one push-button. Any desired combination of ranges can be selected.

For further information, send for Data Sheet No. 10.0-6.

#### NEW *ElectroniK* HIGH SPEED RECORDER

Features pen speed of only one second for full scale travel. Ideal for measurement of rapidly changing temperatures, pressures and other variables encountered in research and engineering investigations. Full scale signals which vary as rapidly as 20 cycles per minute can be accurately recorded. Signals with peak-to-peak amplitude of 10% of scale span can be reproduced at variations up to 180 cycles per minute.

For further information, send for Data Sheet No. 10.0-7.

### Components



#### BROWN CONVERTERS

May be used with any system requiring the conversion of low power d-c signals, of the order of 100 microvolts, to 60 or 400 cycle alternating voltages. Output is 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

Driving Coil Input: 18 volts, 94 milliamperes, 400 cycles (within 10%).
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 through pin No. 2.

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. Stray Pick-up: Electrostatic: 2 x 10<sup>-10</sup> volts per ohm of input circuit impedance. Electromagnetic: 2 x 10<sup>-5</sup> volts, constant to 2 x 10<sup>-6</sup> volts, For further information, send for Data Sheet No. 10.20-1.



#### **BROWN SERVO AMPLIFIER SYSTEM**

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. General characteristics are:

Amplifier	Input Impedance	Sensitivity	Overall	60-Cycle Output Current	60-Cycl≥
No.	Ohms	Volts	Voltage Gain		Output Voltage
351921	400	2 x 10 <sup>-6</sup>	10 <sup>6</sup>	0-12 ma.	0-154
354547	7000	0.5 x 10 <sup>-6</sup>	4 x 10 <sup>6</sup>	0-12 ma.	0-154

For further information, send for Data Sheet No. 10.20-3.

An amplifier with added stage of amplification and greatly increased sensitivity is also available. It produces motor drive from signals as low as 0.05 microvolt. Special features eliminate spurious signals resulting from thermal emf's and stray a-c pick-up.

For further information, send for Data Sheet No. 10.20-4.



#### BROWN 60-CYCLE BALANCING MOTOR

Totally enclosed and self-lubricated, ideal where positive positioning is required. Designed to have a tapered curve of speed versus voltage and, at the same time, maintain high torque at low speed. Nominal characteristics:

	27 RPM MOTOR	54 RPM MOTOR	162 RPH MOTOR
MAXIMUM TORQUE	85 inch-ounces	43 inch-ounces	19 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.
POWER	Line field-9.5 watts.	Amplifier field—4 watts.	

For further information, send for Data Sheet No. 10.20-2.

## and components to speed your research projects

These products are representative of the thousands of modifications of the Electronik Potentiometer and the great numbers of Brown Electronic Components which are being utilized as precision measuring devices and as integral elements of various analytical systems. Perhaps your research program can benefit from such specialized instrumentation. Your inquiry is invited. MINNEAPOLIS-HONEYWELL REGULATOR Co., Industrial Division, 4578 Wayne Ave., Philadelphia 44, Pa.

#### MINNEAPOLIS



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- 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 switchhor



#### CONFIDENCER

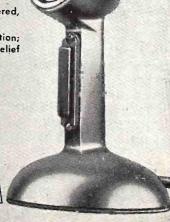
- The only scientifically engineered noise cancelling transmitter for use on most standard handsets.
- Substantially cancels objectionable ambient noises. Signal-to-noise ratio 14 db.
- Can also be furnished on Roanwell Desk Microphones or Mobile Microphones.

#### New Design! DESK STAND MICROPHONE

- Complete desk stand is a SINGLE piece die-casting; finished in semi-gloss black baked enamel. Comfortably held as a hand-held microphone.
- Various transmitters available—F-1 type, sound powered, or noise cancelling "Confidencer."
- Terminal board in base provides easy means of connection; straight or retrax cordage. Cord protector and strain relief provision furnished as standard equipment.
- "Detent" switches of various types.

is also one of the most important sources of the military agencies for both development and manufacture of military communications terminal apparatus.

H-33 HANDSETS (The standard Signal Corps handset)
H-81 HEADSET SWITCH AND CORD PLUG ASSEMBLY H-85 HEADSET



Write for detailed data sheets on all above items to:

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Exclusives

in this
12th
annual

## BUYERS' GUIDE

electronics

include:

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- geographical listings
   of distributors
- simple telephone book
   type product listings



esco Coils to JAN Specs axed, varnished, baked, thermo-ing plastic coated, vacuum impreg-grif, potted, etc.

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SOLENOIDS

Hypes—Single and / iple Layer • Relay es · Audio-power resformer windings bin Coils—Mag-lic Head Coils— Rorder Erase Coils Per Interleaved Coils metically Sealed sin standard transiner cases.



#### TOROIDS

sizes including ding rings—cased ncased-wound on spilized cores and by cycled • Hermet-My sealed Filters aransformers of ypes.



also available to usual commercial ements for TV, FM, AM receivers, etc.

g-in Housings = 30 Models Versatile aluminum plugins, with threaded bases for stud mounting coils, relays, filters, crystals, resistors, condensers, etc. · Special models with permeability tuned coil forms - various pin arrangements—etc.

inquiries handled promptly....

Manufacturing Company

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FACTORY REPRESENTATIVES

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#### RADIO FREQUENCY SYSTEMS AND INSTRUMENTATION



#### 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
	CRD-2	1.5-30 Mc	4-element spaced aerial- electronic goniometer	Automatic Visua Indication
	DFG-1	0.54-30 Mc	Crossed Adcock with goniometer	Aural-Null
	DFM-1	0.54-30 Mc	Rotatable Loop	Aural-Null
	DFM-2	0.54-30 Mc	Crossed Loops with goniometer	Aural-Null
ı				

#### CRYSTAL CONTROLLED SIGNAL GENERATOR

Model 2400

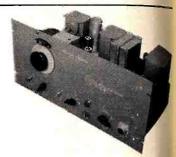


Positive crystal control from 150 Kc to 150 Mc; precision zero-leakage measurement of output level from 1 to 100,000 microvolts; and metered modulation free from FM distortion. These features of the Model 2400 Signal Generator make it possible to preset channels "onthe head," to know receiver sensitivity 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

Here is a versatile precision instrument every laboratory needs for frequency com-



parison, measurement and synthesis, useful from 7 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 measurement 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



SERVOTHERM THERMISTOR BOLOMETERS are small, fast, sensitive IR detectors, suitable for spectrophotometric, industrial and military applications. The flake is a blackened thermistor 2.5 mm x 0.2 mm. Resistance at 25°C approx. 3 megohms. Silver chloride window with silver sulphide coating standard. (Transmission from 2 to over 15 microns). Other type windows available as noted. For additional information write for data sheets SCA-TDS-10 and SCA-TB-1.

BOLOMETER PREAMPLIFIER serves as bolometer mount. Permits high impedance bolometer output to be fed in a rigidly supported and shielded tube to preamplifier input. This low noise, low microphonic miniature amplifier has output impedance under 10,000 ohms. No additional charge made for assembly when ordered with Bolometer.



The Recording Amplifier is used following the Servotherm Preamplifier to drive the built-in indicating meter and any 5 ma. recorder for radiation measurements. Includes a.c. amplifier, detector and decade attenuator.

THERMISTOR POWER UNIT is a superior low noise regulated power supply for frequencies to 3 c.p.s. or less especially designed to power a Servotherm Bolometer and Preamplifier. Operates from 60 cy. 115-volt line and supplies highly regulated voltages for positive and

negative bolometer bias, preamplifier plate, and preamplifier d.c. heaters. Model 1330-A2 will power one Model 1350-A2 Recording Amplifier in addition.



SERVOTHERM RADIATION PYROMETER system is used for remotely measuring or controlling thermal radiation. The time constant of the system is under .025 seconds. The pyrometer optical head may be located at any distance from the object and fits any standard tripod. System includes one optical head with special Thermistor Bolometer and Model 1321-A2 Preamplifier, one Model 1360-A2 Recording Amplifier, one Model 1330-A2 Power Unit, and connecting cable.

Type Nos.	Former	Sensitivity	Time Constant
Bolometers	No.	Volts/Watt	Seconds
1311	BG-1	400	.005 to .008
1312	BQ-1	400	.003 to .005
Special Windows	<u>Material</u>		
Suffix — R	Rock Sal	t	See Data Sheet
K	KRS-5		SCA-TB-1 for
P	Pot. Bron	nide	characteristic
F	Fluoroth	ene	
A	Arsenic 7	Trisulphide	

Preamplifier	Bandwidth	Voltage Gain	
1321-A1	3-1500 cps	180	
1321-A2	25-175 cps	30	
		- 120	

with preamplifier A2, 50 to 260 cps.

1330-A1	6 foot preamplifier cable included
1330-A2	6 foot preamplifier cable included
Radiation	

yrometer	Approx. range	Field of view
360-A2	To over 1000°C	1° x 1°
	in four ranges	



ppe has been built for engineers BY
rs. It is one of a line of tools and techwe have developed for our own use in
ully solving many of the same kind of
s as those facing you. Servoscope solves
vomechanism design problem in INDUSDYERNMENT—EDUCATION applications.

#### SERVOSCOPE® — Saves Time & Guesswork in design and synthesis of ... CONTROLLERS • SERVOMECHANISMS • REGULATORS • PROCESS INSTRUMENTATION

MODEL 1100 — Servoscope is a versatile test instrument for use in the development of all types of servomechanisms and process controls. Transfer characteristics, frequency response, phase lag or lead become available continuously and instantly. Servoscope furnishes test signals and functions as an amplitude-phase comparator. Complete frequency response data may be plotted quickly and accurately. If a minor change is made in the servo under test, the effect of the change may be readily gauged without actually plotting the curve. Thus rapid servo analysis is the keynote. Solves problems such as determining operation under flight conditions and measuring ability of your equipment to meet design requirements. Indispensable equipment for scientists, development and test engineers.

Performance Spec • Operates on any signal carrier from 50 to 800 cps • Carrier modulation from .1 to 20 cps Sinusoids from .1 to 20 cps for testing D.C. servos • Square waves from .1 to 20 cps • Amplitude range 0 to 25 volts

RMS • Two phase reading methods: pattern shift or rotating pattern • Frequency calibration: accuracy 1.5% • Phase lead or lag accuracy 1 degree • X-axis switch to select either phase-reading method • Y-axis switch to by-pass at will servo under test • Synchronized electronic linear sweep 0 to 150 volts • Dimensions: length 21", height 14", depth 15" • Net weight 55 lbs. • Shipping weight 85 lbs. Input 60 cy. 115v.

MODEL 1100A (.1 to 20 cps)

MODEL 1100B (.15 to 30 cps)

#### SERVOBOARD — Experimental Mechanical Component Group

The Servoboard is a set of standard precision mechanical parts, including 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, computer or regulator. The Servoboard was developed as an aid to the design of servomechanisms by providing means for quickly synthesizing the electromechanical parts of the control system. Each set contains the following components:

1 Each — Anodized aluminum plate ½" thick, 12" x 17" drilled mounting holes, assembled with legs.

1 Set — Precision ball bearing shaft hangers, shaft 2" off base. Anodized aluminum, shielded ball bearings .25" bore. 4 double bearing type hangers, 6 single bearing type hangers.

1 Set — Stainless steel ground shafts .25" O.D. with ground flat for set screws.

4—Shaft 13/8" long 8—Shaft 3" long 4—Shaft 6" long 4—Shaft 8" long

1 Slip clutch, adjustable friction. Clutch arranged in middle of 3" shaft and may be used in place of standard 3" shaft.

1 Set—Pinian gears with integral shaft 3" long .25" o.d. with ground flat for set screws. Pinian gears—2-12 teeth, 2-16 teeth.

1 Set — Anodized, precision cut 48 pitch aluminum gears, hub for .25" o.d. shafts, with set screws. 2 each with 20, 28, 32, 36, 40, 48, 64, 80, 84, 96 and 108 teeth. 36, 40, 48, (22 gears).

1 Set-Hardware and accessories. 25 stainless steel clamps, necessary screws, nuts and washers for holding shaft hangers. I Gear stand to store gears when not in use. 1 Storage case.



ERVOBOARD SET

10A

#### SERVO AMPLIFIER — A Two-Phase Motor Control

Consists of 3 amplifier stages, phase-inverter and push-pull output stage. Control signals connected by means of front panel plug to a network assembly as a convenient means of changing the network summing resistors should application require. 3 matched .33 meg. summing resistors supplied permit operation as a position servo with tachometer stabilization or as a rate servo. Control signals must be in phase. Amplifier output phase is shifted 90° from the power line phase. Power output is 8 watts. Built-in power supply.

Model 1120A Servo Amplifier (60 cps) 12" x 71/4" x 10" high

#### SERVO LABORATORY Model 2300A **Analysis & Synthesis Equipment**

The Servo Laboratory 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 com-ponents and efficient and versatile mechanical breadboards. Electrical interconnections are facilitated by terminating the various circuits in jack panels which can be quickly crossconnected by patch cords as desired.

SERVO SYNTHESIS EQUIPMENT: Servo Laboratory analysis and Synthesis Equipment as shown comprise 3 basic units and 1 associated storage cabinet, plus standardized plug-in servo components for synthesizer panels.

1 Servoscope, 1 cathode ray indicator (D.C.), 1 cathode ray

ANALYZER CABINET... 1 Servoscope, 1 cathode ray indicator (D.C.), 1 cathode ray oscilloscope, 1 sliding desk.

NIESIZER CABINET... 3 servo synthesizer panels, 3 jack panel assemblies, 1 varioble A.C. supply panel, be and filament supply panel (2 units), 1 regulated power supply panel (3 units).

R. BOARD ASSEMBLY CABINET... 4 servoboard assemblies, 5 jack panel assemblies, 1 power distribution 1 precision attenuator assembly. Smaller Servo Laboratory assemblies available to order. Write connections are united to servo power supply panel (3 units).



#### Model 1121 SERVO RELUCTANCE AMPLIFIER\*

The reluctance amplifier\* is a small, lightweight and efficient amplifier designed for use with A.C. servomotors. It may be connected for either A.C. carrier (1 or 2 inputs) or D.C. signal input, or any combination of these. It contains all necessary power supply and operates directly from the A.C. power line. A unique circuit eliminates the necessity for a power transformer. Like Class B and magnetic amplifiers, total power consumption is low for small input signals. Power output: 10 watts into 1500 ohms; 18 watts into 735 ohms.

\*Pat. Pending

Ī	Model	Frequency	Size
•	1121-A1	400 c.p.s.	534" x 31/2" x 31/4" high
	1121-A2	60 c.p.s.	634" x 41/2" x 41/4" high
	1121-B1	400 c.p.s.	12" x 7 1/4" x 10" high
	1121-B2	60 c.p.s.	(same case as 1120A)





Dept. BG-52

NEW HYDE PARK, N.Y.

FIELDSTONE 7-2810

### SUB-MINIATURE and MINIATURE TUBES



MINIATURE PENTODE TYPE 6AU6 A full line of T-5½ and T-6½ miniature receiving and special-purpose tubes for radio, TV, radar and other electronic uses to be ready soon. Now available, T-3 sub-miniature types especially designed for military applications.

### TRANSISTOR AND ELECTRON TUBE RESEARCH



30-ANODE RADIAL BEAM TUBE TYPE 5730

A separate and complete division for electron tube research and development. Transistor research now under way is leading to a new highly efficient design for this important new device. Now supplying subminiatures, radar indicators, radial beam tubes, secondary emission amplifiers and other types in pre-production quantities.

#### **CATHODE RAY TUBES**



TV PICTURE TUBE

Cathode ray tubes for military and other electronic applications in sizes from 3 to 27 inches. Rectangular and round Videotron television picture tubes up to 27 inches. Electrostatically and electromagnetically deflected types.

## OCTAL TYPE RECEIVING AND SPECIAL PURPOSE TUBES



BEAM PENTODE TYPE 6V6GT



HIGH-VOLTAGE TRIODE TYPE 2C53

An extensive line of G and GT series receiving tubes for radio, radar and television equipments, plus special-purpose electron tubes for non-communications use and low power transmitters.

## TUBES

## for MILITARY and CIVILIAN USE

Reliable-Uniform Performance
Through Continuing Research

#### RUGGEDIZED TUBES

Tube types with ruggedized construction for military applications and other special uses now available, having characteristics equivalent to the regular types. This series, which now includes 5R4WGY, 6SA7WGT, 6SL7WGT and 6SN7WGT, is constantly growing as developments in process are completed.

Send for complete list of tubes manufactured, including approved JAN types

#### NATIONAL UNION RADIO CORP.

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RESEARCH DIVISION: ORANGE, N.J. • PLANTS: NEWARK, N.J.—HATBORO, PA.

BIG ENOUGH TO SERVE YOU SMALL ENOUGH TO KNOW YOU Available for Early Delivery.

MONITORING EQUIPMENT FOR

OTHER CONTEMPLATED SYSTEMS NTSC FIELD SEQUENTIAL AND

> TYPICAL SIGNAL SOURCE for Simultaneous NTSC or Field Sequential Color

P3R Simultaneous ri-Color Pickup

Three 401-AR Gamma Amp.

AR NTSC Matrix Adder

BR Keyed Clamp R Color Burst Gen.

AR NTSC Color Keyer

**BR** Sequential Color Keyer

R Regulated Power

Supplies

1R Universal Color Scanner

Basic Color Scanner gie Ce

(Cabinet doors removed for illustration)

604-AR Control Panel

509-AR-1 Universal Color **Bar Generator** 

605-AR Color Carrier Gen. & Sampling Divider

603-AR Sync Generator

613-AR Regulated Power Supplies

616-AR CRT Power Supply

612-AR Regulated Power

Laboratory Quality Instrumentation, also custom made to specific requirements



TELECHROME'S COLOR EQUIPMENT IS NOW BEING USED BY MANY OF THE NATION'S LEADING BROADCASTERS, RE-CEIVER MANUFACTURERS AND LABORA-TORY GROUPS.

ELECTRONIC EQUIPMENT MANUFACTURERS

88 MERRICK ROAD,

TELEPHONE: AMITYVILLE 4-4446

#### BRUSH INSTRUMENTS

#### For Industrial and Laboratory Use

Brush Development Company comprehensive service offers you the advantages of an expertly staffed, modern electronics and electromechanical laboratory. All the skill and knowledge Brush is applying to the broad field of electronics is available for the solution of your particular design problems. Your inquiries are invited.

#### **BL-222** COMBINATION DOUBLE CHANNEL MAGNETIC **OSCILLOGRAPH**

Combination Oscillo-graphs retain basic features of Brush di-

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 DC to 120 cps. Three speed paper drive provided. Adequate for virtually every recording need. A hinged door in the cover permits access to inkwell, pen, and chart paper for minor adjustments and notations. Entire cover may be easily removed for reloading chart paper, etc. Also supplied in a single channel model in the same chassis known as the Model BL-221. Each model is furnished with both inking pen and electric stylus, six rolls of chart paper and one 2 oz. bottle of both purple and green charting ink. A BL-944 Power Supply is furnished with either model.

Chart Paper..BL-222—3 15/16" W BL-221—23%" W 5mm. longitudinal divisions 1mm. tranverse divisions

Paper Speeds..5, 25, and 125mm/

Chart Drive Motor..105-125V, 50 -60 cycles, 40w, synchronous

Net Wgts...BL-222—25 Lbs. BL-221—20 Lbs. Shipping Wgts...BL-222—28 Lbs. BL-221—23 Lbs. Dimensions....67%" H, 61/2"W,

14%''. Electric Stylus Power Supply.... Dimensions 6" x 6" x 6" Ship-ing Wgt, 10 Lbs.

#### BL-206 SIX CHANNEL MAGNETIC OSCILLOGRAPH

Consists of six magnetic Penmotors mounted in a line, recording on 12" wide chart paper. On standard units, a paper speed of either 125 mm/second, 100 mm/second, 50 mm/second or 25 mm/second plus 1/5 or 1/10 of this speed cam be provided. Other speed combinations available on special units. Chart paper may be torn off or rerolled as desired. Has approximate dimensions of 20"x17"x17". Provides excellent recording medium for multiple strain gage recording, vibration analysis, wind tunnel work, etc. Either DC or AC circuits may be measured. Assures uniform frequency response and a linear phase shift with frequency, Furnished with or without AC or DC amplifiers to fit particular applications. Linear frequency response from DC to 100 cps, when used with our amplifiers.

#### **BL-928 DUAL CHANNEL DC AMPLIFIER**

Developed primarily for coupling external circuits to either the BL-202 or BL-202A double channel magnetic Oscillographs, where high gain is not essential. It will give simultaneous graphic records of two electric phenomena of amplitudes of 40 millivolts or more and frequency components between 0 and 100 cycles. Particularly useful in the study of battery characteristics, photocell outputs, electrolysis surveys, and characteristics of dc generators and motors. A useful tool for the experimenter as a unit for matching special amplifiers to the magnetic Penmotors, as, for example, in electrocardiograph or electroencephalograph work. graph work.

The two amplifiers are contained in a single case with carrying handle provided on front panel for ready portability. Control panel located at front of amplifier case contains a "factor of 10" attenuator, gain control and a pen positioning bias control for each amplifier. A dc calibration source is supplied in the form of an accurate standard cell.

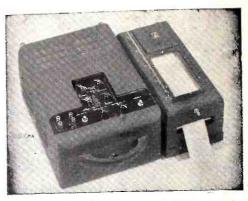
Frequency response DC to 100 cps Sensitivity...1 chart mm/50 mv Stability...0.25 chart mm pen drift or less per hour Voltage gain...25 times (approx.) Power Requirements

95 to 125 volts 60 cycles 145 watts

Input impedance.....10 megohms

Tubes required 4—6F5, 2—6V6, 4—VR-150

BL-502 TRANSIENT RECORDER: Designed to record and graphically represent varied transient phenomena of 2/10 sec. or less. Transient phenomena capable of being converted into electrical impulses recorded and reproduced automatically. Such transients as vibrations, explosion waves, light flashes, welding cycles, etc. are a few that can be recorded. Reproduction repeats continuously for visual analysis by a cathode ray oscilloscope.



#### **BL-320** UNIVERSAL

When used with Brush Magnetic D. rect Inking Oscillo-graph, is a complete package unit for measurement of

as magnitude of the measured strain can be read from the chart deflection on active gages may be used to read directly in microinches per inch from the chart deflection. Can be used to record pressures, temperatures, accelerations, forest can be read directly in microinches per inch from the chart deflection. Can be used to record pressures, temperature compensation when cone active gage is employed. Provision is made for connecting an internal calibrating resistor in the bridge circuit and adjusting the coverall gain. Readily calibrated for individual gages, so that stain can be read directly in microinches per inch from the chart deflection. Can be used to record pressures, temperatures, accelerations, forest etc., provided the equipment is calibrated in terms of the particular pickup used. The output consists of 3 stages, direct coupled, designed to match characteristics of direct inking oscillograph. This section may be used as general purpose, low gain d-c amplifier with gain and centering controls provided. May be adapted for use with Esterline Angus or other similar graphic recorders.

Recommended gages. 120 ohm Output Impedance. Approx. So the used).

ecommended gages..120 ohm type (50 to 1000 ohm gages may be used).

be used).
Range of measurable strain..10
to 40,000 microinches/inch with
one active gage. (Greater sensitivity obtained when more
active gages are employed.
Frequency response (when used
with Brush Direct Inking Oscillograph)..dc to 100 cps.
Bridge Energizing Frequency
2,000 cps.

Output Impedance.. Approx. So ohms (Not to be loaded with less than 1500 ohms)

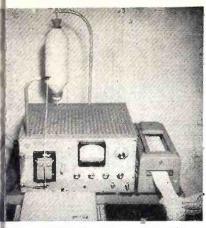
Power required..100 to 125 v., 8 cps., 135 w.

Dimensions 171/4" long x 11" with x 71/4" high.
Weight. 30 lbs.

Tubes Required. 2—6SF5, 1—603, 1—6H6, 1—6SN7, 2—6V6, 2—VR150, 1—VR105, 1—VR75, 1—5U4GT.



#### **BL-932** D-C



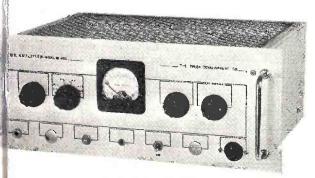
#### BL-314-A ANALYZER

An electronic instru-ment designed to measure and make a permanent record of irregularities in weight per unit length weight per unit length of yarn, roving, and sliver. As the material to be measured is passed continuously through the measuring heads, the cotton count at any given point, or the

average cotton count, is shown on the calibrated meter, and a running record graph running record graph runnings to be used for the inspection of wool, nylon, rayon, and plastics. Available as an accessory is an automatic evaluator adly determining the percent non-uniformity. Additional accessiculate graduated sensing heads, external meter, chart takeup and mounting table.

**BL-103 SURFACE ANALYZER** 

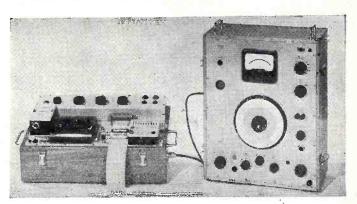
oration, and instantaneous charting of surface finishes—metals, lastics, paper, plated and painted surfaces from less than 1 to roinches. Complete with PA-2 Pickup Arm, Drive Head, Amplignetic Oscillograph, Surface Plate, Carrying Cases, Glass Calistandard, 2V-Blocks, 6 rolls Chart paper, one 2 oz. bottle Red insecting cords and operating instructions. BRUSH "RMS" "average reading" type calibrated in terms of the "RMS" an equivalent sine wave. Provides constant visual check of urface roughness where "hill and dale" chart profiles are not Convenient to read because of large illuminated dial. "RMS" ay be purchased separately or with Surface Analyzer. GNESS RANGE—1/2 to 125 microinches (may be extended) FREQUIREMENTS—105 watts, 105-125 volts, 50-60 cycles



#### RACK MOUNTING

cam of redesigning the present line of amplifiers and oscillosis they may be mounted in standard 19 inch rack is now ray. The first unit completed in this program is the BL-962 punting DC Amplifier as illustrated above. This is a rack verthe BL-932 Portable DC Amplifier. Just completed is the BL-360 et al Amplifier, a rack mounted version of the BL-320 Universal r. Further instruments scheduled for release within the year and mounting versions of the single, double, and six channel apple, and the BL-328 Dual Channel DC Amplifier.

The following instruments are manufactured in Denmark by The Bruel and Kjaer Company, and distributed exclusively in the United States and Canada by The Brush Development



#### **BL-2301 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.

Input Frequency Range....20 to 200,000 cps.

Zero Level...adjustable between 3 and 12mV. A reference voltage of 10mV is supplied.

Writing Speed... Variable in nine steps between 50 and 1000 db/

Paper Speed...Choice of 10 speeds between 0.003 and 100 mm/sec.

Connection to other instruments provided through two mechanical power take-offs.

#### BL-1011 BEAT FREOUENCY OSCILLATOR

Of particular use in conjunction with Level Recorder.

Frequency Range....0 to 20,000

Frequency Accuracy... 1% 🛨 1

Output Impedance...variable in four steps between 6 and 6000

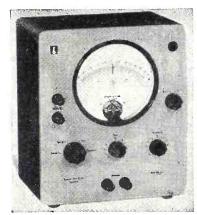
Output Power .. maximum 3 watts, cont. variable volume control.

Vacuum Tube Voltmeter...reads exact output voltage. Attenuator....10 step attenuator provided.

Warble Tone...Mod. freq. variable from 1 to 32 cps. Band width from 0 to  $\pm 200$  cps.

Compressor .. regulating amplifier controls 45 db range, maintains constant output.

Connection to Level Recorder... provided through flexible drive shaft.



#### **BL-1502** and **BL-1507** DEVIATION TEST BRIDGES

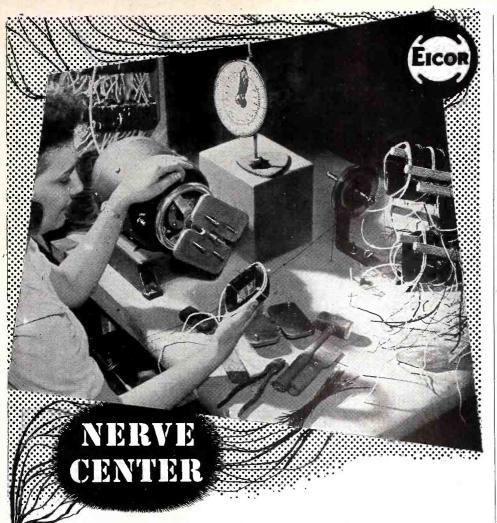
For high speed production checking of resistors, capacitors, inductors. Indicates percentage deviation from standard on large meter with zero point in center. Full scale deflection at 7% and

BL-1502 frequency 1000 cps, ranges resistance 100 ohms—10 meg, capacitance  $50\mu\mu t$ — $10\mu t$ , inductance 2mh—100h BL-1507 frequency 50 kc, ranges resistance 20 ohms—100,000 ohms, capacitance  $255\mu\mu t$ — $0.1\mu f$ , inductance  $100\mu h$ —0.3h.

BL-2002 HETERODYNE VOLTMETER ... a high frequency selective vacuum tube voltmeter for range 20 kc to 27 mc, measures both voltage and modulation. Full scale deflection from 10 µv to 10 volts.

BL-4703 FREQUENCY RESPONSE TRACER. . . for analyzing frequency response of amplifiers, receivers, loudspeakers, microphones. Five inch CR tube synchronized with Beat Frequency Oscillator presents plot of response in db vs freq. Audio Oscillator 0-20,000 cps . . . constant output radio freq. oscillator 1 mc mod. 30% . . . CR Oscillograph Component, 50 db range presented through logarithmic amplifier. Trace area 3 5/16" x 2".

he BRUSH DEVELOPMENT CO. 3405 PERKINS AVENUE CLEVELAND 14, OHIO, U.S.A.



The primary function of a motor or dynamotor is to produce a specified type of mechanical or electrical energy. In the human body such energy, or muscular activity, is controlled by the nervous system which directs this force into useful work. Similarly, our units are built to be activated and controlled by a set of field coils, wound in each instance to obtain a certain performance.

Field windings in Eicor products may be series, shunt, or compound wound, depending on the desired output characteristics. Such factors as the size of wire, number of turns, and type of insulation, are then carefully calculated so as to produce field strength of optimum efficiency for each design. These coils are unit or gang wound on forms, taped, impregnated and baked, and then protectively sealed to withstand extremes of humidity. These operations produce windings sufficiently flexible for shaping and mounting without strain, assuring trouble-free excitation for the life of the unit.

**Properly designed** and fabricated field windings represent only one of many important factors in building "specification" motors and dynamotors. *Every* detail of *every* operation is done with the same painstaking care. That's one more reason why Eicor products are so frequently specified.



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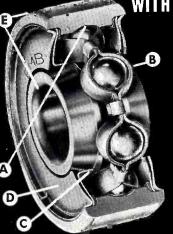
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#### MINIATURE BALL BEARINGS

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:

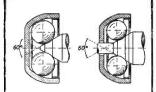
- A—Deep groove races, uninterrupted by filling slot.
- B—Balanced, two-piece ball retainer.
- C-Non-rubbing capillary oil seal.
- D-Dust shield.
- E—Precision tolerances.

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

#### **PIVOT**

Self-aligning



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. Typical applications: Meter movements, small gear trains, lever pivots. Sizes: From .043" to .423" O.D.

#### ANGULAR CONTACT

Self-aligning with inner race





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. Sizes: From .157" to .787" O.D.

#### RADIAL

Without inner race





Particularly useful where loads are relatively light, low starting torque and high shock and wear resistance are important. Typical applications: Pivots for balance arms; shaft supports in control and recording mechanisms. Sizes: From .1181" to .4724" O.D.

#### RADIAL

Deep Groove with inner race



FILMOSEAL



OPEN



LIGHT

These Conrad type precision ball bearings, with deep groove design and balanced ball retainer, provide maximum load capacity, high running speeds, long life. Typical applications: Small motors, sound recorders, computers, potentiometers. Sizes: From .1181" to .8661" O.D.

#### OTHER TYPES





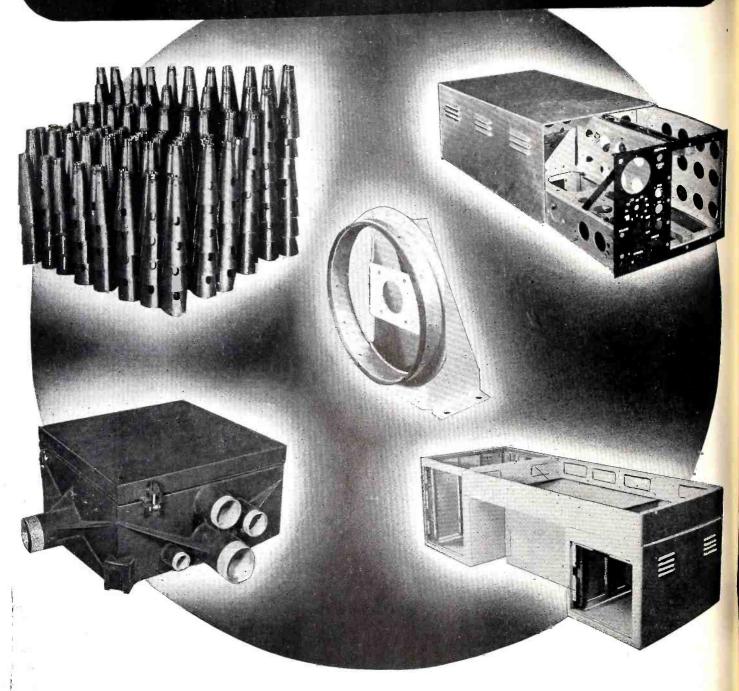


MANY SPECIAL TYPES AND DE-SIGNS NOT SHOWN HERE ARE ALSO AVAILABLE IN A WIDE RANGE OF SIZES. WRITE FOR COM-PLETE CATALOG, WHICH INCLUDES A DISCUSSION OF DESIGN PRO-CEDURE FOR BALL BEARING SELEC-TION.



LANDIS & GYR, INC.
45 WEST 45th STREET, NEW YORK 36

## RECISION -ABRICATION



MULTI-METAL specializes in precision sheet metal fabrication in all metals including: Aluminum, Carbon Steel, Copper, MuMetal, Stainless Steel, etc. A large, modern, well equipped plant and 40 years of service to industry insures a high quality product at economical cost. Our Technical Department invites your problems, from simplest comm ercial stamping to most complicated assembly.

WIDE RANGE OF PRODUCTS

Cabinets — Chassis — Dial Plates — Dust Covers — C. R. Tube Shields — Watertight Units — Brackets — Panels — Racks.

Write for illustrated brochure.

Multi-Metal Co. 1350 Garrison Ave., New York 59, N. Y.
Telephone: Kilpatrick 2-2500 Telephone: Kilpatrick 2-2500

#### SOLA Constant Voltage TRANSFORMERS

STATIC-MAGNETIC REGULATORS

NELEctric Co., 4633 W. 16th St., Chicago 50, Ill., Phone: Blshop 2-1414, Cable: SOLEC, Chicago

HERAL TYPES, SANDARD OK UNITS Sola Constant Voltage Transformers are static, magnetic regulators, operating on a combination of a resonant electrical circuit, and a high-leakage-reactance magnetic circuit. They have the following advantages:

1. Completely automatic, continuous regulation.

No moving or renewable parts or manual adjustments.

3. Response time is usually 1.5 cycles or less.

4. Self-protecting against short circuits on load circuit.

) (	UNITS	the following advantages	:	4. Self-pi	otecting agai	nst short circuits on	load circuit.
	2 <b>2010</b>		- B - B - CP - E RESTA	60 Cycle, <b>Voltage</b>	Single Phase		
		General Unit Description	Output Capacity in VA	Input Range	Regulated Output	Terminal Arrangëment	Catalog Number
		STANDARD TYPE CV	15	95-125	6.0		30488
1		STANDARD TYPE CV. REGULATION $\pm 1 \%$	15	95-125	6.3	Flexible	30492
J			15	95-125	115.0	Leads	30498
		Wide range of capacities and voltages regulation ±1% or less with a total	15	95-125	6.3	Exposed	301002
0		primary variation of 30% for electrical equipment requiring close	15	95-125	115.0	solder-type lugs	301003
200		regulation. These units are the parent type Sola regulator from which the	30	95-125	115.0	Line	30804
3		following four are derived.	60	95-125	115.0	Cord	30805
/4			120	95-125	115.0	Output	30806
			150	95-125	115.0	Receptacle	30888
-			25	95-125	6.3	Screw-type output lugs	30881 30832
4			50	95-125	6.3	on exposed panel	30885
ī			60	95-125	115.0		30886
13			120	95-125	115.0		30807
9443			250	95-125 190-250	115.0		30M807
17			250	95-125	115.0		30808
1			500	190-250	115.0		30M808
			500 1000	95-125	115.0	Screw	30809
	101		1000	190-250	115.0	Туре	30M809
		1500	2000	95-125	115.0	Lugs	30811
			2000	190-250	115.0	in Outlet	30M811
	EEE		2000	190-250	230.0	Box	30968
			3000	95/190-125/250	115.0	with	30M813
7			3000	95/190-125/250	230.0	Knockouts	30877
ŧ			4000	95/190-125/250	115.0		30M814
			5000	95/190-125/250	115.0		30M815
	1 078m		5000	95/190-125/250	230.0		30M816
3	0 0		10,000	190/380-250/500	115.0		301700
			10,000	190/380-250/500	230.0		301701
Principal and a second		HARMONIC NEUTRALIZED	30	95-125	115.0	Line Cord	5002
	,	TYPE CVH	60	95-125	115.0	Output	5003
L		REGULATION ±1%	120	95-125	115.0	Receptacle	5004
	in In	corporates all the features of the Standard	250	95-125	115.0	Screw	5005
k	Ту	rpe CV plus a harmonic neutralizer circuit ±1% regulated voltage with less than	500	95-125	115.0	type tms.	5006
H		% harmonic distortion.	1000	95-125	115.0	in outlet	5008
			2000	95-125	115.0	box	5010
4/8	_ D	LATE & FILAMENT TYPE CVE			I		
M		REGULATION $\pm 3\%$	42	100-130	I Write		7105
	A A	single, compact source of filament and	75	100-130	for	Flexible Leads	7106
1	pl ±	tate supply voltages regulated to within 3% or less with line voltage variations of 00-130 volts.	210	100-130	Information	redus	7107
	M	ADJUSTABLE HARMONIC NEUTRALIZED: REG. ±1%	)		1		
	(A)	C voltage supply adjustable from 0	050	05 105	0.120	Line Cord	50105
1	to to	130 volts harmonic distortion less	250	95-125	0-130 0-130	Output	
1	a a	nan 3% regulation ±1% or less with total primary variation of 30% ortable for use in shop or laboratory.	500	95-125	1 1	Receptacles	50106
O. K. S.		TELEVISION RECEIVER					
1		TYPE CVA: REG. ±3%	180	95-130	115-120	Line Cord	7201
		Voltage regulation of TV receivers and appliances at moderate prices plug-	300	95-130	115-120	Output	7202
J		in type no wiring required				Receptacle	
1	7.	regulation ±3% or less with line voltage fluctuations from 95-130 volts.	The trans	sformers described on this y United States Patents: Nos	page are manu . 2.143.745—2.213	factured under one or	more of the
		fluctuations from 93-130 volls.		ECOLOTION OF			nems penaing

FE FOR BULLETIN DD-CV-142 GIVING FULL DESCRIPTION OF THESE UNITS. SPECIAL VOLTAGES STRUCTURES ASSEMBLED TO ORDER FOR QUANTITY USERS. WRITE, OUTLINING YOUR PROBLEM.

## BARRYMOUNTS ISOLATORS TO PROTECT ELECTRONIC EQUIPMENT FROM

## SHOCK and

#### FOR AIRCRAFT SERVICE

. . . under severe temperature extremes

... ALL-METL Unit Isolators Type 6600

LOAD RANGE	MTG. CTRS.	FREE HEIGHT inches	WEIGHT ounces
2 - 35	1-15/16 X 1-15/16	1-9/16	51/2

load ratings see page Catalog 509



#### ADVANTAGES

- ALL-METL construction
- Superior vibration isolation
- Good shock absorption
- Operation at extreme high and low temperatures
- Structural materials not subject to deterioration

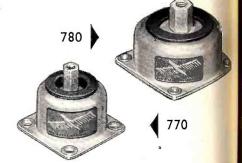
#### CHARACTERISTICS

- Natural frequency: approximately 7½ cps; low horizontal stiffness to give maximum isolation of horizontal vibration
- Transmissibility at resonance: 4½
- Meets vibration requirements of Specifications JAN-C-172A, MIL-E-5272, and MIL-T-5422
- No snubber contact or resonance carry-over when vibrated at government-specified amplitudes

#### ... for general aircraft service ... Air-damped Unit Isolators

LOAD RANGE pounds	MTG. CTRS. inches	FREE HEIGHT inches	WEIGHT ounces	TYPE
2 - 35	1-15/16 X 1-15/16	1-11/32 1-16/32	2 1/ <sub>4</sub> 2 1/ <sub>4</sub>	780 896
1/4-9	13% X 13%	1½ 1¾ 11/16	15/16 15/16 15/16	770 980 860

load ratings iee pages 4,



6475

6465

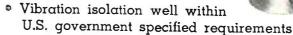
#### . . . with miniaturized apparatus . . . Air-damped Unit Isolators

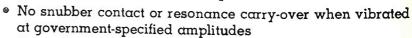
LOAD RANGE pounds	MTG. CTRS. inches	FREE HEIGHT inches	WEIGHT ounces	TYPE
0.1 - 3.0	1-13/32 (2-hole) 1 X 1 (4-hole) 1-13/32 (2-hole) 7 X 1 (4-hole)	1-3/32 1-3/32 1-1/16 1-1/16	5/16 5/16 5/16 5/16	6465 6690 6475 6695

For complete load ratings Catalog 523A

#### CHARACTERISTICS

Vertical resonance: 7 to 9 cps

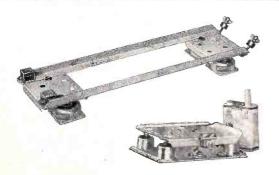




- Transmissibility at resonance: 3½
- ullet Meets temperature requirements ( $-67\mathrm{F}$  to  $+170\mathrm{F}$ ) of Specification JAN-C-172A

#### ADVANTAGES

- Superior vibration isolation
- Low permanent set and drift
- Operation over wide temperature range
- Wide load range with uniform performance
- Excellent shock absorption
- Minimum side sway
- · Low cost



#### MOUNTING BASES . . . . for aircraft service

Complete mounting bases, employing Barry unit vibration isolators, are available in either standard or ruggedized designs. These bases meet the dimensional and material specifications of JAN-C-172A, and the stringent performance standards of military applications.

Using four isolators of the same load ratings, the complete bases cover the load range from 0.4 pound per base to 140 pounds per base.

#### FOR INSTRUMENT SERVICE

#### eneral-purpose isolators . . . Type 990

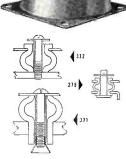
RANGE ounds	MTG. CTRS.	FREE HEIGHT inches
- 30	1-15/16 X 1-15/16	1 1/2

For complete load ratings see page 8 Catalog 504A

PLICATIONS . . . Particularly suited to protecting b atory and industrial instruments. Balloon-type isolators for very light loads . . .

#### Types 275, 302, 371, 372

or rounting sensitive vacuum tubes, radio sub-chassis, rout instruments, small motors, recorders, and recordnager turn-table assemblies. — 1/8 to 3 pounds.



#### BOARD, RAILWAY, MOBILE SERVICE

Sup type . . . Types 1000-4000

RANGE	MTG. CTRS.	FREE HEIGHT	TYPE
unds	inches	inches	
- 100	1-15/16 X 1-15/16	1 1/8	1000
- 360	2½ X 2½	1 1/2	2000
- 1800	5% X 5%	3-9/16	3000
- 900	4¼ X 4¼*	2 1/2	4000



\* Also 2-hole mtg. on 6" centers.

**PIJICATIONS** . . . For absorbing high-impact shocks. se with mobile and railway electric and electronic gubment.



#### FOR INDUSTRIAL SERVICE

#### Plate type . . . Type 5200

AD RANGE pounds	MTG. CTRS.	FREE HEIGHT inches	
3 - 48	13/8 X 13/8	1.0	

load ratings see page Catalog 504A



LICATIONS . . . for impact absorption, with conent vibration isolation and general sound isolation.

#### are industrial vibration isolator TYPE ARON

TITE 0300						
RANGE ands	MTG. CTRS.	HEIGHT inches				
11	1,414	23/32				



Miniature industrial shock isolator TYPE 6550								
	LOAI	D RANGE ounds	MTC	G. CTRS.	HEIGHT inches			

1.414 23/32 the industrial mountings available for use with punch presses, grinders, millers, printing ess, and other machinery requiring good isolation and maximum shock absorption.

1 - 18

Write for data sheets giving complete load ratings

EDIZED BARRYMOUNTS and BASES. A special line of bases and it ibration isolators, designed to provide complete reliability of retention disolation under the severe shocks met in military use. These units satisfy lock strength requirements of AN-E-19, MIL-T-5422, and MIL-E-5272, ne used with equipment that meets the dimensional and other require-WRITE FOR DETAILED INFORMATION en of JAN-C-172A.

RYOUR UNUSUAL PROBLEMS you'll find help available through our electric Engineering Department. Just tell us in detail what your problem is. ir ngineers can then determine what is needed to isolate vibration or to so shock, and they'll recommend the correct isolators for your use. ers no charge for this service to users of Barrymounts. Write to our main ic — or telephone WAtertown 3-1150.

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CANADA — west Ron Merritt Co. — Seattle

711 PLEASANT ST. WATERTOWN 72, MASS:

## SHALLCROSS



#### AKRA-OHM PRECISION RESISTORS

Not only are Shallcross Akra-Ohm wirewound precision 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 and other exacting needs. Guaranteed tolerances from 0.1% to 0.02% and stabilities as low as 0.003% where required. Matched pairs and sets available. Write for Shall cross Resistor Bulletin R3B.

#### 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 a low of 0.0005 ohms to a maximum of 0.005 ohms depending upon the size and material of the contacts. Outline your requirements on Specification Sheet No. 6 for recommendation. Write for Data Bulletin L13.





#### PRECISION ATTENUATORS

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

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

#### PRECISE MEASURING INSTRUMENTS

As long-time specialists in standard and special electrical measuring instruments,

Shallcross welcomes your inquiry for any desired type. Standard instruments include:

Resistance Standards • Decade Potentiometers • Decade Resistance Boxes • Bridges, Wheatstone • Bridges, Kelvin-Wheatstone • Bridges, Limit • Bridges, Megohm • Capacitor Analyzers • Decibel Meters • Tone Generators • Telephone Test Equipment • Low-Resistance Test Sets • Insulation Test Sets • High-Voltage Test and Measuring Equipment

Write for Shallcross Bulletin DC.





#### HI-MEG, HI-VOLTAGE RESISTORS

Special resistance elements hermetically sealed in ceramic tubes with ferrule terminals. Three standard sizes offer values to over 100 megohms. Write for Bulletin L7.



#### HIGH-RANGE KILOVOLTMETER 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 L7.

#### 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., Dept. EG-62 Collingdale, Pa



THORDARSON Mensen RAYTHEON

NEW YORK'S LEADING RADIO SUPPLY HOUSE FOR

for Industry, TV, Receiving and Transmitting

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#### Need Precision Stamped Sub-Assemblies?

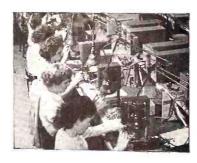
### Then check these three-way facilities...

If you need precision stamped assemblies, here is a completely integrated production service for speeding output and reducing costs. Volkert assumes full responsibility—from creative die engineering to parts sub-assembly—with this unique three-way service:

- 1. TOOLING... Volkert has an enviable reputation for its ability to design and build multi-stage dies. Cost-saving dies like the 13-stage die shown here are not uncommon.
- 2. AUTOMATIC PRODUCTION...Millions of Volkert stampings are turned out each year to exacting tolerances. Modern, automatically-operated presses make for low-cost production; rigid inspections maintain quality at all stages.
- 3. ASSEMBLY... Experienced assemblers work with the best of equipment—help keep output high. Emphasis is always on precision. Volkert-built jigs and fixtures guarantee the quality of all Volkert assemblies.







\*Now...20% greater capacity! The same high quality work with even quicker delivery dates!



Want to learn more about Volkert?

A 16-page brochure, "3-Way Facilities for Precision Stampings" describes Volkert's facilities and abilities. Write for your copy today.

JOHN VOLKERT METAL STAMPINGS, INC. 222-34 96th Avenue, Queens Village 8, L. I., N. Y.

For design...tooling...production and assembly of precision stampings

its Volkert

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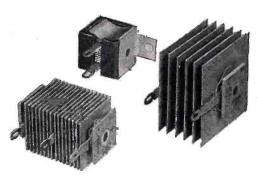
## BUYERS' GUIDE

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verified
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# Centre Sarkes Tarzian Kooled

# SELENIUM RECTIFIERS

Designed primarily for use in radio and television receivers these low and television in electronic equiper. Rated at 130 volts AC input, standard types with current rates rom 10 to 450 milliamperes are available for prompt delivery on stock.





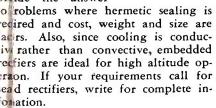
Sarkes Tarzian High Voltage Rectifiers are available in two current ratings. In half wave circuits the type 1 cell is rated at 25 milliamperes DC and the type 0 is 5 milliamperes. Maximum voltage rating available in a single half wave stack is approximately 12,000 volts niverse. Sarkes Tarzian high voltage rectifiers have found wide application in military equipments as well as photosal 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 41/4" 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.

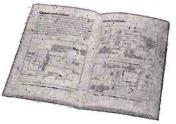
# **NBEDMENTS**

En edded Selenium Reifiers developed by arkes Tarzian proide the answer



# Selenium Rectifier Handbook

Eighty-four pages of useful information on selenium rectifiers. Write for your copy today!





# Sarkes Tarzian, INC.

RECTIFIER DIVISION

415 N. College Ave., Dept. E-4, Bloomington, Ind.

# KAY ELECTRIC COMPANY

# 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

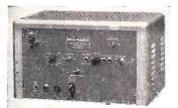
baseline provided on scope display.

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.

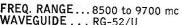
RADA-PULSER: A pulsed carrier generator producing two different lengths and two different carrier frequencies of sine wave trains. Switch allows video pulse to be connected to output terminals. Oscillator can be modulated by pulses of other widths from an ex-



ternal source; when external pulse source is used, it must supply a peak voltage of 20 v across a terminating impedance of approximately 200 ohms. Supplies positive and negative triggers ahead of the pulsed carrier for synchronizing sweep of an oscilloscope or synchroscope used in test. Only random noise is present in pulse "off" time. No video pulses as such present at the RF output. Designed for testing broad band systems.

PRICE . . . \$595

MEGA-X: A source of microwave frequency for checking low frequency antenna scale models, transmitters in X-Band, aligning and testing microwave receivers, testing local oscillators, etc.



FREQ. RANGE ... 8500 to 9700 mc
WAVEGUIDE ... RG-52/U
FREQ. MODULATION ... Sawtooth up to 60 mc in width

POWER SUPPLY . . . Self-contained, electronically regulated, 105 to 125 v to 60 cps, 110 w.

PRICE . . . \$395



### **MEGA-MATCH UHF MODEL:**

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 terminat-

ing 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

VHF MODEL: Same as above but covers a smaller frequency range (10 to 250 mc) used for TV antenna adjustments, matching RF tuners, broad band transformer design and matching distribution systems. Saves time compared to point-by-point methods. Generally similar to UHF Model.



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.



# CALIBRATED MEGA-SWEEP

The widest range sweeping or cillator available. Covers approimately 50 kc to 900 mc range with maximum sweep width least 30 mc.

SINGLE CONTROL TUNING . . . 50 kc to 900 mc SWEEP WIDTH . . . continuously variable 0 to 30 mc SAWT00TH SWEEP . . . no phasing PRICE . . . \$425

MEGA-SWEEP: An alternate model of the above with many the same features except that it lacks single dial tuning and dies indication of approximate output center frequency. PRICE ... 538

### 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 impedant



SWEEP RANGES . . . 50 kc to 5 mc, 50 kc to 10 mc, 50 kc to 20 mc SAWTOOTH SWEEP . . . Sweeps video output and deflects oscillossm 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 repo

tion rate adjustable. MARKERS ... Up to 6 crystal positioned pulse type marks fed directors scope vertical amplifier. 3 located at 0.5, 1.0, 1

mc. Others specified by purchaser.
ZERO LEVEL BASELINE . . . Produced on oscilloscope pattern. ATTENUATORS:

Individual switched . . . 20, 20, 10 db Continuous . . . Approximately 20 db PRICE . . . \$525

SONA-SWEEP: Very similar to Kilo-Sweep. Frequency range sweep width adapt it to measurement and alignment of ultras frequency amplifiers in Sonar and carrier-current communication systems. Adapted to work on high Q systems, since sweep restion rate is variable to below 5 cps. Covers range from 5 to 20 kc. with maximum sweep width of 20 kc. Supplied with or marks at 50, 100, and 200 kc. PRICE . . . \$525

MICRO-PULSER: Provides rectangular pulses over a wide range repetition rates. For testing radar systems and components, the sient response of video amplifiers and other electrical network Has variable delay between synchronizing pulse and output pulse. Pulse output may be used to pulse modulate an RF carried obtain a suitable signal for testing transient response of his band application. band amplifiers. PRICE ... \$195

OUTPUT PULSES:

AMPLITUDE ... Approx. 150v pos. or neg.; WIDTH . . . 0.025, 0.05, 01., 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:

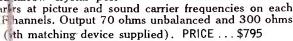
AMPLITUDE ... Approx. 50v pos. or neg.;
IMPEDANCE LEVEL ... Approx. 250 ohms;
TIMING ... Synchronizing pulses precede output pulses by 0 micro-sec. PRICE ... \$195

# KAY ELECTRIC COMPANY

# Industrial Instruments · · · Production Test Equipment TELEVISION PRODUCTION TEST EQUIPMENT

#### F4 MARKA-SWEEP:

eronic switchable TV nerator with narrow ks not affected by reignent. 15 mc wide d arrow crystal posi-



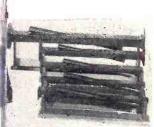


Model IF MARKA-SWEEP: An all electronic switchable IF TV sweep generator covering all present ranges. Includes crystal positioned pulse type markers not affected by receiver. For dual IF or intercarrier receivers. Generally similar to Model Video. PRICE . . . \$295.

Crystal marks (up to 9) \$15.00 each extra.

MEGA-PIX: A crystal controlled television picture and sound RF signal source. Requires composite video and audio modulating signals. Provides output on all 12 channels for complete production line testing. PRICE ... \$990

#### 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 49/U - 3950 to 5850 mc RG 51/U - 7050 to 10,000 mc RG 69/U - 1200 to 1400 mc RG 52/U - 8200 to 12,400 mc RG 50/U - 5850 to 8200 mc RG 48/U - 2600 to 3950 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 com-

🗓 . . . 100 mc to 3000 mc EDANCE...50 ohms

METER CALIBRATION:

Linear in DB noise figure

PRICE . . . \$895

**E RANGE . . . 0 to 20 db** 



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 di-

maeter of the MEGA-NODE Mi . . . 5 to 220 mc.

I EDANCES:

... 50, 75, 150, 300,

**d** . 100, 150, 300, 600,

\$95

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.

**II. WIDE BAND:** A high resolution tachometer that leasures average speed and slow or fast variations in d. o study hunting in synchronous motors, oscillations oil vibrations in coupled shaft systems, the effect of ampeners, etc. With a follower wheel it measures of webs, wires, rolled products, etc. Excellent translate" servo systems. Covers range of 500 to 9000 and extended. PRICE...\$1950 complete with oscillonia. 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

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SONACTOR: Speech pitch extractor with visual display for all normal voices.

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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.

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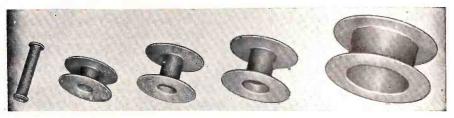
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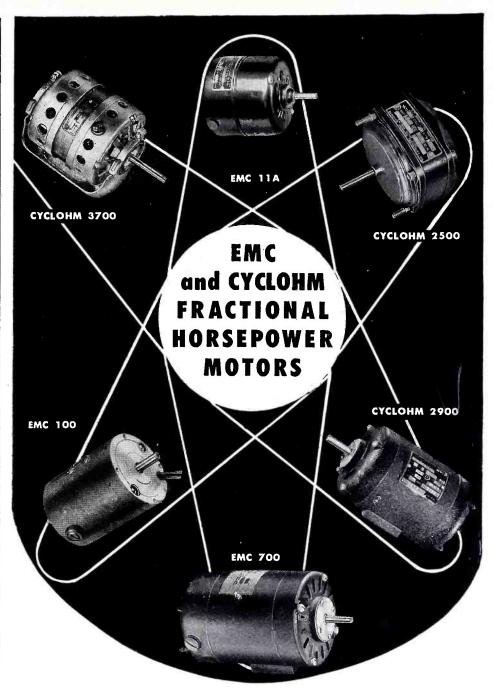
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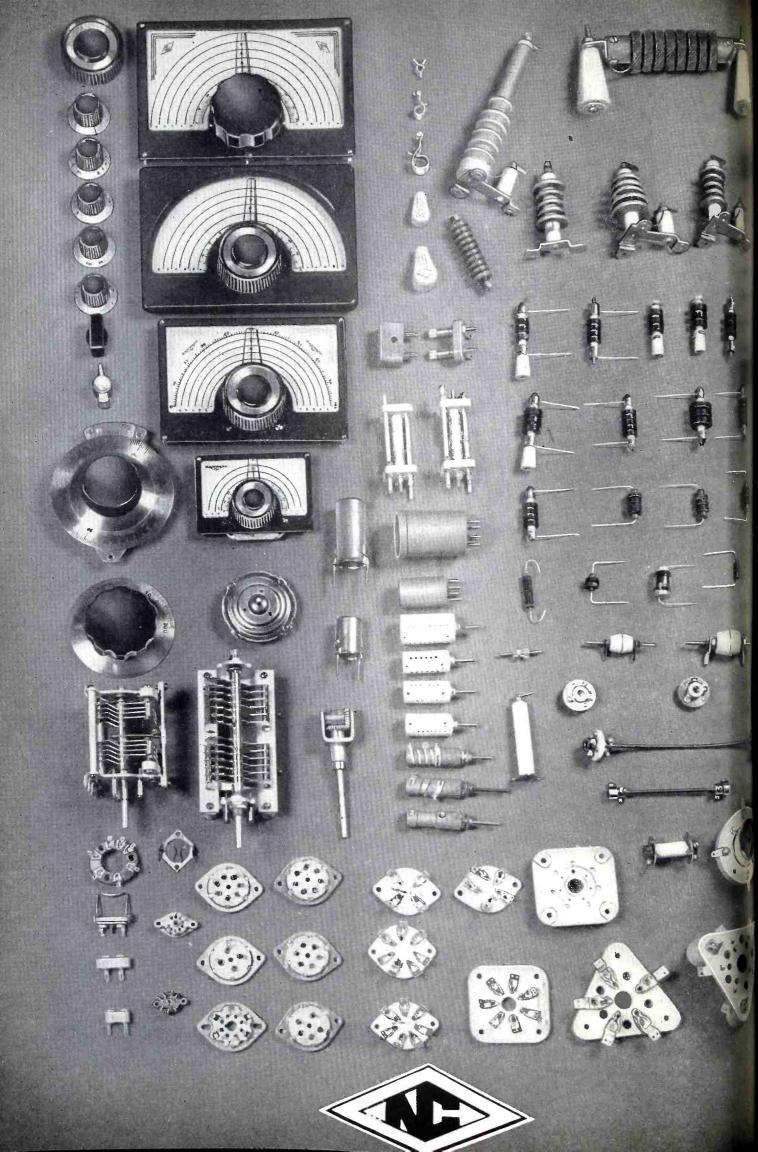
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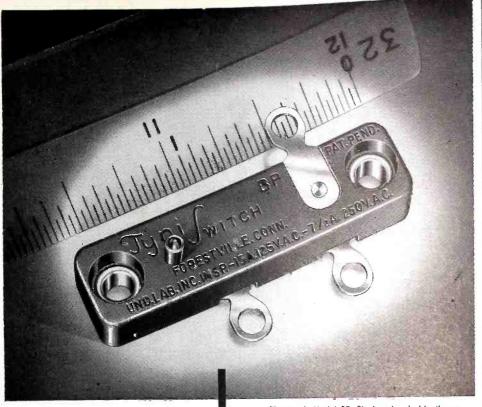
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Illustrated: Model BP. Single-pole, double throw, 15A., 125 V., A-C.

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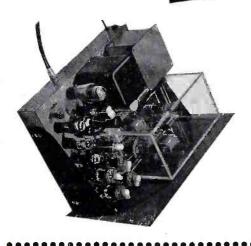
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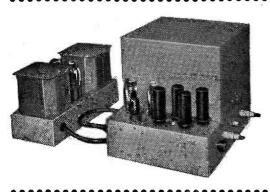


MODEL LAB-30

CONTINUOUSLY VARIABLE 1 to 30 KY REGULATED DC POWER SUPPLY

The LAB-30 covers a voltage range from 0 Volts to 30 Kilovolts with regulations ½ of 1% at 1 milliampere. Up to 2 milliamperes may be drawn from 20KV dow This 16-tube unit is of the RF type consisting of a separate oscillator and buff feeding the power oscillator into a double ® rectifier. Regulations accomplish through feed back into a DC amplifier plus simultaneous output control of the buff LAB-30...Standard Rack Model...19" W x 121/4" H x 13" D...\$495 N LAB-30 B.... Bench Model ..... 21" W x 14" H x 15" D ... \$495 N LAB-30 PN is a reversible polarity unit with polarity reversible from fro panel, having the same electrical characteristics as the LAB-30....\$595 N LAB-30-2 Continuously variable regulated from 1 to 30KV at 2 milliamper

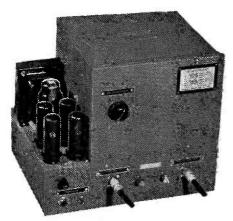
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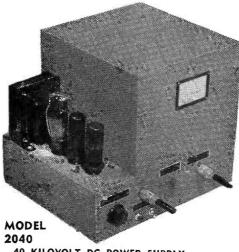


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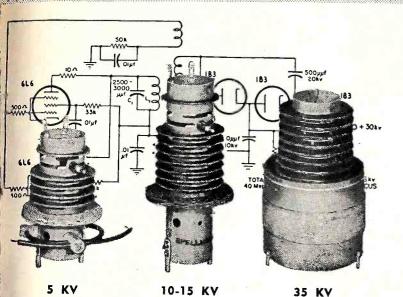
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TELEVISION CO., INC.

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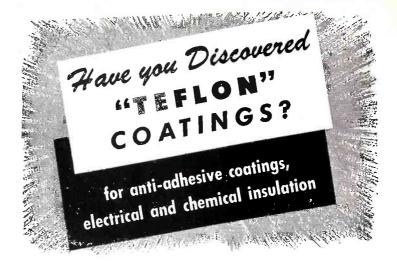
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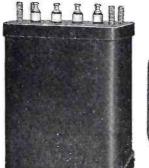
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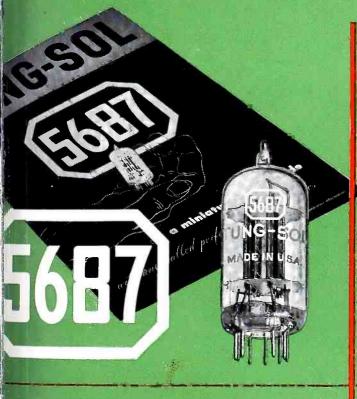
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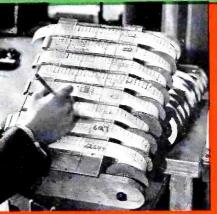




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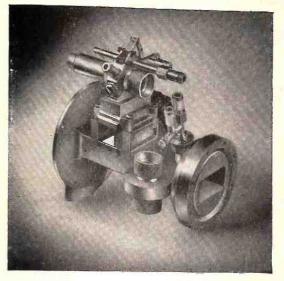
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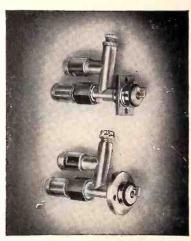
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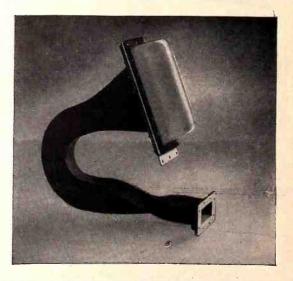
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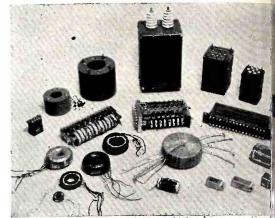
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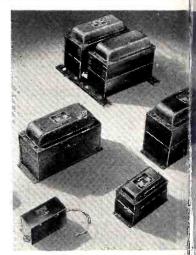
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Raytheon control knobs offer CUSTOM style and quality at STANDARD cost. Made of tough, durable "Tenite II" (cellulose acetate butyrate), injection molded with anodized aluminum inserts and dual setscrews. All types and sizes to fit 1/4-inch diameter shafts. Miniature (70 series) round, dial and pointer knobs also available for 1/8-inch shafts.

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(All Knobs Shown 1/2 Size)



SKIRTED ROUND





DIAL SKIRTED ROUND CRANK 6 FUNCTIONAL STYLES

# WELDPOWER\*

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Raytheon stored energy Weldpower Control units are available in three models with apunits are propriate available in three Weldpower heads.



Model 60 watt-seconds



Model 225 Capacity: 225 watt-seconds



KIRTED F

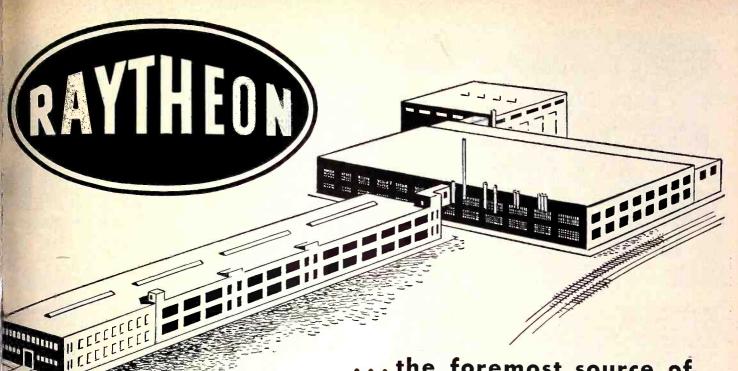
Model 100 Capac 1080 watt



\*Reg. U. S. Pat. Off,

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# There's a University Loudspeaker RUGGED! DEPENDABLE! VERSATILE!

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TRUMPETS Model 7102 exemplifies the rugged construction and progressive engineering behind every University product. Model 7102 is the only loudspeaker ever approved by Underwriters' Labs for Class II Groups E, F, & G hazardous area duty. Features include re-entrant trumpet (pioneered by University) for compactness and greater efficiency, heavy duty 25 watt driver unit with exclusive University "W" shaped Alnico V magnet, and built-in line matching transformer with impedances of 16, 45, 500, 1000, 1500, and 2000 ohms. See general catalog for trumpets of all sizes.

BREAKDOWN-PROOF DRIVER UNITS Model PA-30 embodies features developed by University and never successfully imitated. Ratings are conservative, and construction is to well known University standards which have made our drivers famous for their dependable performance. PA-30 is rated at 30 watts, with response 80-10,000 cps, and is the first to have a multi-tap built-in line matching transformer. Exclusive "rim centering" construction of mechanism and use of University "W" shaped Alnico V magnet insures high conversion efficiency, permanent voice coil alignment regardless of shock or vibrations. Weatherproofed throughout.

PAGING AND INTERCOM SPEAKERS These feature reflex air columns with hermetically seaded driver units. They are widely used for intercommunication and paging of all types. Efficiency is high and reproduction exceptional at any volume level. Directional, radial, or bi-directional types available. Weather-proof finishes permit use anywhere. Typical of University pace-setting design is the Cobra-12 illustrated, which provides optimum area coverage with minimum power input. Power rating is 12 watts, frequency response 250-10,000 cps, dispersion angle 60° x 120°. Swivel mounting bracket provides full flexibility.



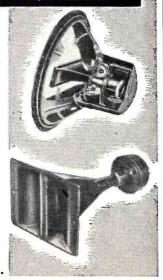


SUBMERGENCE-PROOF SPEAKERS These types are designed for use where extreme ruggedness and immunity to spray, gases, live steam or dust are essential. Function even under water, drain automatically, operate continuously regardless of exposure. Models available for directional or radial projection, wall or bulkhead mounting, swivel mount and with or without built-in line matching transformer and attenuator. Design is ideal for railroad use, board, 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 cz. "W" shaped Alnico magnet and edge 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 submergenceproof 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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- 7. Continuous variable horizontal sweep rate of .2 microseconds per centimeter to .02 seconds per centimeter.
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- 10. Weight: 65 lbs.

# Something New in Oscilloscopes LA 239B The Popular LA 239-A Revised

Here's important news for those who require a rugged, precision oscilloscope for the study of pulse phenomena. The popular Lavoie LA 239-A Oscilloscope has been completely redesigned and rebuilt from the bottom up. Introducing new features that make it one of the most outstanding instruments in its field.

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# Lavoie Laboratories Inc.

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# **BRUSHES**

GRAPHALLOY: The 39-year-old family of GRAPHALLOY metalgraphite brush and contact materials is specially suited for applications requiring low and constant contact drop, minimum electrical brush noise level and very high brush rubbing speeds. Some grades of this long-lived material are in use as brushes at speeds up to 40,000 R.P.M. on ½" diameter slip rings. Other grades are available for slow speed brush applications, or for heavy current requirements. GRAPHALLOY brushes are widely used in rotating strain gage and

## BRUSH AND SPRING ASSEMBLY

### 

Brushes are available to fit the brush holders shown at the right, and in a wide variety of grades. Springs are supplied, as a part of the assembly, to give the correct brush pressure for each application. Where necessary, shunts and caps can be supplied for carrying heavy currents. Special shunt constructions are also available for extra-low electrical noise requirements.

# with SPRING and FLEXIBLE SHUNT

Submit a sketch and brief description of your application including current and voltage conditions, rubbing speed, commutator construction (number of bars, voltage between bars, width and material, or slip ring width and material, and we shall be glad to suggest the proper material. Or, send for Brush Inquiry Sheet #109 which outlines more complete application information.



Standard Coin Silver slip rings of the cylindrical type, where brush contact is made on the O.D., are shown above. This material with a highly polished rubbing surface is used for low noise level and long wear life. Rings are usually installed by press fitting on to a shaft, over insulating sleeves, and with insulating sleeves between rings. Flat type and other special rings can also be supplied.

Part No.	OD	ID	Width
116-4*	1/4	.127/.123	3/16
116-6*	3/8	.252/.248	3/16
116-8*	1/2	.377/.373	3/16
116-10*	5/8	.502/.498	3/16
116-12*	3/4	.627/.623	3/16
116-14*	7/8	.752/.748	1/4
116-16*	1	.877/.873	1/4
116-18*	1 1/8	1.002/.998	1/4
1165-19	13/16	1.000/.996	1/4
1165-23	17/16	1.250/1.246	1/4
1165-27	111/16	1.500/1.496	1/4
1165-35	23/16	2.000/1.996	1/4
1165-43	211/16	2.500/2.496	1/4
116S-52	31/4	3.000/2.996	5/16
1168-60	33/4	3.500/3.496	5/16
1165-68	41/4	4.000/3.996	5/16
1165-76	43/4	4.500/4.496	5/16
1165-84	51/4	5.000/4.996	5/16
1165-92	53/4	5.500/5.496	5/16
1165-102	63/8	6.000/5.996	5/16
1165-118	73/8	7.000/6.996	5/16
1165-134	8 3/8	8.000/7.996	5/16
116\$-150	93/8	9.000/8.996	5/16
<mark>11</mark> 6\$-166	103/8	10.000/9.996	5/16

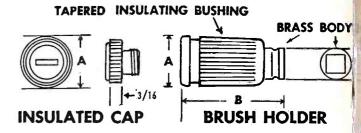
\*Coin silver .025 thick inlaid over brass.

As a contact material, GRAPHALLOY is extremely valuable preventing contact welding or sticking. The inherent non-welding a arc-quenching characteristics of the material have resulted in wi usage for arcing horns on network protectors, relay contacts, elevacontacts and other applications involving the rapid and positive breaking of highly inductive circuits.

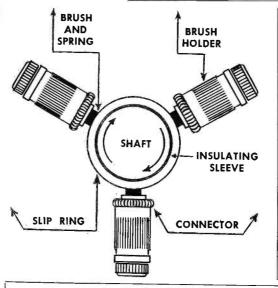
thermocouple circuits, on radar and sonar equipment and in ser

mechanisms, selsyns, gun fire controls and dynamotors.

# BRUSH HOLDER AND CAP



		Suggested Slip		Hole	Dimen
& Cap No.	(Square)	Ring Width	Ring	Diameter	A
14326	1/8	3/16	1/16	13/32	.433 7
11509	5/32	1/4	1/16	13/32	.433 7
11570	3/16	1/4	1/16	7/16	.467 7
11527	1/4	5/16	1/8	9/16	.618 11
	Oth	er Sizes Avail	able on Reque	st	A 100 CO



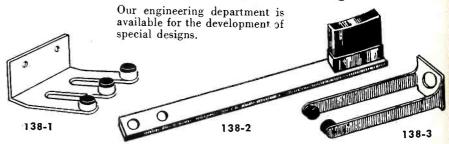


Springs. The silver plated coispring connectors shown above are available for making positive electrical connection to the brass body of the brush holder by snapping inte the groove in the brush holder. The connecting lead can be pre-soldered to the connector.

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		

# SPECIAL DESIGNS and APPLICATIONS

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# CONTACTS

### CONTACTS





Certain GRAPHALLOY mate. rials make valuable non-welding contact materials. The special composition prevents welding and therefore is extremely valuable for circuits where non-welding characteristics are required. Materials with inherent arc-quenching characteristics are also avail-

Standard sizes of contacts press-fitted into brass cups are

vailable as shown in the dimensional diagram and ables at the right.

# SPECIAL CONTACTS





perial contacts can be designed to meet unusual situaons. Send the following information concerning your splication:

Type of circuit (inductive, capacitive or resistive), errent and voltage at make and break, mating material, entact pressure and breaking force available, wiping rtion, shock load and whether contacts will open slowly r by snap action, pressure on contacts.

# STANDARD ROUND CONTACTS (Pressed in Brass Cups)

With Threaded Studs

A = O.D. of contact

B = O.D. of cup bod C = GRAPHALLOY al D = Body length E = Stud length F = Thread size			C D E'					
Contact Assembly No.	A	В	c	D	E	F		
105-2	1/4 "	3/16"	1/6 "	5/32"	5/16"	6-32		
105-3	3/16"	1/4"	1/2 "	5/32"	5/16"	6-32		
105-4	1/4"	5/16"	1/8 "	5/32"	3/8 "	8-32		
105-5	5/16"	3/0 "	1/8 "	5/32"	3/8 "	8-32		
105-6	3/2 "	7/16"	1/8 "	5/32"	3/8 "	8-32		
105-7	7/16"	1/2"	1/8"	5/32"	1/2 "	10-24		
105-8	1/2 "	9/14"	1/8"	5/22"	1/2 "	10-24		
105-9	* 9/16"	\$/0"	1/8"	* 3/6 "	1/2"	10-24		
105-10	· 5/8 "	11/16"	1/8 "	* 3/0 "	1/2"	10-24		

STANDARD ROUND CONTACTS WITHOUT STUDS (Pressed in Brass Cups)

	III DIGGG	ohat		D
Contact Assembly No.	A	8	c	D
128-2	y, "	5/32"	1/16"	3/32"
128-2A	5/32"	1/4"	1/16"	3/32"
128-3	3/16"	1/4"	1/16"	3/32"
128-4	1/4"	5/16"	1/16"	3/32"
128-5	5/16"	3/8"	1/16"	3/32"
128-6	3/8 "	7/16"	1/16"	3/32"
128-7	7/16"	1/2"	1/16"	3/32"
128-8	1/2"	9/16"	1/16"	3/32"

### MATING CONTACT

**Graphalloy Material** 

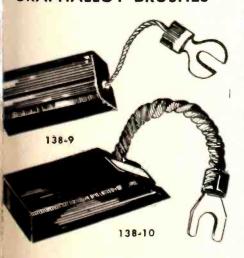
Silver, Grade 411 Copper, Grade 211 Cadmium, Grade 311 **Usually Used Against** 

Coin Silver Contact Copper Contact

Cadmium plated copper or solid copper contact

\*spun in

# INDUSTRIAL **GRAPHALLOY BRUSHES**



wide variety of larger brushes in both meal-graphite and carbon-graphite are availfor industrial applications such as: mogenerators, rotary converters, frequency hangers, elevators. For further information recommendations send the details of your

# MECHANICAL APPLICATIONS

GRAPHALLOY, being an oil-free self-lubricating material, is widely used for mechanical applications. Self-lubrication is supplied by the combined metallic and graphitic structure of the material. Seal rings, thrust washers, pump vanes, cams. flange bushings and Graphalloy lined pillow blocks are a few of the many applications. Special information forms will be mailed on request. Upon their return we shall be glad to make specific application recommendations without obligation to you.







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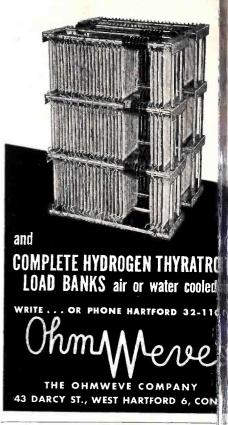
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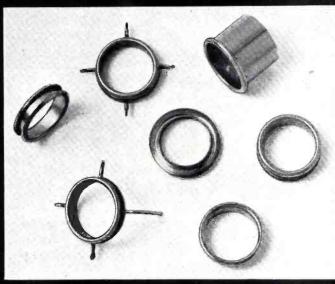


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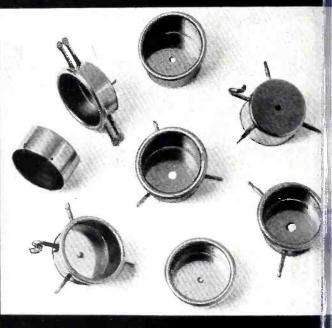
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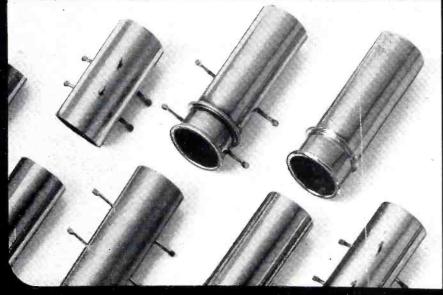
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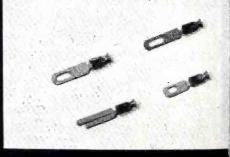


FOCUS ANODES FOR ELECTROSTATIC FOCUS Available with or without Pins and Support Connector.



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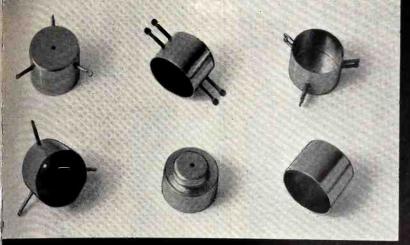


TUBE SOCKET TERMINAL CONT Produced from brass, phosphor br beryllium copper, Inconel and ste

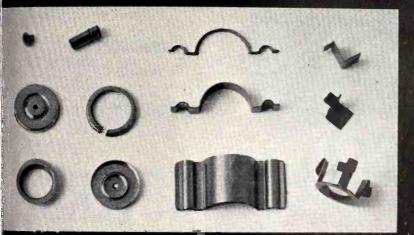
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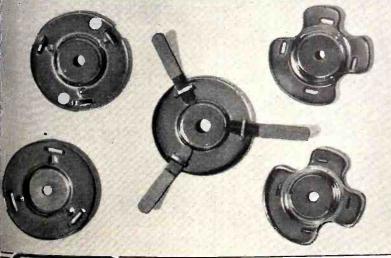
# Parts · Components by J& H



NO. 1 GRIDS and PINNED NO. 1 GRID ASSEMBLIES



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J & H Seamless Anodes and Grids are produced on precision deep drawing machines from high quality strip material—entirely free of contaminent lodging seams and crevices. Parts are deburred and finished by our exclusive processing procedures to the highest degree of surface lustre and uniformity.

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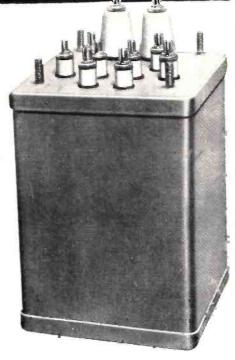
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# HERMETICALLY SEALED UNITS

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# the HORNET

by NYT, are of open type construction, utilizing Class H insulating materials. Approximately one-fourth the size and weight of comparable Class A units. Filament and plate supply transformers and chokes. Units can be designed for ambients up to 190 deg. C., altitudes up to 60,000 feet; power ratings from 2VA to 5KVA.

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#### Full coverage of electronic music

A helpful feature is the chapter on Electronic Music, a relatively new branch of electronics that is growing rapidly more important today. Compiled here are 10 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 the audio amplifier is an essential part of every electronic organ.

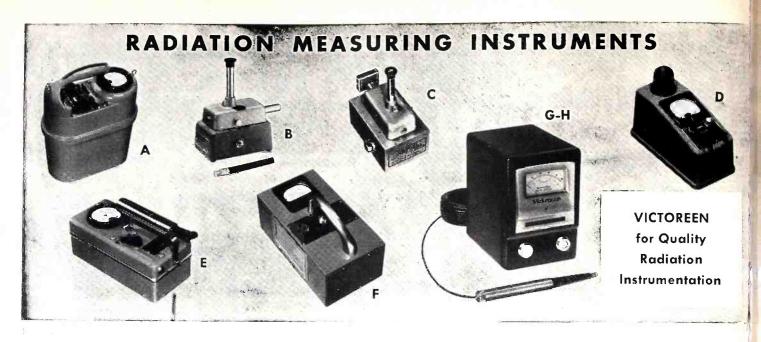
Radar and television circuit developments are treated and explained in each appropriate chapter, rather than being grouped in a separate chapter.

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#### FIG. A. 247 SERIES.

A rugged, compact, ion-chamber type of gamma radiation survey meter. This stable and accurate instrument measures a wide range of intensities of radiation. Models 247C and D have a removable door in the bottom of the case to permit response to longer wavelength or lower energy radiation. The four ranges of sensitivity are color coded for ease of identification. The meter reads directly in milli-roentgens per hour. Complete with batteries, shoulder carrying strap, and instruction manual. Wt. 12 lbs. Size: 10" x 5" x 13". Shpg. wt., 15 lbs.

Model	Ranges of Sensitivity (milli-roentgens per hour)
247A	0-2.5, 0-25, 0-250, 0-25000
247B	0-50, 0-500, 0-5000, 0-50000
247C	0-2.5, 0-25, 0-250, 0-2500
removable	
247D	0-50, 0-500, €0-5000, 0-50000
removable	door
247E	0-250, 0-2500, 0-25,000, 0-250,000

#### FIG. B. MODEL 287-MINOMETER.

A-simple, efficient and accurate instrument for measuring stray radiation and extremely small gamma and x-ray quantities. Designed to aid in protecting medical and laboratory personnel who are exposed to gamma or x-ray 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 0.1, 0.01 and 0.001 r chambers can also be supplied. Complete with Minometer, 0.2 r pocket chamber and instruction manual. Shpg. wt. 5 lbs.

### FIG. C. MODEL 392-MINOMETER.

A pocket chamber and battery operated charger-reader for the measurement of large gamma or x-ray dosage. The Model 392 charger-reader is self contained and is adapted for use with either the 0-100 r or 0-200 r chamber. Designed for use in situations where there is risk of personnel receiving large doses of gamma or x-ray radiation. The pocket chamber resembling a fountain pen has a clip for easy carrying. The Minometer uses standard batteries. Size of Minometer, 8 x 5 x 9". Complete with batteries and instruction manual. Shpg. wt., 5 lbs.

#### FIG. D. MODEL 300-PROTEXIMETER.

An instrument to measure the accumulation of An instrument to measure the accumulation of scattered gamma or x-ray radiation. The meter indicates milli-roentgens directly with a full scale reading of 200. Applications are in radiation laboratories, industrial and therapeutic x-ray installations, and where radiation is present. Uses standard flashlight batteries which require infrequent changing. Complete with instruction manual, batteries, and one chamber. Size: 9 x 4 x 5". Shop wt. 12 lbs. Shpg. wt., 12 lbs.

#### FIG. E. MODEL 389-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 0-0.2, 0-2, and 0-20 milliroentgens per hour. Sensitive to beta and gamma radiation. Indication by earphones or ratemeter. Uses a 1.3 v RM-4 mercury cell and a 4.5 v. Eveready #736 battery. A low current 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. 5½ lbs. Shpg. wt., 12 lbs.

#### FIG. F. MODEL 356-PORTABLE SURVEY RATEMETER.

This lightweight, portable ionization chamber type instrument was designed for detecting and measuring alpha radiation. It is especially suited for detecting alpha contamination on benches, desks, detecting alpha contamination on pencies, pesks, tables and similar surfaces. The chamber, located in the bottom of the instrument, is provided with a thin plastic window to allow the radiation to penetrate. There are two ranges of sensitivity, X 1 and X 10, selected by a range switch on the tables standard batteries. Complete with hat top. Uses standard batteries. Complete with batteries and instruction manual. Size: 10 x 5 x 7". Wt. 8 lbs. Shpg. wt., 10 lbs.

## FIG. G. MODEL 524-ISOTOPE RATEMETER.

A laboratory-quality counting ratemeter for detecting and measuring alpha, beta and gamma radiation. A large illuminated meter allows accurate measurements. A six position sensitivity or counting rate control gives a wide choice of counting rates: 0.300, 0-1000, 0-3000, 0-10,000, 0-30,000 and 100,000 counts per minute. A time constant selector allows the operator to select a 0.5, 5 or 25 second time constant. Audible counting is provided by a speaker in the dible counting is provided by a speaker in the

side of the case. The probe with its six foo cable comes equipped with a 1B85 counter tube. Instrument supplied with probe, cables, and instruction manual. Size: 10 x 7 x 8". Shpg. wt.

#### FIG. H. MODEL 510-ROENTGEN RATEMETER.

An accurate instrument for continuously monitor ing the intensity of x-ray beams or gamma radia tion in roentgens-per-minute. An ionization chamber is used on the tip of a 12" by 1" diam,  $\frac{1}{2}$  lb probe. The probe is connected to the main chassis probe. The probe is connected to the main chassis by a 40 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 per mits the operator to make all readings on the upper two-thirds or more accurate portion of the meter scale. Complete with standard probecable, instrument, and instruction manual. Shpg wt., 35 lbs.

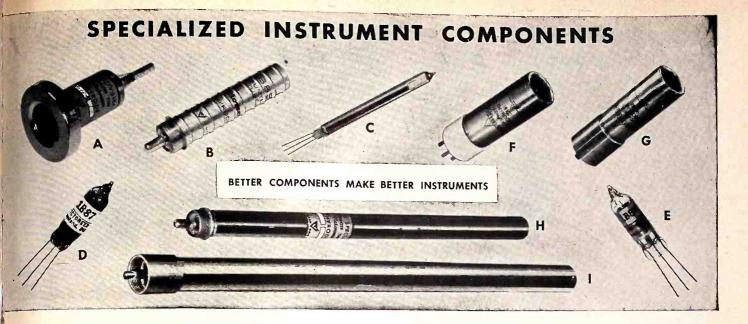
### MODEL 521-CAROMETER.



A compact, portable, sturdy instrument for the measurement of mechanical vibrations. Designed primarily for seismic or earth-shock measurements, it has many applications such as measurements. ing mechanical vibrations in machines and build ings. The instrument reads the peak force o acceleration of the object being measured and holds this reading until reset to zero. It is essen tially a peak reading voltmeter and may be use as such if the head is removed. Consists of crystal probe or head with eight feet of cably and the instrument. The meter is calibrated directly in g's (units of acceleration). There is range switch for the selection of the range: 0.1, 1.0, or 10 g's full scale, as well as a switch position for checking the condition of the barteries. A reset switch and zero position control are also provided. Here standard betteries. are also provided. Uses standard batteries. Complete with crystal head, cable, carrying case fo the head, instrument, batteries and instruction manual. Size: 10 x 5 x 7". Wt. 4 lbs. Shpg. wt. 10 lbs.



The Victoreen Instrument Co. HOUGH AVENUE CLEVELAND OHIO



# ... COUNTER TUBES FOR EVERY PURPOSE

Fig.	Tube Type	Description	Operat- ing Voltage	Thres- hold Voltage	Plateau Length	Plateau Slope per 100v	Active Length	Wall mg/em²	Life	Type Base	Shipping Weight	Price
A	1B67	Beta-Gamma Mioa Window	1200	1100	200	5%	2.5"	2.0 to 2.6	107	Leads	2 lb.	\$75.00
В	1885	Beta·Gamma Aluminum Wall	900	800	200	3%	2.75"	30	109	Coaxial	1 lb.	7.50
C	1B86	Miniature Gamma Glass Wall	300	280	60	10%	2.5"	200	5 x 107	Leads	8 oz.	8.00
D	1B87	Sub-Miniature Gamma Glass Wall	900	850	100	10%/50v	0.5"	200	108	Leads	8 oz.	8.00
E	1B88	Sub-Miniature Gamma Glass Wall	300	275	50	30%/50v	0.5"	200	5 x 107	Leads	8 oz.	5.00
F	1B102	Beta-Gamma Mica Window	900	825	150	10%	1.7"	2	Unlimited by use	4 pin	2 lb.	60.00
G	1B106	Beta-Gamma Mica Window	900	825	150	10%	1.7"	2	Unlimited by use	Coaxial	2 lb.	60.00
Н	1B124	Gamma Ray Chrome Brass	900	800	200	3%	12.5"	300	109	Coaxial	2 lb.	30.00
ī	1B125	Cosmic Ray Chrome Brass	900	800	200	3%	16"	300	109	Coaxial	2 fb.	40.00

# .. SUBMINIATURE ELECTRON TUBES



79		to the street of the street of	_	0.00				THE	-
Tube Type	Typical Service	Ec <sub>1</sub> Volts	Ec <sub>2</sub> Volts	Eb Volts	l b μa	μ	Gm µmhos	Maximum Grid Current	Price
*5800	Electrometer Tetrode	+ 3.4	-3	+ 4.5	12	1	15	3 x 10-15	\$12.50
*5803	Electrometer & D. C. Amp.	- 1.7	-	+ 7.5	100	2.0	150	10-14	6.75
*5828	O. C. Amp.	-1.0	_	45	250	17.5	450	10 -9	6.75
*5886	Electrometer	- 2 - 3	+ 4.5 	+ 12.0 + 10.5	6 200	2	14 160	3 x 10-15 2 x 10-13	7.50
Maria.	Half		k Inverse /oltage		k Plate urrent		. Output irrent	Tube Voltage drop	Price
*5799	Wave Rectifier		3000v.		600µa		00μa	5.0v.(max.)	\$3.75
			triking /oltage		gulating oltage		ulating ange	Max. Regulator Current	Price
5841	Corona Regulato	r	930		900	2.0—	50.0 μa.	50 μa.	\$6.50
5950	Corona Regulato	r	730		700		50.0 μa.	50 μa	6.50
6143	Corona Regulato		1230		1200		100.0 μa.	100 μa.	6.50
6119	Corona Regulato	nr -	2100		2000		50.0 μa.	50 μa.	6.50
VXR-130	Regulator	_	160		130		2.5 ma.	2.5 ma.	5.00
*All fila	ments 1.25 volts at 1	O ma							
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For electrometer circuits where stability, accuracy, and high humidity operation are of prime consideration.

Characteristics
Resistance Range 10° to 10′° ohms
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Volt. Coeff. -.02 to -.03%/V

STANDARD	RESISTANCE VALUE	PRICE
10° Ohms	100 Megohms	\$ 4.50
10° Ohms	1,000 Megohms	5.50
10'° Ohms	10,000 Megohms	5.50
10'' Ohms	100,000 Megohms	5.50
5x10'' Ohms	500,000 Megohms	7.50
1012 Ohms	1,000,000 Megohms	12.00
10'3 Ohms	10,000,000 Megohms	20.00
10'4 Ohms	100,000,000 Me <mark>gohms</mark>	25.00

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Standard Cord 14.15
Monoset with Volume Control Cord 18.55
Standard Cord only 4.20
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Cord only 8.60

SPECIFICATIONS—Sensitivity: 88 db. above .000204 dynes per sq. cm. for 10 microwalts input. Impedances: 128 ohms, 500 ohms, 2,000 ohms. Construction: Sealed magnetic receiver... Grey polished Tenite plastic... Removable plastic earlips... 5 ft. tinsel cord with standard plug. Built-in volume control optional.



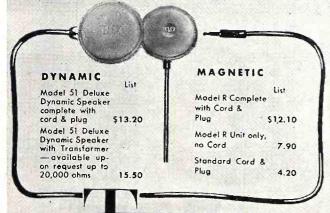
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SPECIFICATIONS—Sensitivity: 101 db. above .000204 dynes per sq. cm. for 10 microwatts input. Impedances: 1,000 ohms—brown; 64 ohms—yellow. Coding visible inside female socket. Construction: Tenite plastic and bright nickel. Headband, spring steel wire cased in Tenite. 5 ft. Monocord plugs into either receiver. Special cord with built-in volume control available.

# PILLOW SPEAKERS



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New Dynamic Under-the-Chin Headset with dynamic driver in plug. Excellent for office transcribing, radio monitoring and telecasting. Higher fidelity brings more lows and highs to your ears. Extremely sensitive—lightweight, only 1.25 oz. Comfortable under-the-chin styling.

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Earset only	\$ 7.80
Earset with Cord &	
Plug	12.00
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METAL EARSET	List
Earset only	\$ 8.50
Earset with Cord &	
Plug	12.70
Standard Cord only	4,20



SPECIFICATIONS—Sensitivity: Comfortable listening level with 3 milliwatinput. Impedances: 120 ohms, 2,000 ohms. Construction: Clear plastic eaframe or metal bow. Sealed, rustprooreceiver. 5 ft. Monocord with standard phone plug connection.

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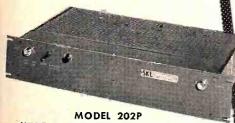
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# INSTRUMENTS

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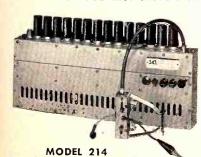
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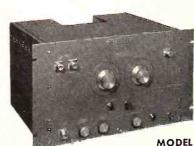
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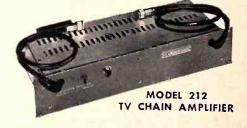
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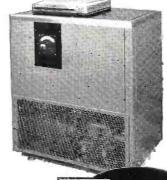
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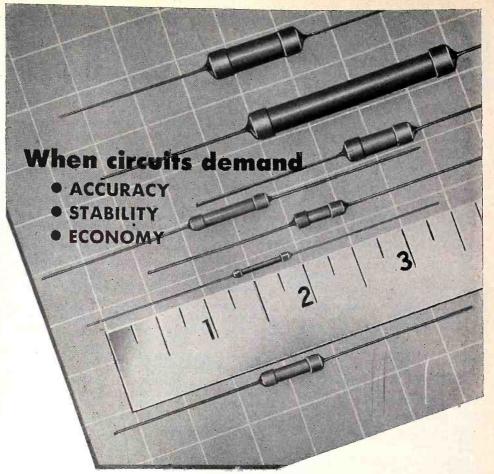


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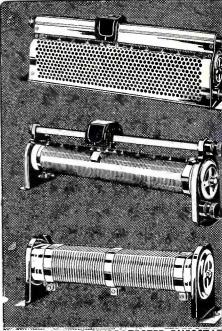
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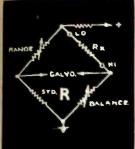
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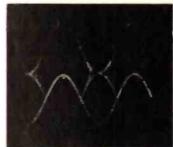
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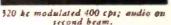
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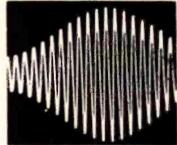
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24 ke modulated 60% 1 ke.

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## Q Meters TF 329G or TF 886A (Check 1)

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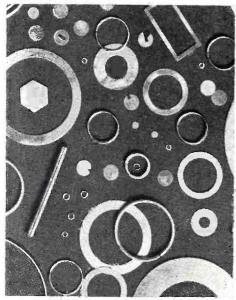
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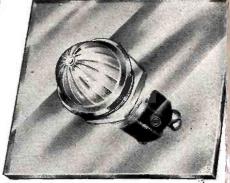
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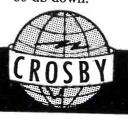
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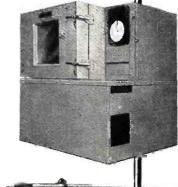
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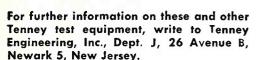
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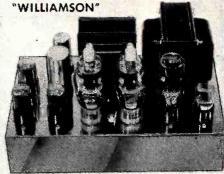


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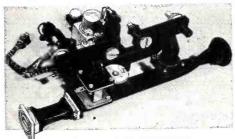
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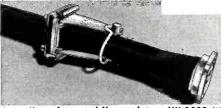
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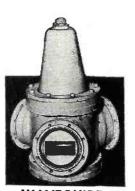
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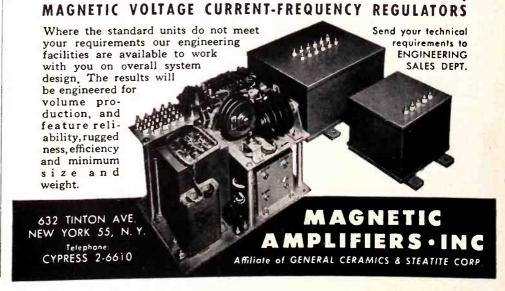
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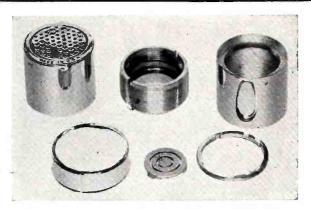
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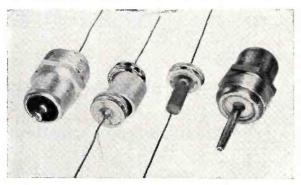
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## **Electronic Components**



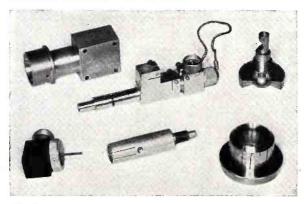
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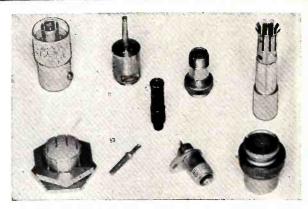
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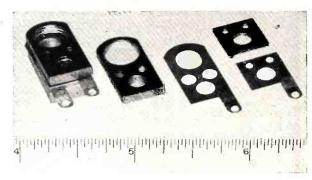
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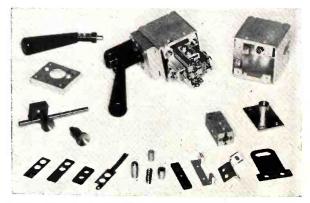
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Made of Beryllium copper and phosphor bronze. Beryllium copper contact points formed, heat-treated; tolerance one thousandth of an inch.



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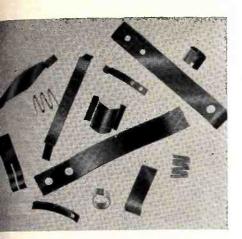
used in communication and aircraft industries

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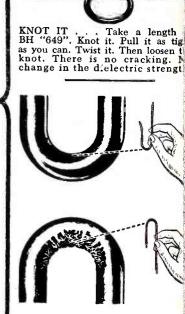
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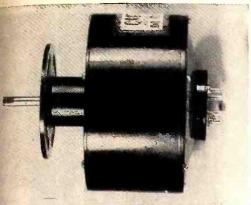
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Tubing and Sleeving.   BH Special Treated Fiberglas Sleeving.   BH Extra Flexible Fiberglas Sleeving.   BH Bayon or Cotton-base Tubing and Sleeving.   BH Extra Flexible Fiberglas Sleeving.   BH Bayon or Cotton-base Tubing and Sleeving.	gia
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## PRECISION POTENTIOMETERS



**RL-14 MS** 

### Sinusoidal Type

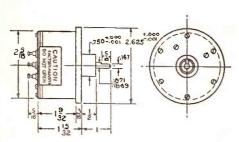
CONDENSED SPECIFICATIONS

Terre	RL11-C	RL-14 MS
Total resistance	16,000 ±10%	$35,400 \pm 1\%$
electic resistance within britch circle	A OF 01	99 ±1/4%
Angle of rotation	360°	360°
Weight Torque (Approximate)	4.75 oz.	1.8 lbs.
Torque (Approximate). Wire Resolution	<sup>3</sup> / <sub>4</sub> oz. in.	2 oz. in.
Resolution.	80 Ni 20 Cr	80 Ni 20 Cr
, madia accuracy	±.6°	±.5°
, mpirtude accuracy	9.07	生.6%
Trianillalli AOITS actoss Minding	150	350
May Millian Speed	60 rpm	60 rpm
Expected Life	350,000 cycles	200,000 cycles

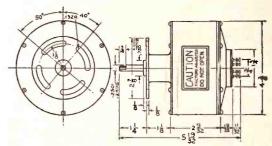
Minor variations of these standard designs, available on special order, permit operation at high rotational speeds with some loss of accuracy.



RL-11C

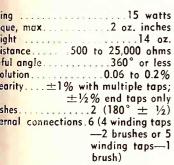


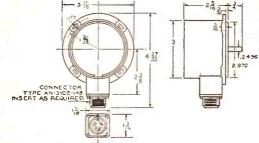
RL-11C

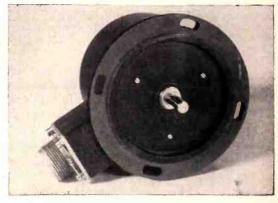


RL-14 MS

### **Toroidal Type**



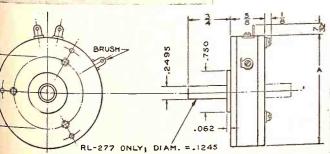




### RL-270 Type

#### CONDENSED SPECIFICATIONS

	RL-272	RL-270	RL-271	RL-275	RL-277
Diameter "A" (in)	5	3	2	15/8	11/4
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) ±10%	500,000	275,000	160,000	105,000	64,000
Min. resistance (ohms) ±10%	460	250	150	105	80
Max. useful angle (deg.)	$358 \pm \frac{1}{2}$	$356 \pm \frac{1}{2}$	$354 \pm \frac{1}{2}$	$352 \pm \frac{1}{2}$	350±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 (%)	$\pm 0.10$	±0.10	$\pm 0.15$	$\pm 0.25$	±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 3/6" to the overall length for each

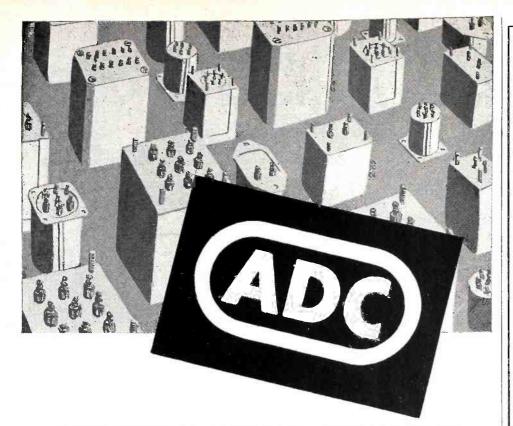
additional section.

Terminals will be positioned on the circumference as required for taps and winding angle.

Expected life of all types over 1,000,000 cycles.

## THE GAMEWELL COMPANY Newton Upper Falls 64, Massachusetts





TRANSFORMERS • REACTORS • FILTERS • JACKS AND PLUGS • PATCH CORDS • JACK PANELS



The initials "ADC" on a transformer, reactor or filter indicate a product custom-built by Audio Development Company for a definite function in a special field—and for a particular company.



Your own types of electrical or electronic construction may demand a transformer, reactor or filter of original design. When the question arises—to whom shall you go for competent design and construction of these component requirements—the answer is, ADC. For in ADC's efficient manufacturing plant capable engineers actually supervise each productive process from start to finish.



Moreover, the "Model Shop" maintained by ADC fashions precision models based on blue print instructions—and supplies you with sample units which permit dimensional check-up and observance of performance.

Our field representatives are trained men, well acquainted with our operation. For prompt response, summon the one in your area or contact our Home Office.



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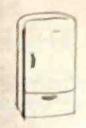
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largely determines the success, profits and future of your company. Its marketability and acceptance may well be increased by modern, precision fastening. You are invited to enlist Millord Rivet's Design Engineering Service without obligation.









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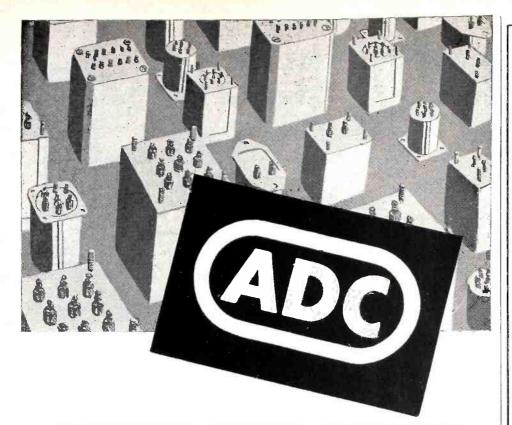


Est. 1915

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806 Illinois Ave., AURORA, ILL. 26 Platt St., HATBORO, PA.



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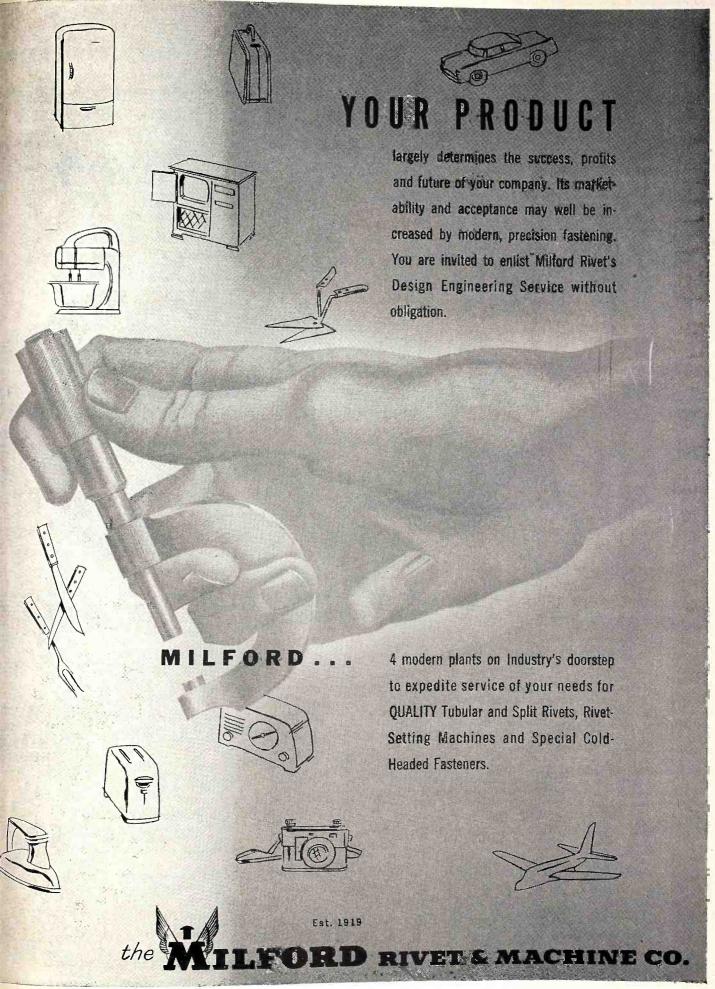
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a complete, accurate, and
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of all types of electronic
and allied products . . .
components and complete
equipment.

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## **BUSS Fuses**

## FUSETRON dual-element Fuses and Fuse Holder

for Protection of Radios, Instruments and Electronic Equipment

#### **FAST ACTING FUSES for** PROTECTION OF INSTRUMENTS, Etc.



Formerly called 8AG Dimension 1/4 x 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 250less MJB 1/500, 1/200, 1/100, or 1/32

"MJW 1/16 or 1/8

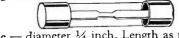
"AGX 1/4, 1/4, 3/8 or 1/2

125 or less AGX 3/4, 1, 1/2 or 2

The MJW fuses are special low resistance fuses.

#### BUSS FUSES — SFE STANDARD

Fuses of different amperages are of different lengthsmake it impossible to insert too large a size - thereby preventing over-fuseing.



Glass tube — diameter ¼ inch. Length as per table below. Symbol & Length

Voltage 32 or less " " " " "	Amperes SFE 4 SFE 6 SFE 9 SFE 14 SFE 20 SFE 30	Inches 58 34 78 11/16 11/4	.70 .71 .72 .77 .83 1.05
	315 30	1/16	

#### BUSS GLASS TUBE FUSES, 1/4 x 11/4 inch





MTH 8

AGC and MTH 4,5 and 6

Amperes Voltage Symbol

250 or less AGC

1/8, 1/4, 3/8, 1/2, 3/4, 1, 11/2, 2 or 3

MTH 4, 5, 6 or 8

32 or less AGC

5, 6, 7½, 10, 15, 25 or 30 20 ampere size is an SFE 20 fuse.

#### BUSS CERAMIC TUBE FUSES, 1/4 x 11/4 inch



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

#### FUSETRON FUSES, 1/4 x 11/4 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. at 300% " " 8 " 3 " at 500% " " 3 " 1.25 " 1

125 and 250 volt sizes listed as approved by Underwriters'

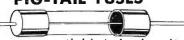
Laboratories.
Shipping weight 0.9 lbs. per 100.
Voltage Symbol Ampere Amperes

250 or less MDL

125 or less MDL MDX

32 or less MDL

#### PIG-TAIL FUSES



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

Write for full information.

#### BUSS FUSE CLIPS & CLIP ASSEMBLIES

for 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 elec-trical 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 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 5/16 thick.

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

Normal current carrying capacity: 15 amperes HJM for  $\frac{1}{4}$  x 1 inch fuses (AGX, MJB, MJW, SFE 14) HKP for  $\frac{1}{4}$  x 1 $\frac{1}{4}$  " (ABC,AGC,SFE20,MDL,MTH)

#### IN-THE-LINE HOLDERS

#### for 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

for 1/4 x 1 inch fuses (AGX, MJB, MJW, SFE 14)

Takes No. 18 or smaller wires.

HDJ-A for 1/4 x 11/4 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.

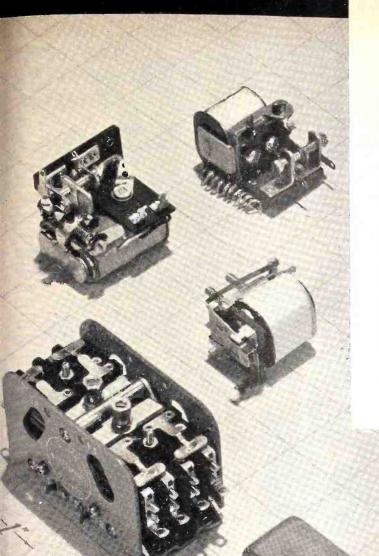


Offer simplest way to install protection. Wire can be cut to give leads of desired length. A spring nut, furnished with holder, can be used to mount holder on panel up to  $^3\!3_2$  inch thick.

Complete with SFE 20 fuse Complete with SFE 14 fuse HRI HRI 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



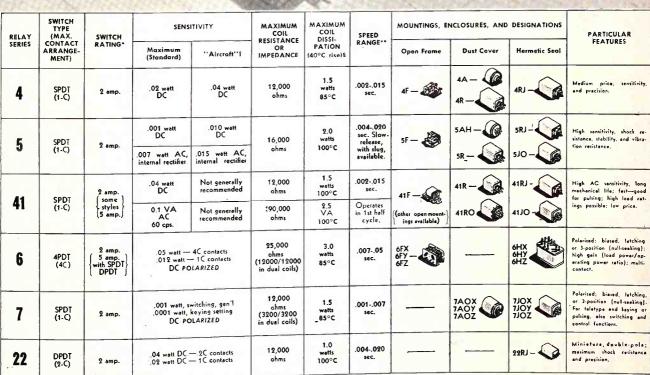
## SIGMA

## Sensitive Relays

#### AVAILABLE SERVICE

- 1. Selection from six basic designs, each with many enclosure and mounting styles. Each such selection may be ordered with a coil resistance and adjustment chosen from a list of standard codes. The classification chart below, from the new catalog, calls attention to the most obvious points of comparison between design series.
- 2. Specification by our application engineers of the relay they would use if faced with your problem.\* This includes selection of type and enclosure as well as design of special adjustment and electrical characteristics, all subject to your approval and test. The resulting specification is your property and will be disclosed only at your request.

\*Don't fail to describe all of it, so as to reduce to a minimum our guesswork!



\* Nominal, 24VDC or 115VAC resistive; medium-duty

2 13

26

life, eg. 100,000 operations.
Approximate, as governed by normal variations in driving circuit

† Any duty involving vibration up to 10g while in use,

† At operate voltage, operated. Unoperated, approx. 1/2 this value, Varies inversely with applied voltage.

§ Sum of ambient plus temperature rise not to exceed temperature given for each relay. Thermal time constant varies from 10 to 30 minutes. For higher temperatures, inquire of factory.

Write for fully descriptive catalog

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MODEL HPF-1 . . . hi-pass interference filter

MODEL FMT-1 . . . Tunable FM interference filter

MODEL MS-1 . . .

Matching transformer for 300-72 or 72-300 ohm lines

MODEL AS-1 . . . Antenna switch

MODEL TS-2 . . .

2 TV set coupler from one antenna

MODEL TS-4 . . .

4 TV set coupler from one antenna

#### SPECIAL

MODEL PA-100.

self powered preamplifier for low impedance pick-ups.

> See your distributor or write Dept. E-6 for literature

EPCO Electronics, Inc. 9



INSULATING COMPOUNDS

SEALING COMPOUNDS

For dipping, potting, impregnating and sealing of radio components and all types of electrical units

HI-TEST can supply you with materials for highest and lowest temperature applications, with a wide range of melting points, and varying degrees of hardness, flexibility and toughness.

HI-TEST is ready to serve you with products developed and made according to YOUR specifications. If you have a problem requiring a product with special or unusual characteristics, we invite your inquiry.

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is a list of over a

1000 DISTRIBUTORS OF **ELECTRONIC COMPONENTS** 

and

### **ELECTRONIC EQUIPMENT**

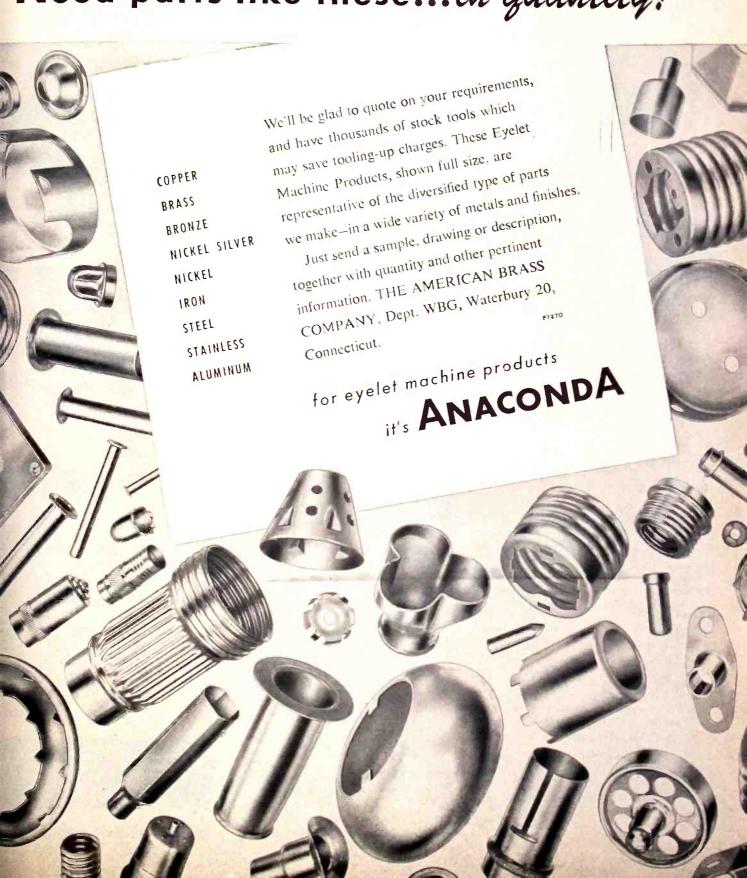
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> When ordering, be sure to mention the ...

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## for high fidelity in Tape Recording!

first choice of engineers the world over



#### see these standard specifications

Precision engineered to meet NARTB standards, Magnecorders provide maximum flexibility and fidelity for a minimum investment. Frequency response: Flat from 50-15,000 cps ± 2 db at 15"/sec. tape speed. Signal-to-noise ratio: Exceeds 50 db with less than 2% harmonic distortion. Flutter: Less than .3% maximum (peak to peak). Truly high fidelity! Recorders, amplifiers and other units interchangeable for portable, rack or console.



#### **OUTSTANDING VALUES**

Shown at right is PT6-J single microphone input, single channel amplifier. Also available are three-channel low level mix amplifiers for rack mount or portable use.



Series PT7 units have many refinements. Recorder has 3 heads for erase, record, and playback. Three-channel high-level mixing amplifier; and line level record/ playback amplifier for console mount

#### COMPARE!

Magnecorder — the product, performance, and price - with any recorder on the market. Then you'll see why Magnecorder is the 3-to-1 choice of the professionals!

Model 4-14 is a 4-hour continuous tape player with broadcast quality at a price you can afford! - - - \$585.00

new magnecorder

MagneCordette brings professional performance to the home or office; in handsome blond or dark mahogany cabinet. - - \$385.00

Binaural

Consoles ... racks ... portables ... Magnecord has them all at prices to fit your purse and your purpose. See your distributor for a demonstration or write for specifications. All prices shown subject to change without notice.

Magnecorder adds a third dimension to sound, records with unbelievable realism!

Recorder Amplifier

Maquecord, INC.

360 NORTH MICHIGAN AVENUE, Dept. E-52 CHICAGO 1, ILLINOIS



#### 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% balanced air rotor. 115 volts, AC, 60 cycles. 1650 RPM (free air) 40 watts. Can be supplied for 230 volt operation. Various



#### TYPE F

For cooling electronic tubes in transmitters, induction heaters and diathermy equipment. 115 volts, AC, 60 cycles. 3000 RPM (free alr), 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.

## LOWELL, MASS

## Permoflux (EE OP)

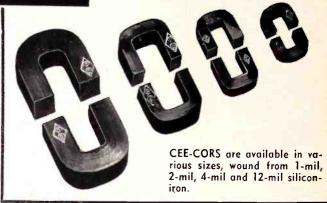
#### TRANSFORMER CORES

Grain-Oriented Silicon-Iron Continuous-Strip Wound

## TRANSFORMER CORES

Available for transformers operating within the frequency spectrum ranging from sub-audible frequencies to radio frequencies, as well as for pulse work, at average power levels from a fracion of a watt to hundreds of watts.

The cores are formed by winding the thin ribbonlike grain-oriented iron into loops of proper shape and dimensions. Then, after heat treating and bonding, they are halved and supplied in matched



12-mil Cee-Cors are normally used at power and low audio frequencies

4-mil Cee-Cors are normally used at frequencies throughout the audio range, including aircraft, portable and mobile power-supply applications.

2-mil and 1-mil Cee-Cors are normally used for pulse, supersonic, and radio frequency components.

ADVANTAGES OF PERMOFLUX CEE-CORS: 1. High Fermeability.
2. Low Losses. 3, High Operating Induction. 4. Controllable Air Gap.
5. Low Assembly Cost.

Specific dimensional and electrical data on Permoflux CEE-CORS is available upon request.

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#### Miniature Dynamic Receiver and Microphone



Excellent wide-range frequency response characteristics, maintained flat by the Patented Permoflux acoustical damping method. Utilizes a self-formed voice coil. Sensitivity-105 db in 6 cc coupler with 1 m.w. input. Overall diameter 1"—height 11/16". Nominal impedance 11 ohm ±10%.

#### Subminiature Transformers



TYPE T1 and T2: These subminiature units provide power efficiency from 80% to 90% with high voltage breakdown characteristics and extremely low susceptibility to electrolytic deterioration. Frequency response is  $\pm 2$  db from 100 to 8000 CPS. Impedances up to 200,000 ohms and windings with inductive reactances up to one megohm. Available magnetically shielded and in pitted or hermetically sealed cans.

T and VT Series: Standard Output Transformers for Radio Television Use. Unusually high efficiency is gained by see of bobbin windings. Data and quotations upon request

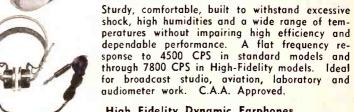
Complete Engineering Data Available on Alf Permoflux Audio Components

#### Royal Speakers with the "Famous Blue Cones"



The ROYAL EIGHT-INCH Speaker (illustrated at left)—comparable to any 12-inch! New advances in cone design featuring the Blue Cone with slotted treated edge and special curvilinear throat help produce a smooth, faultless flow of tone over an unusually large band of frequencies—12,000 cycles in width. Compares with finest speakers —regardless of size or price! But one of a very complete line of Royal Speakers with the famous Blue Cone, 6" to 15".

#### Standard and High Fidelity Dynamic Headsets



#### High Fidelity Dynamic Earphones



PDR Series: Smooth broad frequency response, articulation, good power handling capacity and ability to meet the rugged requirements of combat service where extreme noise exists. Permoflux DYNAMIC units give superior performance at high altitudes, in extreme temperatures and in regions of high humidity.

#### Dynamic 2-Inch Midget Speaker



Designed to be readily adaptable to two-way "hand held" com-munication equipment, small inter-office systems, "pocket" radios or any apparatus where a small highly efficient light-weight speaker with smooth, flat frequency response is required.

Specialists in the Design and Manufacture of Precision Audio Components

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Phillipsburg, N. J.

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- outstanding electrical prop-
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- dimensional stability and extremely low initial cost



Rexolite 1422 has been specifically designed and developed to meet the growing need for a lightweight
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Rexolite 1422 is available for immediate delivery as centerless ground rod in any diameter up to 1". Also cast in larger diameter rods and sheets.

Meets JAN-P-77 and MIL-P-77A specifications.

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#### THE REX CORPORATION

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YOU'LL FIND the new ESCO catalog 1950-JR a useful tool when you want to choose switches for special or standard services. It shows, in detail, how the single- and multifingered rotors, and the 4-, 8-, and 16-position detents, can be combined to suit an infinite variety of circuit control require-

TO AID YOU in control-circuit design, this catalog gives cut away, sectional, and exploded views of typical Type JR switch assemblies, shows popular rotor and stator assemblages for single- and double-break switching, and gives dimensional details for rotary switches consisting of from one to thirty switching sections.

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#### FLUSH SWITCH PATTERNS

such as commutators, modulators, slip rings, pulse generators.

Phenolic, Polyesters, Teflon, Melamine, etc., clad with Aluminum, Copper, Nichrome, etc. "flip flops".

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To your specifications



#### **PULSE HEADS**

High signal - low noise output, high "Q", very high resonant frequency, excellent thermal and mechanical stability, low inductance and low internal impedance.

Also memory drums, analogue to digital and digital to analogue converters, scalers, and

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DESIGN

ASSEMBLY

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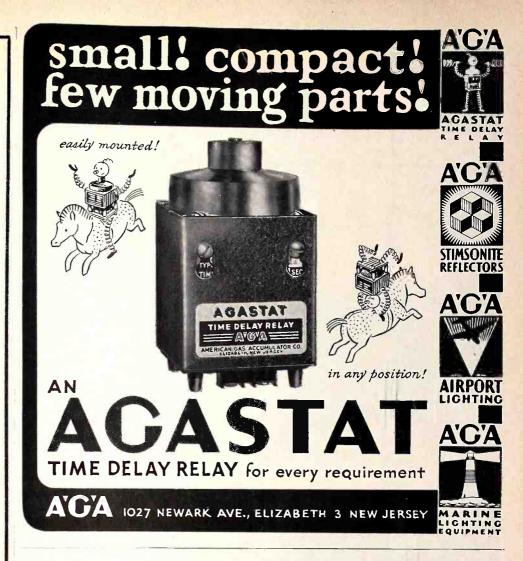
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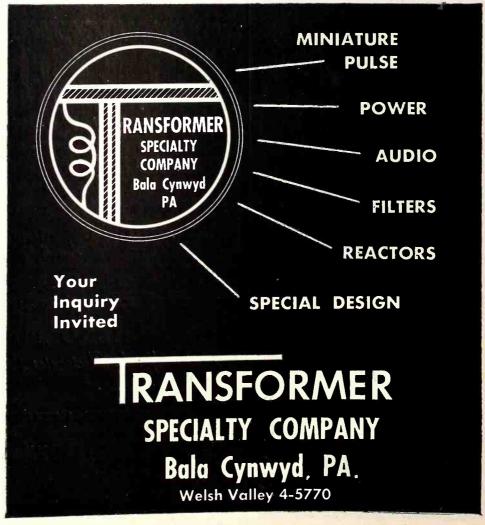
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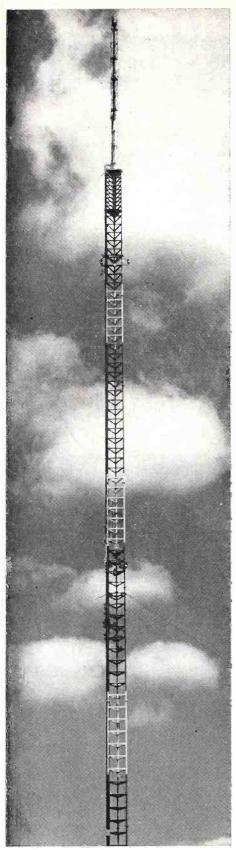
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- geographical listings
   of distributors
- simple telephone book
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#### Stainless Towers offer you:

- All welded, tubular steel construction
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- Aerodynamic design providing minimum wind resistance
- Natural ladder—easy to climb easy to maintain—IMMEDIATE DELIVERY

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DELAY VALUES TO 1000
LOW SPURIOUS SIGNALS
LOW ATTENUATION OF
DELAYED PULSE

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for the Electronics Industry

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### ... for the finest equipment for AM-FM-TV station use

#### Gray TELOP (TELevision Optical Projector)

Makes PROFITS GROW for TV Stations. The Gray Telop projects low-cost, easily produced TV 'commercials.' Without keystoning, 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 verically with Stages #2 and #3. (For full letails write for Bulletin T-101.)

#### Gray TELOP II

With the new, versatile Gray TELOP II you can produce an amazing variety of professional-quality commercials at low ost. TELOP II presents selling messages vith opaque cards, photographs and ransparencies. You get the effect of suerimposition, lap-dissolve and fade-out. Only limitation is your imagination. One perator does it all! Write for full inforhation on the new and exciting Gray ELOP II.

#### gray STAGE #2

ttaches to any optical openings of the Telop. Accommodates roll stock vertially to televise commentary or the compercial in the same way movie introducons are projected.

#### Gray STAGE #3

ttaches to optical openings of the Telop. ews ticker tape fed from 8-mm reels is rojected on any part of the screen, top bottom, horizontally, may be used with est pattern or other commercial.

#### fray LIGHT BOX for

#### ransparencies

rovides back lighting for Telop use.

#### ray REVERSE READING CLOCK

or use where reversal is required. Designed permit superimposing of the commercial r other copy.

### Gray TV CAMERA TURRETS

nable a Single Camera to Serve up to 8 Projectors

lodel 556 - Centered on a rugged 'square' destal, requires a minimum of space. Heavy uty ball bearings. Rotates 360°.















#### Gray TRANSCRIPTION ARMS

**NEW Viscous-Damped Model 108-B 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 car-



#### Model 106-SP Arm

Designed to meet strictest requirements of modern highly compliant pickup cartridges. Three cartridge slides furnished enable GE 1-mil, 2½-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.

#### Gray EQUALIZERS

Model 602 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 MULTIPLEXER Model 600

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.



Please write for bulletins describing the above equipment.



and Development Co., Inc., 598 Hilliard St., Manchester, Conn.

rethe 6. Ortuges President

Division of The GRAY MANUFACTURING COMPANY—Originators of the Gray Telephone Pay Station and the Gray Audograph

381

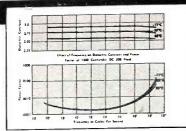
DOW CORNING SILICONES

## Heat-Stable, Moisture-Proof SILICONE DIELECTRIC MATERIALS

are available in the following forms:

#### LIQUID DIELECTRICS

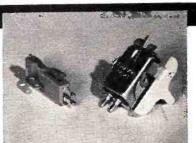
DOW CORNING 200 FLUIDS are a series of clear, inert liquids, notable for their thermal stability and for their remarkably flat viscosity-temperature slopes. Available in viscosities from 0.65 to 1,000,000 centistokes. Pour points range from -123° to -47°F. and flash points range from 30° to 600°F. Low dissipation factors at elevated temperatures or at high frequencies, inertness to moisture, oxidation resistance and heat stability make Dow Corning 200 Fluids unique among liquid dielectrics.



As indicated by these curves, neither frequency nor temperature changes have any pronounced effect on the power factors or dielectric constants of Dow Corning 200 Fluids. Power factor and dielectric constant of 1000 cs. fluid at  $-17^{\circ}$ , 23°, and 83° C. are plotted against frequencies ranging from 10 to  $10^{10}$  cycles per second.

#### DIELECTRIC COMPOUND

DOW CORNING 4 COMPOUND is a nonmelting water-repellent dielectric paste which retains its grease-like consistency at temperatures from -70° to 400°F. It is highly resistant to oxidation and to deterioration caused by corona discharge. Power factor is less than 0.003 at frequencies up to 10,000 megacycles; volume resistivity is more than 10<sup>12</sup> ohm centimeters at temperatures up to 400°F.; dielectric strength is more than 500 volts per mil at a 10 mil gap. Dow Corning 4 meets all requirements of Specification AN-C-128a.



Dow Corning 4 packed in phonograph pick-up head cartridges increased crystal service life 20 times. The silicone compound prevents Rochelle Crystals from deteriorating due to absorbed moisture. It also acts as a viscous damping medium, thereby reducing excess vibration and enabling the head to handle a much higher frequency.

#### ELECTRICAL INSULATING VARNISHES

DOW CORNING 996 VARNISH dries tack-free in not more than 3 hours at 150°C. Dielectric strength measured with 2 inch electrodes on 2 mil films baked for 16 hours at 150°C. is 1000-2000 volts/mil, dry, and 500-1500 volts/mil, wet. Heat flexibility is more than 100 hours at 250°C. Cured films have good resistance to dilute acids, concentrated hydrochloric acid, and dilute or concentrated alkalies.

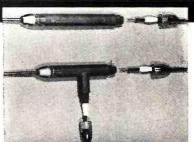


Flashover in high voltage television power supply coils can set ordinary organic varnish aflame. To eliminate this fire hazard, coils are impregnated with Dow Corning 996. Highly resistant to arcing, 996 provides positive protection against carbon tracking for the life of the entire set.

#### SILASTIC \*, THE DOW CORNING SILICONE RUBBER

Silastic combines the remarkable heat stability and moisture resistance of resinous silicones with the physical properties of rubber, including resilience, shock and abrasion resistance, and resistance to both mechanical and electrical fatigue. Its dielectric properties show little change over a wide range of frequencies, even after aging at high temperatures. The surface resistivity of Silastic is high, and its thermal conductivity is about twice as great as that of either organic rubber or resinous insulating materials.

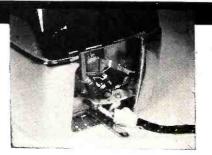




Completely eliminating taped connections on aircraft antennae, white Silastic seals reduce static and corona discharge by as much as 90%. They retain their resilience as well as their dielectric properties, excluding moisture and foreign matter after long exposure to the full range of ground and stratospheric temperatures.

#### SILICONE-GLASS LAMINATES

DOW CORNING THERMOSETTING RESINS are used to bond inorganic fabrics and finely divided particles such as powdered metals or mica. Typical ½ silicone-glass laminates have a flexural strength of 22,000 to 45,000 psi; water absorption after 24 hours of 0.25 %, dielectric strength with continuous filament cloth of 250 volts/mil or more; power factor of 0.002 at 1 mc; loss factor of 0.007 at 1 mc; wet insulation resistance of more than 10<sup>12</sup> ohms; arc resistance of 300 seconds and a heat distortion value above 250°C.



For maximum dependability and long service life, silicone-glass terminal blocks and contactor bases are being used in late model automatic toasters. Tests prove that Dow Corning silicone resin bonded glass laminates are more rigid, more heat-stable, more resistant to moisture and easier to fabricate and assemble than conventional materials.

#### MAIL THIS COUPON TODAY!

DOW CORNING CORPORATION, DEPARTMENT BY MIDLAND, MICHIGAN
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Dow Corning 200 Fluids Dow Corning 4 Compound Dow Corning
Electrical Insulating Varnishes Silastic Dow Corning Silicone-Glass
Laminates Reference Guide to Dow Corning Silicones
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WASHINGTON, D.C.

In Canada: Fiberglas Canada Ltd., Toronto • In Great Britain: Midland Silicones Ltd., London

3	FIRST IN SILICONES
	DOW CORNING CORPORATION
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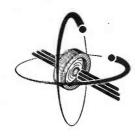
ELECTRONIC TRANSFORMER COMPANY, INC.
209 West 25th Street WAtkins 4-0880 New York 1, N. Y.

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special requirements.

## SPECTRUM ANALYZER

- 5 inch 'scope gives high visibility
- Interchangeable RF heads extend range
- Complete accessibility for adjustment or maintenance
- Panel controls grouped for convenience of user
- Stabilized IF amplifier holds long-term alignment
- Full shielding by mu-metal tube shield and steel
- · Bezel accepts Dumont hood, filters, and camera
- Heavy-duty power supply handles all 300 vreflex-klystron local oscillators





#### **SPECIFICATIONS**

Overall Gain—130 decibels
Sensitivity—Approx. -60dbm for
I µsec. pulse width.

IF Bandwidth — 50kc. standard (20 kc. if so ordered); 50 kc. bandwidth recommended for CW and pulse widths 0.2 to 2 μsec.; 20 kc. bandwidth recommended for pulse widths up to 5 μsec.

Sweep Frequency—10-30 cps easily changed for specialpurpose measurements.

Power Requirements—110 volts, 60 cps.

Frequency Spread (max.)—0.75 mc/in. at S-Band, 3 mc/in. at X-Band.

Model SA20S—Frequency range, with S-band head — 2400 to 3650 mc.

Model \$A20X—Frequency range, with X-band head — 8500 to 9660 mc.

The Vectron spectrum analyzer is a double superheterodyne receiver with a five-inch cathode-ray oscilloscope output indicator. The local oscillator is frequency-modulated by the same sawtooth voltage wave that produces linear horizontal sweep on the cathode-ray tube. The components of an input signal are shown as vertical pips on the 'scope screen; the frequency and power of a component are indicated by the position and amplitude of its pip.

The analyzer can be furnished with either an S-band or an X-band head. Heads for other frequencies are available on special order. The heads are interchangeable, allowing one basic unit to be used with all heads.

To assure trouble-free service, the instrument uses a stabilized IF amplifier, oil-filled capacitors, and preferred-type tubes. Removable case panels give quick access to the chassis if adjustment is ever necessary.

VECTRON ALSO OFFERS engineering and manufacturing service in the design and production of electro-mechanical apparatus. Your needs in development of instrumentation, gyro-mechanisms, communication networks, filters, servomechanisms, and electronic systems can be met by our plant, equipment, personnel, and experience.



## 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 crossover 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**

ABC

AB.

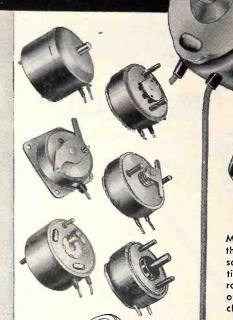
A McGraw-Hill Publication 330 West 42nd St. New York 36, N. Y.

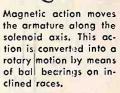
## **LEDEX** rotary solenoids solve remote control problems!

The many production applications of Ledex 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 1/8 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.

Ledex 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 Ledex Rotary Solenoid to meet your product's requirements.





MODEL NO.	2	3	5	6	7	8
Diameter	11/8"	1%"	17/8"	21/4"	23/4"	33/8"
Torque lb./inches*	1/4	1	5	10	25	50
Weight lbs.	1/8	1/4	1/2	1	21/4	41/4

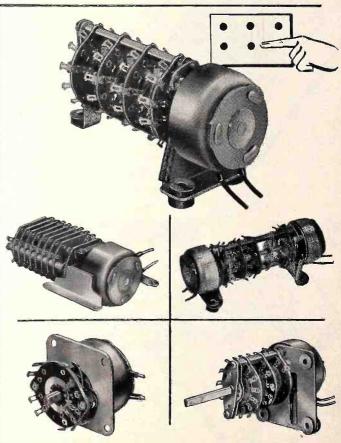
\*45° stroke intermittent duty

## **LEDEX** circuit selectors and stepping relays give remote control for multiple complex circuits.

Ledex Circuit Selectors and Stepping Relays can be remote controlled, are Rotary Solenoid operated, have positive detent action and are selfstepping 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 Ledex 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 Ledex Rotary Solenoids and Ledex Circuit Selectors.

INC.



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123 WEBSTER STREET . DAYTON 2, OHIO

## CINEMA

YPE B-13

#### PRECISION WIRE-WOUND RESISTORS

NON-INDUCTIVE: Accuracies 1% to 1/20%. ¼ to 10 Watt power ratings. Several impregnation treatments to fit your specific requirements. 42 different styles. Sub-miniature and laboratory instrument types. Characteristics to best commercial tolerances; temperature coefficients; and wire alloys. Orders accepted for special controlled, calibrated resistors, and ratio sets. Cinema resistors are finding nation-wide acceptance from proto-type to production. For complete technical data, write for Catalogue 14-R.

YPE 992-A

#### PRECISION VARIABLE ATTENUATORS



Precision and general purpose types. Resistance accuracies 5% to 1/20%. Nickel silver contacts and brushes. Low, constant contact resistance with stutter-free performance. "Multi-brush" design assures positive wiping action and quiet operation. Fine decibel accuracy and accurate voltage ratios. Mixer and detented action. Special ratio and resistance steps. (Specials are our largest business.) Write for Catalogue 18-A.

TYPE CES

#### INSTRUMENT SWITCHES

**ROTARY TAP TYPE:** Low contact resistance and long life are features of the CES design. Complete with integral detent action with stops or 360 degree rotation. Nickel silver contacts and brushes. Phenolic insulation. Especially designed for dc and audio instrument applications. Custom built in jig-time from basic production parts. Speedy service is the key-note of this design. Catalogue provides formula by which literally hundreds of switch circuit possibilities may be selected to fit your specific needs. Request Catalogue 17-S.



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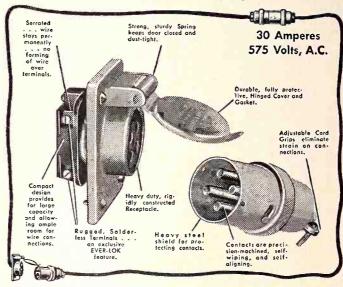
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CORD CONNECTORS

... FOR HEAVY-DUTY UTILITY AND INDUSTRIAL APPLICATIONS



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.

Outstanding Ever-Lok advantage is an automatic locking grip that prevents faulty contacts and accidental disconnection in service. Every Ever-Lok plug grips fast and holds forever despite every tug or pull yet separates instantly with a finger-tip twist of the powerful bayonet type lock.

Good products need good connections - and Ever-Lok always provides a happy ending to cord connector problems. Write for literature EL-6

• R&S Ever-Lok complete lines are available from Midget type 10 amperes to 200 amperes heavy service types . . . standard or reverse service . . . fused and non-fused types. Also a complete Ever-Lok Multicircuit line from 2 to 12 poles, for sound and control equipment.

Representatives in Principal Cities.



Midget

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#### TYPICAL **APPLICATIONS** FOR Midget EVER-LOK DEVICES in the Electronic

Adaptable as components for:

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Accelerometers. Amplifiers: Audio Frequency, Audio Input Systems, Keying, Ultrasonic, and Vibration Pickup, etc. Battery Chargers. Blowers, Small. Broadcast Input Control. Cathode Ray Oscillo graph,

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Frequency Shift. Detectors. Electrocardiographs. Electroencephalographs.

Gages: Measuring, and Electronic Inspecti**on**e Geophysical Apparatus Indicators. Inverters. Machines.

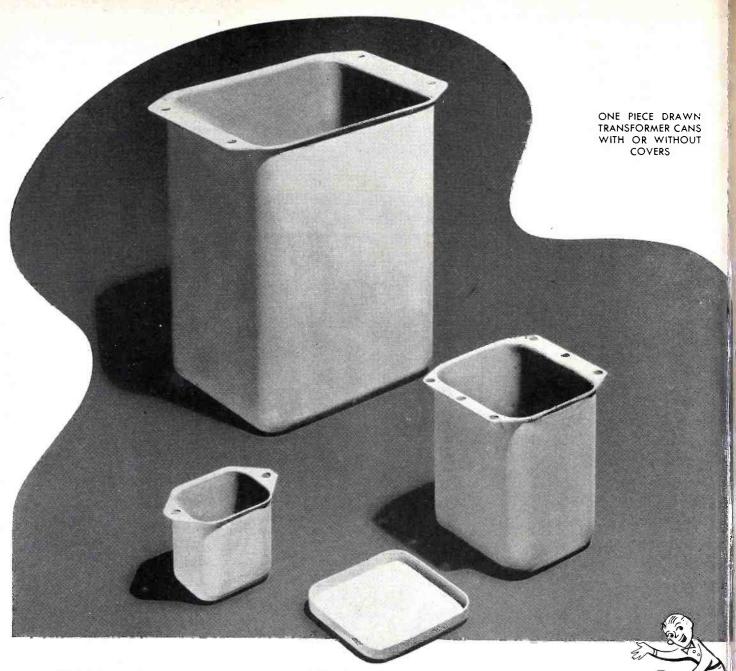
Meters: Sound Level, etc. Monitors. Oscillographs. Radar Systems, & Equip'#. Receivers:

Communication, Portable and Mobile: Radio Direction Recorders:

Facsimile. Materials Thickness, Sound and Phonograph, Sound Level, and

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Recording and Transcription. Vibration Analysis Equipment. X-Ray Equipment.



## N STOCK: TRANSFORMER CANS

Save die costs on stock size transformer cans. IMMEDIATE DELIVERY on full range of sizes, with or without covers. All drawn in one piece! Write for list of sizes and prints.

#### SPECIAL SHAPES AND SIZES

We are fully equipped to fabricate special sizes (round, square, and rectangular) to your specifications. Tell us your requirements and let us submit estimates.

#### Here's Help for your DO Contracts.

Craft offers you these seven metal fabricating services.

- STAMPING
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- SPINNING
- SHEET METAL WORK
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WRITE OR PHONE FOR FULL INFORMATION OR SEND BLUEPRINTS FOR PROMPT QUOTATION.

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## KOBZY PRODUCES THAT ALL IMPORTANT QUALITY

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- · LAMINATIONS
- · CO VERS
- · CHANNEL FRAMES
- · HOUSINGS
- · METAL STAMPING PARTS

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.

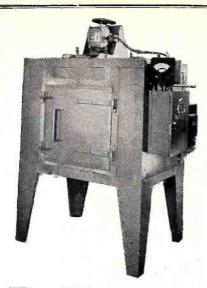
Keep a copy of the Kobzy Catalog handy for reference. We'll gladly send you one upon request.



KOBZY
TOOL CO.

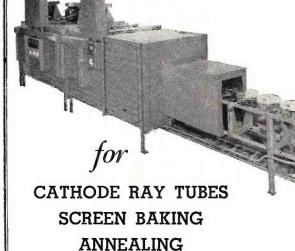
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CHICAGO 22 HILLINGIS

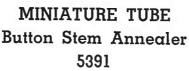


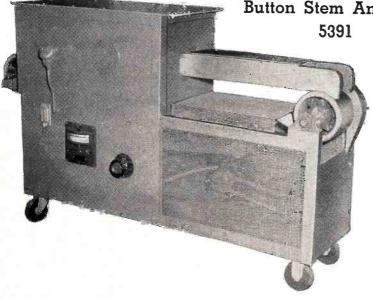
## **OVENS**

Forced Air Circulation Cabinet Types, as illustrated, for glass annealing, coil baking, curing.



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DESIGNERS AND BUILDERS OF INDUSTRIAL OVENS

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# BUYERS' GUIDE

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### S. S. WHITE PRODUCTS AND SERVICES FOR THE ELECTRONIC INDUSTRY

### FLEXIBLE SHAFTS

for Power Drive for Remote Control

S.S.White Flexible Shafts, in both power drive and remote control types, come in a large selection of sizes and characteristics. Combinations of selected flexible shaft, flexible casing and end fittings are made up to user's or government specifications in any length, ready for connection. Engineering cooperation on specific applications available without obligation.

FOR THIS 256-PAGE FLEXIBLE SHAFT HANDBOOK

omplete, up-to-date information on flexible aft selection and application. Copy sent free you request it on your business letterhead.



### FLEXIBLE SHAFT ADAPTERS

Used to connect flexible shafts in close quarters and where space conditions prevent a direct connection without bending shaft too sharply. Drawings and specifications on request.

### "All-Weather" MOLDED RESISTORS



Of particular interest to all who need resistors with inherent low noise level and good stability in all climates.

HIGH VALUE RANGE—10 to 10,000,000 megohms. This unusual range meets the needs of scientific and industrial control, measuring and laboratory equipment, and high voltage opplications.

STANDARD RANGE—1000 ohms to 9 megohms Used widely in commercial radio, telephone, telegraph, sound pictures, television, etc., and in a variety of U. S. Navy equipment.

#### WRITE FOR BULLETIN 4906

It gives full information on S.S.White Resistors, including construction, characteristics, dimensions, etc. Also describes S.S. White 80X High Voltage Resistors. Copy with price list on request.



### PLASTIC SHIPPING CAPS AND PLUGS

THREADED TYPE

Provide inexpensive protection to threaded openings and studs during shipment, storage and maintenance. Made of tough, non-brittle plastic, they will not chip or break easily and can be used over and over again. Write for BULLETIN P-4601.

#### ELASTOPLASTIC TYPE

Slipped into or over the ends of plain tubing, elastoplastic plugs and caps seal out moisture and dirt and prevent damage. They hold by friction fit and are easy to apply and remove. Ask for BULLETIN P-4704.



### OTHER PLASTIC PRODUCTS

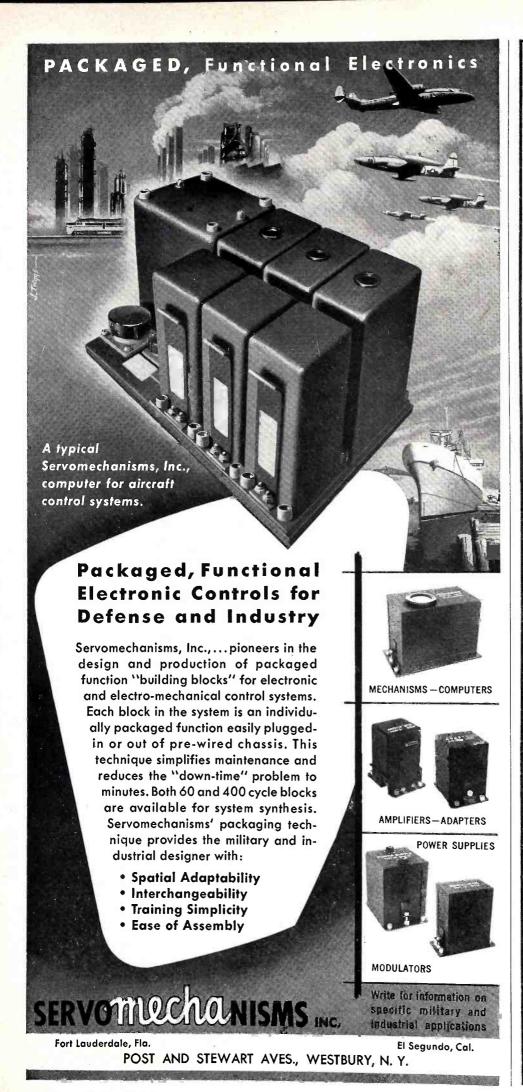
S.S. White has a large range of stock plastic parts for protection of parts during production, shipment or storage. Also a custom molding service in Nylon and in all thermoplastic and thermosetting materials.

### THE Sibhite INDUSTRIAL DIVISION

DENTAL MFG. CO.



Dept. EG, 10 East 40th Street NEW YORK 16, N. Y.



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EL SEGUNDO CALIFORNIA

### HI-VOLTAGE SELENIUM RECTIFIERS

Phenolic Cartridge Type



Type F



Type P



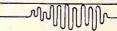
Type S

DIAMETER: From 1/8" to 1" LENGTH: From 1/2" to 12"

CURRENT, half-wave: 1.5 ma to 60 ma VOLTAGE, DC output: 20 volts to 10,000 volts

Send for Bulletin H-1

### SELENIUM DIODES



DIAMETER: From 1/8" to 13/32" LENGTH: From 1/4" to 1/2" RMS applied voltage: From 26 volts to 104 volts

RMS input current: max. 500 microamperes

DC output voltage: From 20 volts

DC output current: avg. from 200 microamperes to 5 milliamperes





Actual Size

Write for Engineering Data

Reverse Leakage at 10 volts RMS: 0.6 microamperes to 2.4 microamperes

Potted in thermosetting compound Temperature Range: From -60° C to 100° C

Available in 1, 2, 3 and 4 cell Diodes

### HERMETICALLY SEALED RECTIFIERS



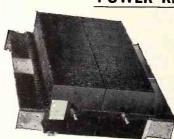
Octal Tube Base Type Metal Case





DIAMETER: From 3/16" to 1-1/4". LENGTH: From 9/16" to 10" CURRENT, half-wave: 1.5 ma to 60 ma VOLTAGE, DC output: From 20 volts to 4,000 volts. Write for Engineering Data

### **POWER RECTIFIERS**



CELL SIZES: From 1" x 1" to 6¼" x 7¼"

CURRENT RATINGS, per cell: 0.125 amperes to 7 amperes

VOLTAGE RATINGS, inverse per cell: 22 volts rms to 40 volts rms

Efficiency to 87%

Power factor 95% Suitable for oil immersion. Ratings to 250 KW

Send for Bulletin C-349

### PHOTO-ELECTRIC CELLS — SELF-GENERATING TYPE





DP-2 Hermetically Sealed 25 microamperes

DP-5

Hermetically Sealed 600 microamperes \* At 100 foot-candles illumination and 100 ohms external resistance



13 microamperes\*



Available
Output up to
600 microamperes\*

Write for Bulletins PC-649, PPC-250 HPC-450

R N 0 R Offices: 1521 E. Grand Ave., El Segundo, Calif. Phone: El Segundo 1890 205 West Wacker Drive - Phone: Franklin 2-3889

Branch Office:

### INSTRUMENTS

#### Impedance Measurement Audio Frequency

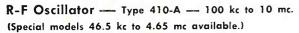
Type 310-A Z-Angle Meter — 30 to 20,000 c.p.s.

Measures impedance directly in polar coordinates as an impedance magnitude in ohms and phase angle in degrees  $Z/\pm \ominus$ . 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  $(\ominus)$ ,  $+90^{\circ}$  (XL) through  $0^{\circ}$  (R) to  $-90^{\circ}$  (Xc). Accuracy: Within  $\pm$  1% for impedance and  $\pm$  2° for phase angle. Price: \$470.00.

#### Impedance Measurement R F Frequencies

Type 311-A R-F Z-Angle Meter for radio frequencies - 100 kc to 2 mc.

Simplifies laboratory and field impedance and phase angle measurements. Ideal for checking impedance of coils, transformers, coupling networks, lines, filters, antennas, etc. Directreading Impedance Range: 10 to 5,000 ohms up to 200 kc, and 10 to 1,000 ohms at 1 mc. Phase Angle: +90° (XL) through 0° (R) to -90° (Xc). Accuracy: Impedance to within ± 3%, and phase angle ± 4°. Price: \$385.00.



Power oscillator for use as bridge driver and general laboratory measurements. Features: High stability, high output (approximate 30 volts), 50-60 \(\Omega\) output impedance, expanded frequency scale, direct reading output voltmeter, compact design. Price: \$385.00.





All electronic instrument that directly measures phase angle between two periodic voltages from zero to 360°. Readings made directly withtwo 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%.

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 20 cycles to 20 kcs. Accuracy: ± .05 degrees; with special operating techniques± .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.

phase shift and wide band width.

Outstanding specifications: Amplification—10;
100; 1000 selected by rotary switch . . . Accuracy
—±2% nominal . . . Frequency response—
±0.5db from 5 cycles to 2mc on gain of 10; ±0.5db
from 5 cycles to 1.5 mc on gain of 100; ±0.8db from
5 cycles to 1mc on gain of 1000 . . . Phase shift
—0±2° from 20 cycles through 100kc . . . Gain stability—constant with line voltages (105125v). Input impedance—160 megohms shunted by 7 mf. Output impedance—approximately 200

(from cathode follower). (from cathode follower).

Technical Catalog—yours for the asking. Contains detailed information on all TIC Instruments, Potentiometers and other equipment. Get your copy without obligation — write today.

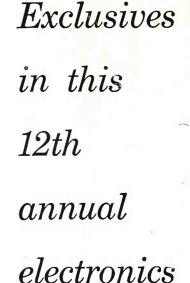
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533 Main Street, Acton, Massachusetts, Telephone: Acton 600



### **BUYERS'** GUIDE

include:

- a cumulative editorial index to ELECTRONICS. 1940-1949 inclusive
- extensive trade name listings
- geographical listings of distributors
- simple telephone book type product listings

Exclusives in this 12th annual electronics

### **BUYERS**' GUIDE

include:

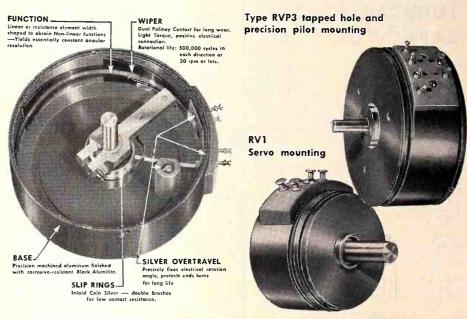
- a cumulative editorial index to ELECTRONICS. 1940-1949 inclusive
- extensive trade name listings
- geographical listings of distributors
- simple telephone book type product listings

### 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

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. Greatly expanded facilities plus mass production techniques meet customer volume needs yet maintain precision tolerances in both linear and non-linear potentiometers.



TYPE	DIAM.	RESISTANCE	ELECTRICAL ANGLE	LINEARITY	POWER	MOUNTING	EXAMPLE OF NON-LINEAR FUNCTION AVAILABLE AS STANDARD
RVP-7	7"	1-500,000 Ω tol. to ± 1%	320° tol. to .5°	As low as .05%	6 watts at 25°C.	Serva	Type RYP7-S2 function; E out = sin ⊖/2 ±0.1% peak amplitude
RVP-3	3 <sup>11</sup>	Std. values to 200,000 $\Omega$ tal. to $\pm$ 1%	320° tol. to ± .5°	As-low as ± .1%	6 watts at 25°C.	Servo—tapped hole and precision pilot or threaded bushing	Type RYP3-S4 function: 50 db logarithmic; conformity: ±2% constant fractional accuracy
RV-3	3.,	Std. values to 200,000 $\mathfrak L$ tol. to $\pm 1\%$	115° tol. to ±1°	As low as ± .25%	8 or 12 watts	3 tapped hole	Available for non-linear functions Note: Phenolic base precision po- tentiometer, stainless steel or bakelite shaft
RV2	2"	5td. values to 100.000 € tol. to ±1%	320° tol. to ± .5°	As low as ± .2%	4 watts at 25°C	Servo—tapped hole and precision pilot or threaded bushing	Type RY2.5112 function: R=K⊖², conformity: ±.5% over 64° to 320°
RV1-5/6	- 5%"	Std. values to 100,000 \$\pi\$ tol. to \pm 1%	320° tol. to ± 1°	As low as ± .25%	3 watts at 25°C.	Servo—tapped hole and precision pilot or threaded bushing	Type RVI %-SI04 function: $\frac{E \cdot Out}{E \cdot in} = \sin \Theta \pm 4\%$ peak amplitude per quadrant
R∀I	1/16"	Std. values to 50,000 Ω tol. to ± 1%	320° tol. to ± 2°	As low as ± 1.5%	2 watts at 25°C,	Servo or threaded bushing	Type RVI-S7 function: $\frac{E \text{ out}}{E \text{ in}} = \sin \frac{\triangle}{1.78} \pm 4\% \text{ of}$
LINEAR	TYPES	ONLY:					peak amplitude
RV-7/6	<b>1/6</b> "	5td. values to 40,000 Ω tol. to ± 1%	320° tol. to ± 3°	As low as ± .5%	I watt	Servo or threaded bushing	
RVT Tr 3%" x		y10,000 Ω ±15%	Stroke*	± 1% total resistance	. I watt	Provides output placement rathe	proportional to a linear dis- ir than a rotary motion of a shaft
* Speci	al resista	nce values and s	trake lengths f	rom.5 inches	to 15 inche	s can be provide	d on a custom basis.

#### **Engineering Representatives**

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### YOU CAN'T HOLD YOUR BREATH INDEFINITELY!

### **BUT THESE PAPER** TUBULAR CP TYPE CAPACITORS CAN!

The chief deficiency found in paper tubular capacitors is their susceptibility to a process called "breathing". Paper capacitors not hermetically sealed tend to absorb moisture from their surroundings. This process is accelerated in operation as electronic equipment alternately heats and cools as it is turned on and off. Expansion and contraction of the air within the capacitors causes the breathing action while the accompanying evaporation and condensation of moisture cause deterioration by gradual increase of moisture content until the capacitor becomes excessively leaky.

The solution to this problem may be found in utilization of ELMENCO CP TYPE PAPER TUBULAR CAPACITORS. These capacitors are non-inductively wound paper and foil units sealed into steatite ceramic tubes by means of baked synthetic resin end fills. The insert is mineral oil impregnated, assuring safe operation at ambient temperatures up to 85° C.

The steatite case and synthetic resin end fill combine to insure air-tight enclosure eliminating accumulation of moisture and "breathing".

#### "SHELF LIFE"

The superior construction of Elmenco CP Type Paper Tubular Capacitors permits indefinite storage of these units without danger of damaging deterioration.

#### "OPERATING LIFE"

Thousands of TV servicemen swear by these capacitors. They merely replace and forget. CP type capacitors last a "lifetime".



WRITE FOR FREE CATALOG AND PRICES.

#### CAPACITY RANGES

000	WYDC	.001	_	.056	MFD	
600	WYDC	100.	_	1.	MFD	
400	WVDC	.02	_	.25	MFD	
200	WVDC	.1	_	.5	MFD	Ì

ELECTRONICS, INC.

103 LAFAYETTE STREET NEW YORK 13, N. Y.

### CHASSIS and DUST COVERS



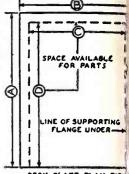
CHASSIS

DUST COVER

POTENTIAL USES Aircraft Equipment Industrial Electronics Marine Equipment
Portable Test Equipment Radar Apparatus Radio Apparatus Sound and Signal Systems

JAN	APP	ROX. DI	MEN.	FIC	3. 1 DI	MENSIC	NS
DESIGN ATION	W	Н	L	A	В	C	D
A1-C	5	71/8	151/2	151/8	41/2	35/8	14
A1-D	5	71/8	191/2	191/8	41/2	35/8	18
B1-B	101/4	71/8	121/2	121/8	93/4	87/8	1133
B1-C	101/4	77/8	151/2	151/8	93/4	87/8	1433
B2-C	101/4	107/8	151/2	151/8	93/4	87/8	1433
B1-D1	101/4	77/8	191/2	191/8	93/4	87/8	18
B1-D2	101/4	71/8	191/2	1978	98/4	87/8	1833
B2-D1	101/4	107/8	191/2	191/8	93/4	87/8	1833
B2-D2	101/4	107/8	191/2	191/8	93/4	87/8	183
C1-C	151/2	77/8	151/2	151/8	15	141/8	1433
C2-C	151/2	107/8	151/2	151/8	15	141/8	1433
C1-D	151/2	77/8	191/2	191/8	15	141/8	1834
C2-D	151/2	107/8	191/2	191/8	15	141/8	1833
S-1	51/8	75/8	97/8	93/8	411	318	833
S-2	47/8	75/8	131/8	125/8	418	316	127

ARMY-NAVY SPECIFICATION JAN-C-ITZA



DECK PLATE PLAN-FIG.

On standard types, mension from bottom chassis to under surfa of deck plate is 2 15/1 on specials it is 11/ minimum.

MATERIAL SAE201—1/2 H Aluminum SAE30915 Stainless Steel

FINISH-Chassis:

Aluminum anodized, Front panel black wrinkle on face and edges, Hold-down ho stainless steel passivated.

DUST COVER

Aluminum anodized, Black wrinkle outside, Flat black bake inside

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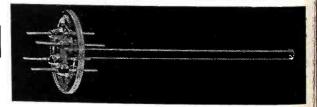
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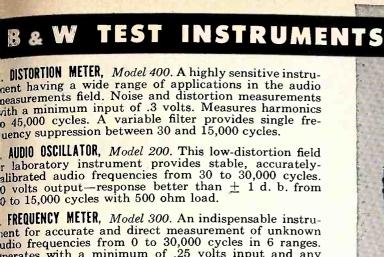
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FREQUENCY METER, Model 300. An indispensable instruent for accurate and direct measurement of unknown udio frequencies from 0 to 30,000 cycles in 6 ranges.
perates with a minimum of .25 volts input and any ave form with peak ratios of less than 8 to 1.

LINEAR DETECTOR, Model 404. Combines R-F detection nd audio bridging circuits to complement any distortion eter lacking these features. When combined with the & W Model 400, noise and distortion measurements in be made from AM carriers or in balanced and unalanced audio circuits. Freq. range 400 KC to 30 MC.

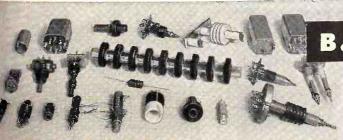
SINE WAVE CLIPPER, Model 250. When driven by the Model 00 Audio Oscillator or equivalent it replaces a square ave generator in most tests. Provides a clipped sine ave for accurate analysis of audio circuit characteristics.

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B & W high-pass, low-pass, and
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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.



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INDUSTRIAL COILS. Single-layer solenoid coils · Universalwound 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.

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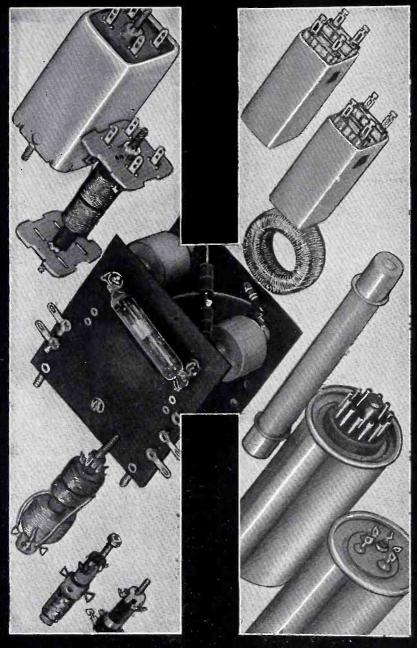
### & WILLIAMSON, INC. 237 Fairfield Ave., Upper Darby, Pa.

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**DELAY LINES** 

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HERMETIC SEALING FACILITIES



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### Titeflex Rigid and Flexible WAVEGUIDES

TITEFLEX, INC., 534 Frelinghuysen Ave., Newark, New Jersey

There is nothing so important in a waveguide as lectronic satisfaction. The price of a waveguide is usually mall by comparison with the cost of manufacturing and esting the assembly in which the waveguide is used. ailure of a waveguide, therefore, to meet requirements ght jeopardize a costly investment in labor and mateals and increase operational failures.

Titeflex Waveguides, both rigid and flexible, are mpetitive in price. They are much more. They are ade to such close tolerances, and so carefully inspected nd tested under quality control supervision that you n accept our test figures, if you choose to, without plicating inspection.

Titeflex is valued as an authority in working out fficult waveguide problems; and as a source of dependole delivery—two points you may want to keep firmly mind. We have the plant, the productivity, and the ople-ready to help you. Write for information and e literature.



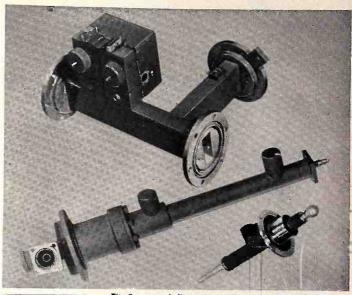
Waveguide

ts by this department out a thorough electrical ck-up. Every single Titeflex ible Waveguide is tagged beshipment with its test score

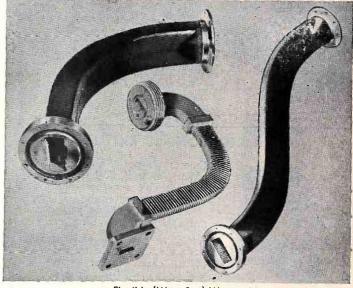
JAN-W-287 specifications.

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.





Titeflex specializes in the design and fabrication of RIGID rigid waveguide components such as directional couplers, rotating joints, duplexers, mixers, adaptors.



FLEXIBL

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.

### WAVEFLEX (Flexible Waveguide) Engineering Data

M	ATCHES RIG		FLECT	DIGAL	2000	- D.T C			HVCICA	I DDO	DEDTI	TC		
	WAVEGILLDE		LLLUI	RICAL	L PROPERTIES			PHYSICAL PROPERTIES MOLDED ASSEMBLIES						
	MATEGORDE		Frequency	Wave			Power							
A-N Type	0.D.	I.D.	Band KMC/SEC	Length cm,	Atten- uation db/Ft.	Max. VSWR	Rating Mega Watt	Wave- Flex No.	Ε	Н	Twist Deg./ Ft.	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		
	RG-69/U RG-48/U RG-49/U RG-50/U RG-51/U RG-52/U	RG-69/U 6.66x3.41 RG-48/U 3.0x1.5 RG-49/U 2.0x1.0 RG-50/U 1.5x.750 RG-51/U 1.25x.625 RG-52/U 1.0x.50 RG-91/U .702x.391	RG-69/U 6.66x3.41 6.50x3.25 RG-48/U 3.0x1.5 2.84x1.34 RG-49/U 2.0x1.0 1.872x.872 RG-50/U 1.5x.750 1.372x.622 RG-51/U 1.25x.625 1.122x.497 RG-52/U 1.0x.50 .900x.400 RG-91/U .702x.391 .622x.311	RG-69/U 6.66x3.41 6.50x3.25 1.12-1.70 RG-48/U 3.0x1.5 2.84x1.34 2.6-3.95 RG-49/U 2.0x1.0 1.872x.872 3.95-5.85 RG-50/U 1.5x.750 1.372x.622 5.85-8.2 RG-51/U 1.25x.625 1.122x.497 7.05-10.0 RG-52/U 1.0x.50 900x.400 8.2-12.4 RG-91/U .702x.391 .622x.311 12.4-18.0	RG-69/U 6.66x3.41 6.50x3.25 1.12-1.70 20 RG-48/U 3.0x1.5 2.84x1.34 2.6-3.95 10 RG-49/U 2.0x1.0 1.872x.872 3.95-5.85 5 RG-50/U 1.5x.750 1.372x.622 5.85-8.2 4.5 RG-51/U 1.25x.625 1.122x.497 7.05-10.0 3.5 RG-52/U 1.0x.50 .900x.400 8.2-12.4 3 RG-91/U .702x.391 .622x.311 12.4-18.0 2	RG-69/U 6.66x3.41 6.50x3.25 1.12-1.70 20 .018 RG-48/U 3.0x1.5 2.84x1.34 2.6-3.95 10 .045 RG-49/U 2.0x1.0 1.872x.872 3.95-5.85 5 .063 RG-50/U 1.5x.750 1.372x.622 5.85-8.2 4.5 .10 RG-51/U 1.25x.625 1.122x.497 7.05-10.0 3.5 .10 RG-52/U 1.0x.50 .900x.400 8.2-12.4 3 .15 RG-91/U .702x.391 .622x.311 12.4-18.0 2 .2	RG-69/U 6.66x3.41 6.50x3.25 1.12-1.70 20 .018 1.02 RG-48/U 3.0x1.5 2.84x1.34 2.6-3.95 10 .045 1.02 RG-49/U 2.0x1.0 1.872x.872 3.95-5.85 5 .063 1.04 RG-50/U 1.5x.750 1.372x.622 5.85-8.2 4.5 .10 1.05 RG-51/U 1.25x.625 1.122x.497 7.05-10.0 3.5 .10 1.05 RG-52/U 1.0x.50 .900x.400 8.2-12.4 3 .15 1.05 RG-91/U .702x.391 .622x.311 12.4-18.0 2 .2 1.08	RG-69/U 6.66x3.41 6.50x3.25 1.12-1.70 20 .018 1.02 10  RG-48/U 3.0x1.5 2.84x1.34 2.6-3.95 10 .045 1.02 2.6  RG-49/U 2.0x1.0 1.872x.872 3.95-5.85 5 .063 1.04 1  RG-50/U 1.5x.750 1.372x.622 5.85-8.2 4.5 .10 1.05 .570  RG-51/U 1.25x.625 1.122x.497 7.05-10.0 3.5 .10 1.05 .440  RG-52/U 1.0x.50 .900x.400 8.2-12.4 3 .15 1.05 .25  RG-91/U .702x.391 .622x.311 12.4-18.0 2 .2 1.08 .20	RG-69/U   6.66x3.41   6.50x3.25   1.12-1.70   20   .018   1.02   10   .0404   .045   .02   .02   .045   .02   .02   .045   .02   .	No.   No.	RG-69/U   6.66x3.41   6.50x3.25   1.12-1.70   20   .018   1.02   10   S6004-416   13   25   3.0x1.5   2.84x1.34   2.6-3.95   10   .045   1.02   2.6   S6004-428   3.0x1.5   2.84x1.34   2.6-3.95   10   .045   1.02   2.6   S6004-128   3-1/2   5-1/2   3.0x1.5   3.0x1.	Columbia   Columbia		

### Other Titeflex **Products**



The Titeflex Connector—One basic plug, 3 types of receptacles, 16 shell sizes, AN8-36, over 300 insert arrangements.



Titeflex Radio Shielding is custommade for eliminating radio interference especially in radar-equipped locations.

SYNCHRONOUS MOTORS

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Illustrated and briefly described below are typical precision Cramer Timers special interest to manufacturers and users of electronic apparatus. All Cramer P ducts are designed and built with DEPENDABLE performance as the essent specification. Our General Catalog and supplementary Bulletins contain complete details and will be sent promptly on request.

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TYPE TE



TYPE TEC

We manufacture a very complete line of standard Time Delay Relays covering all usual time range requirements and with operating characteristics to meet every functional need. All are built to extremely high standards of quality and tested for overall accuracy, inclusive of setting, within 2%, with repeat accuracy within ½ of 1%. Setting controls are simple, rugged and easily adigred Diele are decigned for the setting controls. justed. Dials are designed for utmost legibility and excellent appearance on the instrument panel. Especially in the case of electronic tube warmup control timers and similar applications, the absolutely dependable performance and maintained accuracy of Cramer units are important safeguards.

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TYPE TF2

### SYNCHRONOUS MOTORS



Cramer Type SX Synchronous Motors, as used in Cramer Timers and available for chart drives and other instrument and control applications, are the finest power units available for this exacting service.

Compact, powerful and precision built, they feature the following important characteristics:

- Extremely high torque of 30 in. oz. at
- Instantly self-starting; reaches syn-chronous speed within 2 cycles.
- Stops within one pole of motion (1/60
- Low rotor speed, 240 r.p.m. at 60 cycles.
- Motor lubricated for life; operates over range of 0° to 125° F. With special lubricant, starts instantly at -65° F.

Available in standard output speeds from 60 r.p.m. to 1/24 r.p.h. also in clutch and reverse clutch types. Send for Motor Bulletin 10B.

#### PERCENTAGE TIMERS



Designed to control percent of time in which electrical circuit is closed or open out of definite time cycle. Used to regulate input to electrically operated furnaces, ovens or heaters, etc. Also to control operating time of apparatus, proportionate flow of materials, etc. Send for Percentage Timer Bulletin.

### RUNNING TIME METERS



TYPE E2

Typical of this important series instruments is the Cramer Mol E7, which is equipped with a speul reset counter and is powered via the dependable, long service Crain SX S-L-O-W speed Synchronis Motor, with precision heavy construction throughout. Sev models, of course, for all purp s. Write for Running Time Mar Bulletin.

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TYPE HT1



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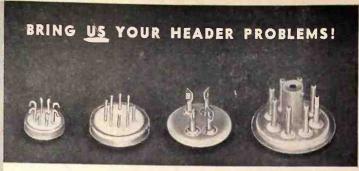
Running Time Meters Percentage Timers Synchronous Motors

Chart Drives



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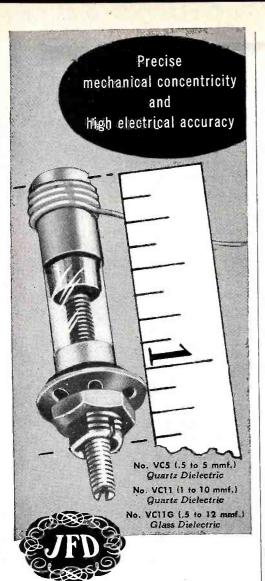
STILL DOESN'T SUIT YOU? Tell us what you do need; perhaps one of our other standard units will fill the bill. Or, we'll be glad to design a special unit for you (as we've done for many others.)

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10,000 megohms insulation resistance minimum.

minimum.

minimum.

Operating temperatures, -55 C. to +125 C. with glass dielectric. And -55 C. to +200 C. with quartz dielectric.

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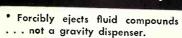
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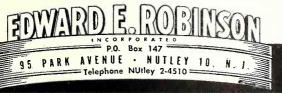
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100 kc to zero cps

Any symmetrical or unsymmetrical waveform

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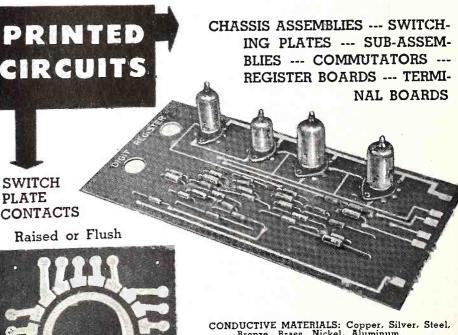
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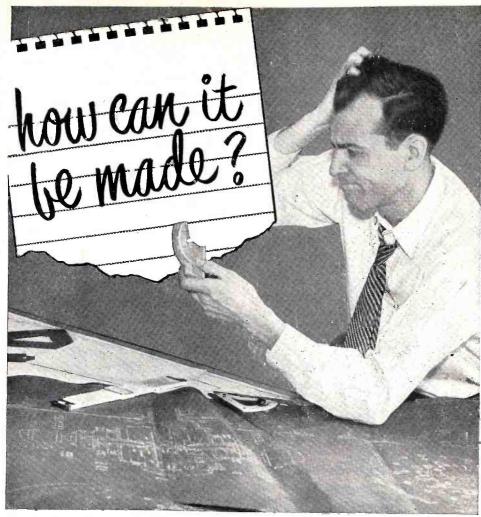
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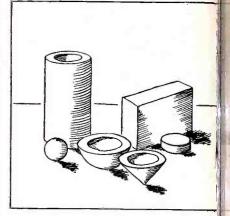
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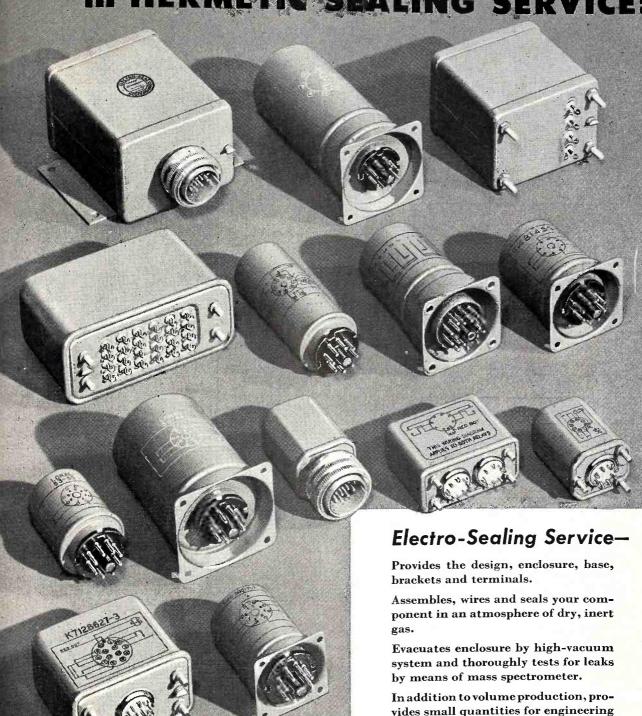
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3C23 THYRATRON

NL-618P RECTIFIER

NL-1001 IGNITRON

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Type Numb	er	G Fill	as ing	Outpu Amper		s. Inve	rse	Fila- ment Volts	hila- ment Amperes
NL-3C23		Arg. &	Merc.	1.5	6	12	50	2.5	7
NL-710/601	1	Arg. &	Merc.	2.5	30	12	50	2.5	9
NL-714		Arg. &	Merc.	1	3	12	50	2.5	5
NL-715/555	7	Mercur	у	1	3	50	00	2.5	5
NL-740		Arg. &	Merc.	4	50	12	50	2.5	16
NL-741		Mercur	у	4	50	50	00	2.5	16
	A	HAL	F-W	AVE	RECT	IFIE	RS		
NL-249C		Mercur	у	.64	2.	5 75	00	2.5	7.5
NL-615		Mercur	У	2.5	10	20	00	2.5	7
NL-617		Mercur	у	5	20	10	00	2	12
NL-618		Xenon		6.4	40	7	50	2.5	18
NL-623		Mercur	У	15	45	5	00	2.5	20
NL-627		Mercur	У	20	120	10	00	2.5	26
NL-649/583	4/249R	Mercur	у	2	10	9	00	2.5	7
#		FUL	L-W	AVE	RECT	IFIER	RS		
NL-600		Arg. &	Merc.	1	4	9	00	2.5	6
NL-604		Arg. &	Merc.	2.5	10	9	00	2.5	12
			IC	SNIT	RONS	-1/-d1			
				MAX	IMUM RA	ATINGS			
Type Number	Sur	oply olts		mum	Corresponding Curre DC-Amp	nt C	ximu urren -Amp	t	orrespond- ing Demand
NL-1001	250-6	00 AC	150	Kva	4.9		9.0		50 Kva
NL-5552	250-6	00 AC	1200	Kva	75.6		140		100 Kva
NL-5822	1500	peak	1200	peak amps.	16.0		56	13	peak 336 amps.

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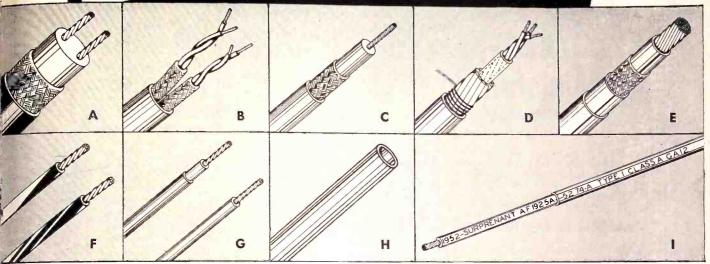
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"Spiralon"—"Surco-Spiralon" color coding is available on all vinyl and polyethylene insulated wires with or without nylon jackets. One, two, or three color stripes are available in the standard Nema colors providing almost unlimited color identifications.

Solid color insulation is also available in the 10 standard Nema colors.

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"Surco" Tubing—"Surco" vinyl tubing is available in special formulations to provide low temperature (-65°C), high temperature (U.L. approved for 105°C), high dielectric strength, flexibility and colors. Standard compounds are carried in stock in regular sizes. Polyethylene and nylon tubing are also available and are carried in stock in natural color in limited sizes. S-18-A conforms to 12047-A.

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.



"Surflene" Insulated Hook-up Wire—"Surflene" is extruded trifluorochlorethylene and is noted for its outstanding resistance to heat, abrasion, most chemicals, and fuming nitric acid. It has high dielectric strength and insulation resistance. It is especially adapted for small size hook-up wire for high temperature operation and for totally enclosed application. "Surflene" is available in thirteen solid colors to insure positive circuit identification. "Spiralon" colors not available as yet. Colors available at present are as follows: Red, orange, yellow, light green, dark green, blue, pink, gray, tan, black, brown, white, and clear.







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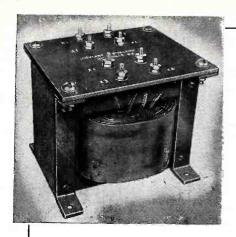
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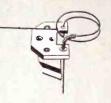
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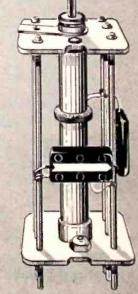
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IMPEDANCE TABLE	OUTPUT LEVEL
L-35-50 ohms	58.7 db below 1 Milliwatt per 10 microbar signal
M—150-250 ohms	59.5 db below 1 Milliwatt per 10 microbar signal
H—High	57.0 db below 1 volt per microbar

MODEL	CABLE	CODE	LIST PRICE
"300"	20 ft.	RUDOW	\$125.00
"315"	20 ft.	RUDOX	\$ 75.00

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### TYPES 747 AND 748 - LINEAR

Similar in their general characteristics and construction, these potentiometers are precision-built to close tolerances and are guaranteed for long service life and sustained accuracy. Type 747 has a nominal diameter of 2 in., Type 748 is about 3 in. in diameter. Either can be ganged in assemblies of up to 10 cups, or combined with other units having non-linear windings to meet special application problems.

### TYPE 746 - FOR EXTREME ACCURA



Available in both linear and non-liner windings, this unit offers several unusal features. All-metal construction makes runusually high accuracy and permits garing up to 20 units on a single shaft. It vidual cups in a gang are easily replad where necessary. Phasing adjustmen a simple and very accurate. Type 746 has we torque and is small in size.

### TYPE D-C-P (Differential-Computing Potentiomets)



With the Type D-C-P you can combine of input variables and obtain an output at is proportional to their sum or different. Instead of using terminal lugs, the D-P provides for external connections to wing ends and wiper by means of three casilver slip rings to permit continuous retion of the body as well as the shaft.

### SPECIFICATIONS OF FAIRCHILD PRECISION POTENTIOMETERS (Nominal Values)

	TYPE 746	TYPE 747	TYPE 748	TYPE D-C-P
Resistance, onms, max. Linear Non-Linear	100,000 <u>+</u> 3%	100,000 ±5%	150,000 ±5%	150,000 ±5%
Electrical Function Angle, deg., max.	320 nominal	351.3 +0.5	354.5 +0.5	354.5 +0.5
Electrical Contact Angle, deg., max.	340	351.3 (+4, -0)	354.5 (+4, -0)	354.5 (+4, -0)
Mechanical Rotation	Continuous	Continuous	Continuous	Continuous
Functional Tolerance (guaranteed), per cent Linear Windings Non-Linear Windings	$\pm 0.5$ $\pm 1.0$ or better	<u>+</u> 0.15	±0.10	<u>+</u> 0.10
Mechanical Accuracy Concentricity (shaft to pilot bushing), in., FIR max. Radial shaft play, in. max. Shaft	0.001 0.0009 Centerless ground to 0.2497-in. dia. (+0.0000, -0.0002 in.)	0.0025 0.0015 Centerless ground stain- less steel to 0.25-in. dia. (+0.0000, -0.0005 in.)	0.0025 0.0015 Centerless ground stain- less steel to 0.25-in. dia. (+0.0000, -0.0005 in.)	0.0025 0.0015 Centerless ground st less steel to 0.25-in. (+0.0000, -0.0005
Pilot hub	Machined to 0.5000 in. (+0.0000, -0.0005 in.)	Machined to 0.7500 in. $(+0.0000, -0.0005 \text{ in.})$	Machined to 0.7500 in. $(+0.0000, -0.0005 in.)$	Machined to $0.7500$ ( $+0.0000$ , $-0.0005$
Torque, ozin. per cup	1.5	1.0	1.0	1.0
Wattage (rated at 40C ambient temperature)	2.5	4	5	5
Terminal Voltage, max.	400	400	400	400
Voltage Breakdown at Sea Level (60 cycle) RMS	900	900	900	900
Taps, number per cup	1 <b>b</b>	12 c	16 <b>c</b>	d
Operating Ambient Temperature Range, deg. C	−55 to +71	−55 to +71	-55 to +71	−55 te +71
Dimensions, in. Diameter Length (one cup), max. Added length per unit ganged	1.750 0.800 <u>+</u> 0.009 0.580 <u>+</u> 0.002	2.093 1.1156 0.594	3.093 1.1156 0.594	3.093 1.219

- a Maximum resistance range depends on requirements. Tolerance on over-all resistance of non-linear windings is ±5%.
- b Two taps can be provided by slight design modification using terminal board clamp screw modified for wiper terminal. 19 taps can be provided by addition of dummy cup section.
- c Depending on spacing requirements and without moving bridge or
- d No slip rings provided for taps, but within the cup 16 taps can be proved depending on spacing requirements and without moving bridge or vertexminal

SAMPLE POTENTIOMETERS IN A HURRY! Send your potentiometer problems to the Fairchild Potentiometer Sample Laboratory and we'll show you how to solve them. Sample units can be designed and built at nominal cost in 4 to 6 weeks after receipt of approved specifications. For full details write to Fairchild Camera and Instrument Corporation, 88-06 Van Wyck Boulevard, Jamaica 1, New York, Department 140-28J.



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### SUPER-DRIVE GRID WINDER

FOR HIGHER PITCH PRECISION TO 500 T.P.I. AND OVER

### THE PROBLEM:

to produce grids of higher pitch and top precision at greater speed . . . and, at the same time, to cut labor and maintenance costs.

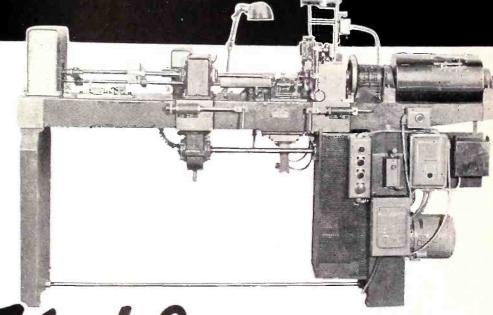
### THE SOLUTION:

Kahle developed a grid winder with extra heavy, oversize parts to provide greatly increased smoothness and sensitivity of operation. Vibration was cut to a new low by carrying main and draw spindles on extra large bearings, by using flexible couplings and by replacing ratchet and pawl with gears. Lubrication is fully automatic requiring nothing more than occasional attention to the oil level.

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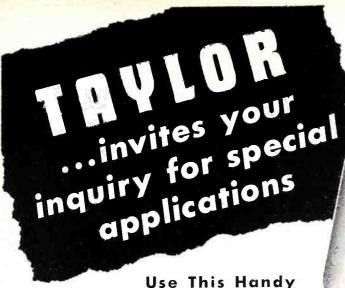
- spool carriage rides in its own two bearings and is dynamically balanced
- main and draw spindles are extra long; each mounted on two individual bearings
- double-row precision bearings are pre-loaded, extra large, anti-friction
- lubrication is provided by the Bijur fully automatic system
- mandrel head, draw spindle and cam shaft drives are sealed and run in an oil bath
- lead screw and nut are never disengaged, assuring exact register at all times
- exclusive gear and clutch arrangement operates instantly at a flick of the finger
- pneumatic cutter rises, cuts and recedes automatically leaving mandrel completely accessible
- network tension control of grid wire spool is a special hysteresis-magnetic brake
- cutting, notching, peening knives are easily adjustable to micrometer precision
- side wire (mica-stop) swaging
- smooth leg gapping; constant and variable pitch
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This current transformer cast in Araldite Resins is 12 feet high . . . 30 inches at widest dimension . . . and weighs approximately 2600 pounds!

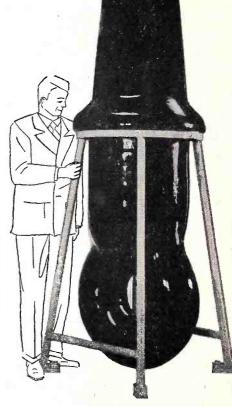


ARALDITE RESINS HELP PER-FECT PERMANENT TROUBLE-FREE SLIP RING ASSEMBLIES.



Wire leads are securely imbedded in ARALDITE RESINS. Hard silver concentric rings are plated to this precisely machined one-piece plastic form making rings integral part of complete unit in which "specs" are met with degree of accuracy never before achieved in production, for all sizes and (Courtesy Electro-Tec Corp.) quantities.

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\*Reg. U. S. Pat. Off.

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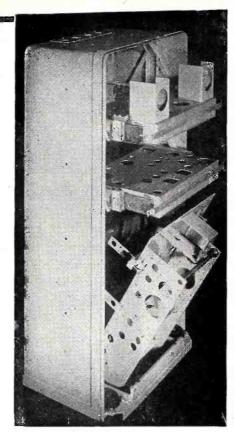
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Solve all your difficult angle jobs! End make shift methods, delays and spollage with this famous PALMGREN ANGLE VISE. Ideal for Drilling, Milling, Griding, Fliting, Fitting, Marking and hundreds of jobs requiring speed and accuracy of angles on machine or bench. Set at any angle up to 90 degrees and lock—it's ready for see. Accurately graduated, every part of vise is accurately machined. Jaws of steel 2½" wide. 1 Plain, 1 Grooved for holding round pieces, Auxiliary Bases for machine or bench use. Swivel "M" Base shown \$3.00 Extra. Order NOW! Today!

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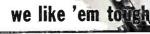
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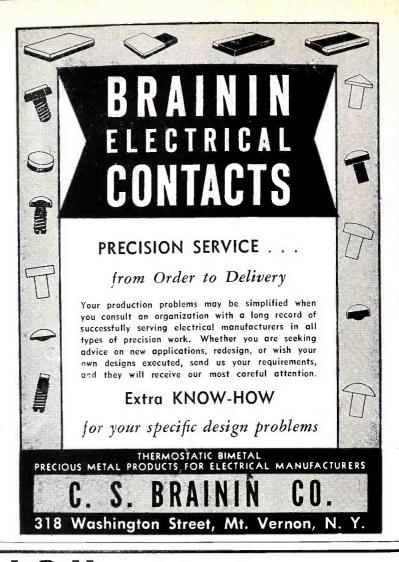
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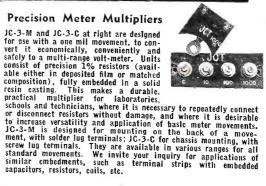
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World's finest dynamic. Laboratory calibrated. For TV, FM, AM. Broadcast, recording and public address. No closely associated auxiliary equipment required. Response: 50 - 15,000 c.p.s. flat within  $\pm$  2½ db. Level: 56 db below 1 volt/ dyne/sq. cm.







#### The Model TV-2 Television Booster



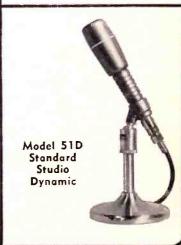
The Turner Booster consistently produces excellent pictures under receiving conditions that render many other boosters nearly useless. Turner's cascode circuit stabilizes the picture, reduces noise and snow to a minimum. The TV-2 also amplifies FM, aviation and mobile radio signals.



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Detailed Data on Request





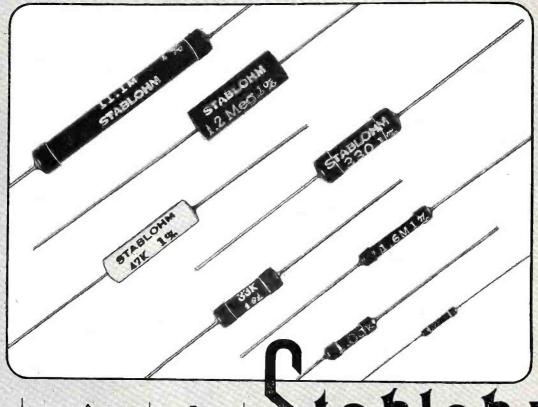
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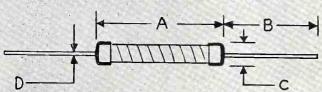
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Crystals licensed under patents of the Brush Development Company

Canada:

### Precision Microcrystaline ARBON FILM RESISTORS





STABLOHMS are 1% precision resistors made by coating a specially treated ceramic core with a film of micro-crystalline carbon. The great stability of the resistor so formed

			DIMEN	SIONS
TYPE	WATTS	A	В	С
CM	1/4	7/16	11/2	0.095
C-15	1/2	%6	11/2	0.160
CA	1/2	13/16	11/2	0.160
C-20	1/2	11/16	11/2	0.295
C-176	1/2	1	11/2	0.282
C-900	1/2	1	2	0.350
C-25	1	15/16	11/2	0.295
C-30	2	21/16	11/2	0.295
	Note 1: Heri	metic seal in	ceramic case	

**Tolerance:** ±1% ±2% ±5%

Temperature Coefficient: 180 to 590 ppm, depending upon resistance.

Voltage Coefficient: 0.002% per volt maximum.

Humidity Sensitivity: After 5 cycles from -55°C to +120°C the change in resistance averages 0.05%. makes it ideally suited for many applications in which precision and stability under widely varying ambient conditions are important requirements.

D	MIN. RES.	MAY DEC	
		MAX. RES.	INSULATION
0.016	100 ohm	500 K	Varnish
0.032	100 "	1 meg.	"
0.032	100. "	5 "	
0.032	100 "	5 "	ır
0.032	100 "	5 "	See Note 1
0.028	100 "	10 "	See Note 2
0.032	100 "	10 "	Varnish
0.032	200 "	20 "	4 01 111211

Note 2: Moisture Resistant Seal in Phenol Plastic Case

Overload Sensitivity: May be overloaded 100% for short times without permanent resistance change.

After 100 hours at 125°C ambient (1/2 watt resistor dissipating 0.1 watt )average change in resistance is less than 0.1%.

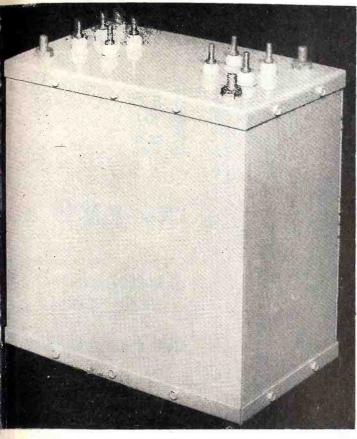
Peak Voltage Rating: Maximum instantaneous peak voltage is 6000 volts.

### CHASE RESISTOR COMPANY

9 RIVER STREET

MORRISTOWN, N. J.

## "ZERO" PHASE SHIFT



## Specifications TRANSFORMER #E10YY8

		′ ′
PRIMARY	120 Volt	60 Cycles
SEC #1	90 Volt	5 Amperes
SEC #2	45 Volt	5 Amperes
SEC #3	45 Volt	5 Amperes

VOLTAGE DIFFERENCE between sec #2 and sec #3 with identical loads . . .

 $\pm 0.02\%$ 

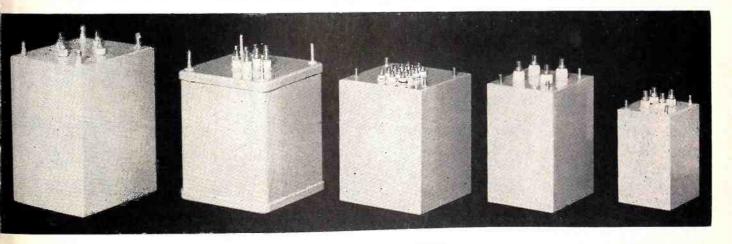
PHASE SHIFT between sec #2 and sec #3 with identical loads . . .

Less than 0.1 milliradian

With FULL LOAD on one winding And NO LOAD on other winding

Less than 0.5 milliradian

## MIL-T-27 TRANSFORMERS (All Families)



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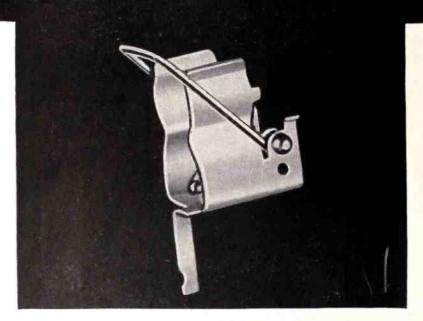
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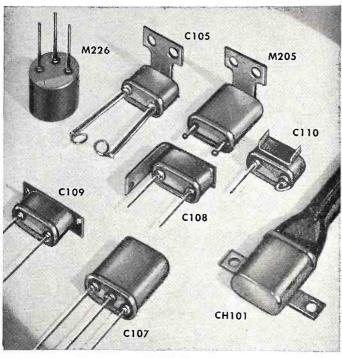
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# hermetically sealed 3\*

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Bright plated or dull black finish. Terminals to customer specification. Thermostats shown approximately  $\frac{3}{2}$  size.

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\*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



manufacturing company, inc.

MANSFIELD, OHIO

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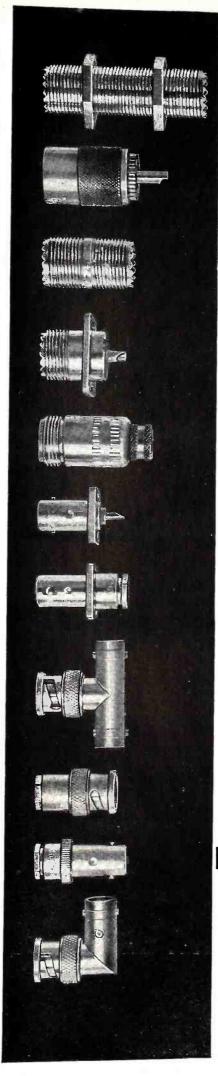
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EPI manufactures all types of RF CON-NECTORS and fittings; made by craftsmen skilled in their field, to rigid government specifications. Our Engineering Department will be pleased to quote on your special requirements. Check EPI first for Quality, Price and Delivery.



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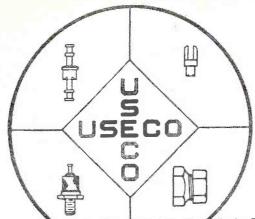
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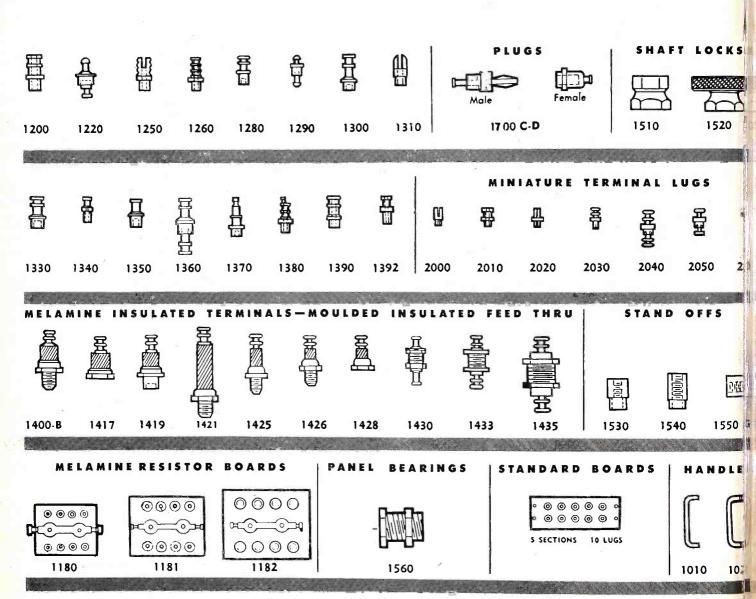
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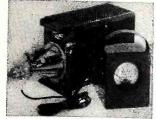
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# TERMALINE Coaxial Line Instruments

TERMALINE Direct-Reading RF Wattmeters 30 mc-2500 mc; 50 ohms; ½w.-5kw.



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 mounte in aluminum housin separate from termina tion
67C	30-500 me or 30-1000me	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 re quired above 500 watts
824	30-220 mc	5000 W (Water cooled)	1	0-5000 <b>W</b>	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.



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 coaxial assembly and distribution of resistance along length of ter surface of resistor.

Major use is as a dummy load for high frequency transmitters, ng non-radiating, adjustment of transmitters can be made with-yiolation of FCC rules. Thousands are now being used in mili-y equipment. It is incorporated as standby in many commercial nsmitters and as a test load.

leboM	Max. Power	Best Freq. Range	VSWR	Input Connector
80-5 <b>F</b>	5 W	0-11 KMC	1.15	Type N Female
80-5 <b>M</b>	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
82 <b>C</b>	2500 W**	0-3 KMC	1.2	Coplanar. Fitting and cable assemblies for all flex and rigid lines available

\* At max rating fan necessary

0-11.000 mc

\*\* Water cooled

50 ohms

#### COAXWITCH—Coaxial Selector Switch



Cut-away View Model 74 is a 50 ohm switch for use in coaxial circuits. Characteristic impedance naintained through all switch details and low standing wave ratios result. Y.S.W.R., switch is comparable and as good as the connectors and cable which it is used.

MODEL 74 SINGLE COAXIAL CIRCUIT SIX POSITIONS (SELECTOR OR TAP SWITCH) 0 0 0 (2)

MODEL 718

SINGLE COAXIAL CIRCUIT
EIGHT POSITIONS
(SELECTOR OF TAP SWITCH) (0) (0) 0 0 0

MODEL 72-2 COAXIAL CIRCUIT: TWO POSITIONS (OPDT, etc.)

WO COAXIAL CIRCUITS
REVERSING SWITCH
(DPDT, etc.)

MODEL 72R

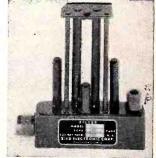
5w.-2500w.

SOLID LINES INDICATE POSITION 1 SOLID LINES INDICATE POSITION 1 DOTTED LINES INDICATE POSITION 2

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.

N PASS RF FILTERS Suppression of low order harof 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 ½ db and in stop band 40 db or better is realized.

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



Model 844



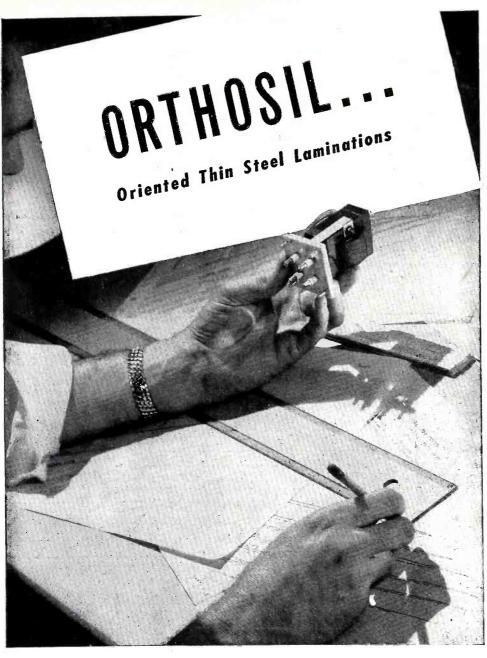
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Developed primarily for frequencies of 400 to 2000 cycles, these thin laminations are also adaptable to the audio ranges.

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OrthoSil laminations in standard as well as in special shapes. Our UI and EE series are designed especially for the OrthoSil, and are excellent for 400 cycle applications. These silicon steel laminations will frequently replace scarce nickel materials.

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Specialists in Magnetic Materials - Permanent Magnets and Laminated Cores



THOMAS & SKINNER Steel Products Company
1120 East 23rd Street - Indianapolis, Indiana

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#### FREQUENCY DIVIDER EQUIPMENT

**Ever Designed** 

There are altogether



5555

37 different outputs divided as follows

2 100 kc
2 20 kc
2 5 kc
4 1 kc
3 500 cps
2 300 cps
3 250 cps
3 200 cps
3 100 cps
7 60 cps
4 50 cps
2 10 cps

The outputs are through a system a double jacks allowing a selection between balanced and unbalanced output depending on how the jack-plug is connected All outputs are 5 volts across 600 ohm. Total distortion less than 1%. The jack are covered with snap covers to preven dust and moisture from entering the unit

By means of a patch panel 26 lines (twires) can be run out from the rack tremote points. Any frequency of the one listed can be brought out to anyone these stations by connecting the propoutput to the line desired.

A Signal Failure Indicator unit causes an frequency that is not correct to be she off.

A Power Supply Unit furnishes 500 M regulated D.C. current for the plate suply of the various units and 50 ampered to volts A.C. for the filaments.

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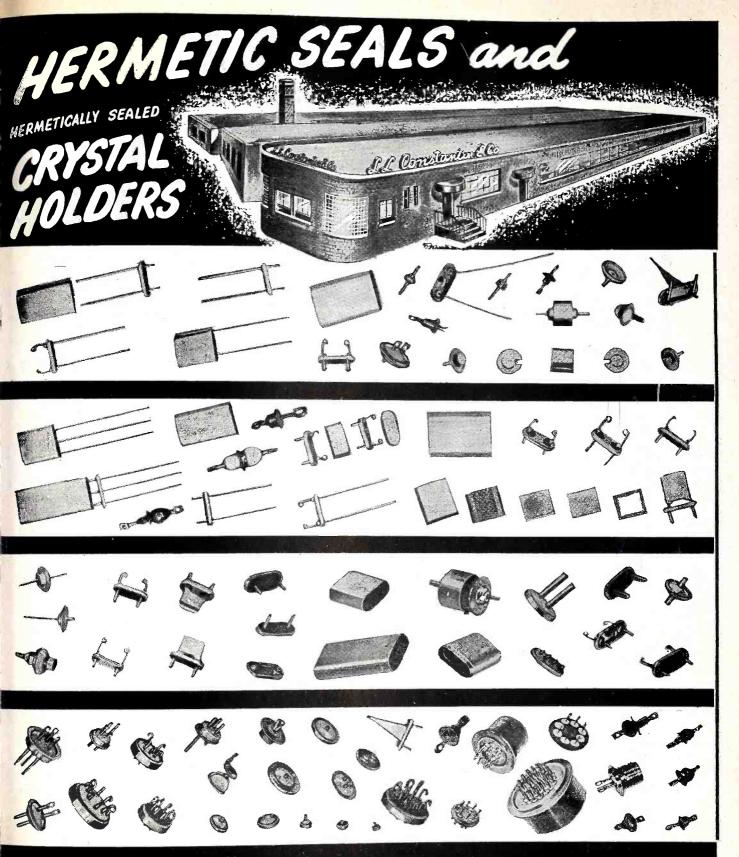
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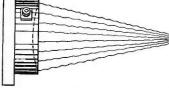
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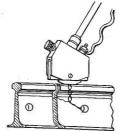
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Turret Lugs. With 2 soldering spaces for 2 or more connections. Sizes range from \(\lambda\_2''\) terminal board thicknesses. Mounted heights from \(\lambda\_2''\).



**Split Lugs.** For potted units where later soldering is advisable. Also standard applications. Hole through shaft allows top or bottom wiring. Fit standard board thicknesses from  $\frac{1}{64}$ " through  $\frac{1}{4}$ ". Mounted heights from  $\frac{5}{62}$ ".



**Double End Lugs.** Provide terminal posts on both sides of board. Through connection for easy wiring. For board thicknesses from  $\frac{1}{22}$ " to  $\frac{1}{4}$ ". Mounted heights from  $\frac{5}{22}$ ".

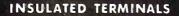


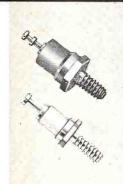
Removable screw permits mounting components directly to screw end. Also provides removable link connections at screw end. 3 sizes,  $\frac{5}{1}$ ,  $\frac{11}{32}$ ,  $\frac{38}{38}$ , diameter. Bright alloy plated for easy soldering.

#### HARDWARE

# Handles in nickel-plated brass are available in 3 sizes ranging from 3 \(^{1}/6''\) length to 6\(^{3}\kappa''\) length. Black alumilite aluminum handle available in 4\(^{3}\kappa''\) length. Ferrules available on brass and aluminum handles.

Other Hardware includes tube clamps, panel and thumb screws, combination screw and solder terminals, shaft locks, terminal board brackets, standoff mounts, etc.





Phenolic. ¼" diameter, in rivet, or screw stud type. Voltage breakdown from 4800 — 11,000 V at 60 cycles RMS.

Ceramic. Silicone impregnated. 5 lengths of dielectric. Voltage breakdown ratings up to 5800 V. Over-all heights range from ¾", including lug. For high electrical stresses over a broad humidity range. Cadmium plated studs. Brass terminals plated for soldering.

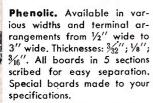
#### INSULATED FEED THROUGHS



Phenolic. Approved XXX material. Brass bushings, nickel plated. Brass through-terminals, silver plated for easy soldering. Rugged, withstand shock and vibration. Two sizes: for 1/4" and 3/4" mounting holes.

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#### TERMINAL BOARDS



Ceramic. Silicone impregnated. Type X1986 with 8 lugs staked in two rows. Standoffs riveted and soldered to ground strap for good grounding dt R.F. frequencies. 11/4" long, 7%" wide. All metal parts plated. O.A. mounted height: 35/4".

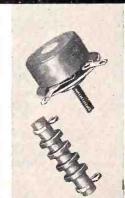
#### SLUG TUNED COILS



**Phenolic.** 3 sizes:  $2\frac{7}{32}$ ;  $1\frac{1}{8}$ , and  $2^{\prime\prime}$  high. 5 standard windings — also special windings or as high-quality phenolic coil forms.

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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.

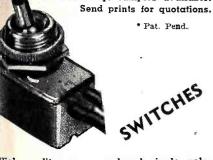
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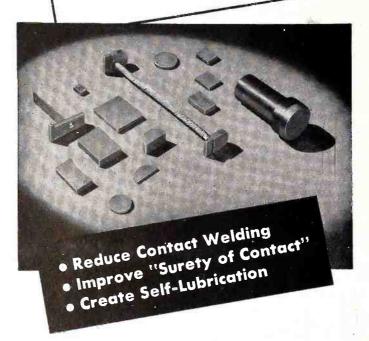
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CONTACTS



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Non-sticking characteristics make Graphite Gibsiloys advantageous for use in circuit breakers and contactors. Rheostats, aircraft turrets, contacts operating against slip rings, and many other sliding contact applications may require Graphite Gibsiloys because of the self-lubricating nature of graphite. Moreover, the low, stable contact resistance and "surety-of-making-contact" quality of these Gibsiloys provide ideal performance in many switches and relays.

In addition to Graphite Gibsiloys, Gibson contact materials include Refractory Gibsiloys, Ductile Gibsiloys, silver, silver alloys, and

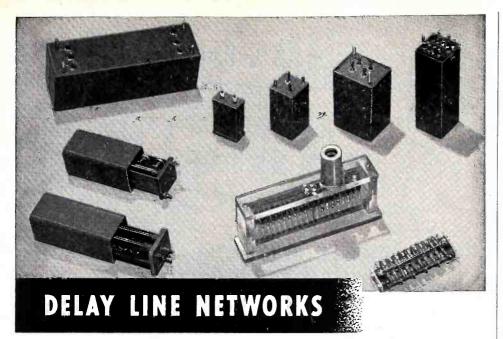
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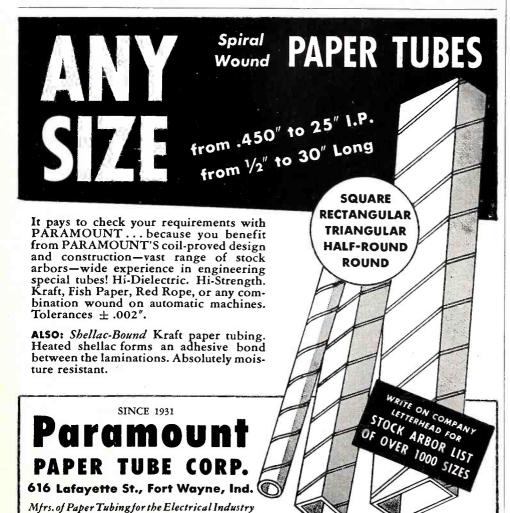
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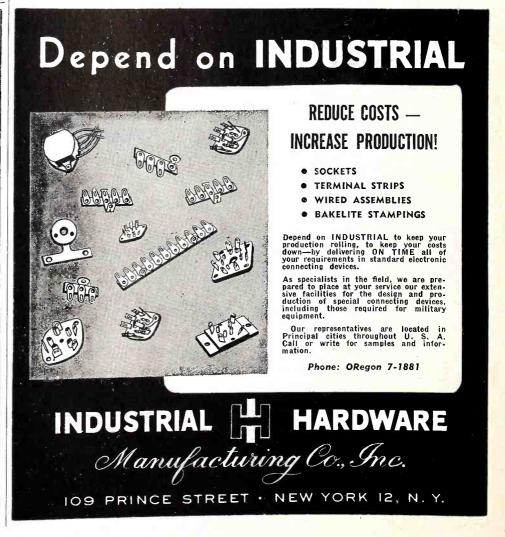
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the right size is importa

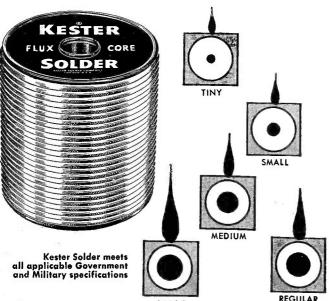
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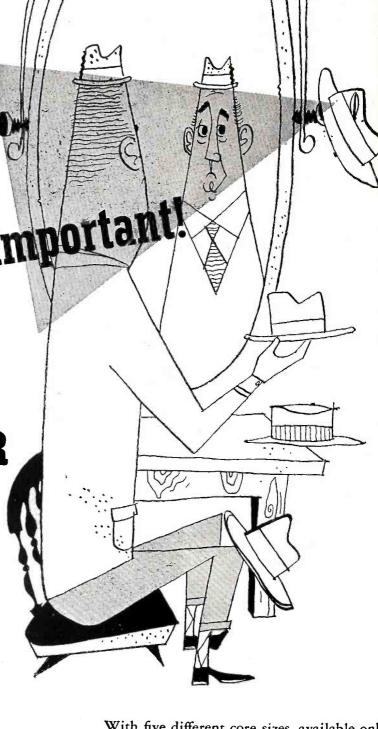
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With five different core sizes, available only in Kester Solder, you're sure of the desired solder-spread and absolute control of flux residue. This is a "job-insurance" feature, only to be had with Kester, that will see you through satisfactorily in your production on those exacting government contracts, and all other soldering.

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#### **ELECTRONIC COUNTERS**—

Industrial Model 10 (illustrated) uses single Decimal Counting Unit plus 6-digit mechanical register; operates at speeds to 6,000 counts per minute, with total capacity of 9,999,999. Dimensions: 61/4" x 71/4" x 61/2";

eight, 6 lbs.; price, \$148.\* High-speed Model 410 with 10,000 s counting speed, \$330.\* Applications: High-speed counting.

#### ULTI-CHANNEL COUNTER-

odel 3501 (not illustrated) provides 5 separate counting chan-Is, each consisting of one Decimal Counting Unit driving a 6ace mechanical register; maximum counting rate is 100 per secd, each channel. Dimensions: 19" x 121/4" x 143/4"; weight, 75 s.; price, \$750.\* Applications: counting manufactured objects, apulse tabulation, etc.



#### PRESET COUNTERS

Accepts and displays counts at rates up to 10,000 per second; may be preset to supply an output pulse at any desired count from 0 to maximum capacity of

e unit (available in any desired capacity). Applications: Producon line control, packaging control, impulse tabulation, statisti-Il use, etc.



#### TIME INTERVAL METER-

Model 510 (illustrated) provides direct reading of elapsed time between any two events in the range of 0.00001 to 1.0000 seconds; accuracy is ± 10 microseconds. Dimen-

ons: 203/4" x 101/2" x 15"; weight, 57 lbs.; price, \$750.\* Model 12, with a range of 0.000001 to 1 seconds and accuracy of  $\pm 1$ icrosecond, \$995.\* Other models available. Applications: Preision timing; determination of viscosity, projectile velocity, timng of relays and switches; calibration of optical shutters, etc.



#### **EVENTS-PER-UNIT** TIME METER-

Model 554 (illustrated) automatically counts and displays the number of events occurring during a precise crystal controlled 1-second time interval,

at rates to 100,000 events per second. Accuracy is ± 1 event. May be recycled either manually or automatically. Dimensions: 203/4" x 101/2" x 15"; weight, 68 lbs.; price \$775.00. Model 556, utilizing 60-cycle line frequency as a time base, \$560. Model 558, 1mc.-\$995.\* Application: precision frequency, pressure or flow measurement, high-speed tachometry, high-speed counting, etc.



#### UNIVERSAL COUNTER AND TIMER-

Model 550 (shown) is a versatile general-purpose laboratory counter-timer combining the features of the Model 554 Events-Per-Unit-Time Meter and Model 510 Time Interval Meter described above, with an added facility for frequency ratio measurements. Dimen-

sions: 191/2" x 213/4" x 15"; weight, 110 lbs.; price, \$1200.\* Applications: high and low frequency measurements; frequency ratios; high-speed counting and timing.



#### **DOUBLE PULSE** GENERATOR-

Model 903, illustrated, supplies either single or paired pulses individually variable in width, amplitude, and spacing. Spacing is variable from 0 to 10 microseconds; rise

time is less than 0.055 microseconds and decay time less than 0.15 microseconds. Dimensions: 141/2" x 93/4" x 103/4"; weight, 181/4 lbs.; price, \$440.\* Applications: checking characteristics of electronic circuits, gates, switches, wide-band amplifiers; measuring counting circuit resolution time, etc.



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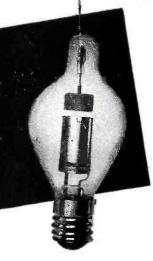


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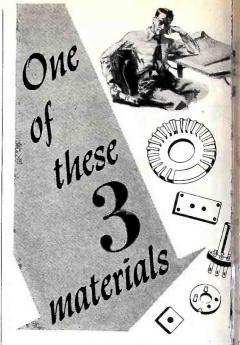


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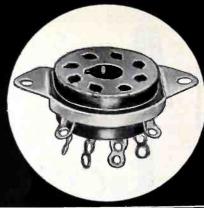
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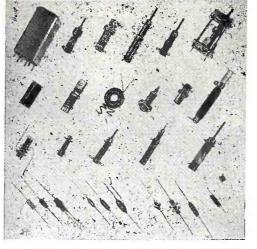


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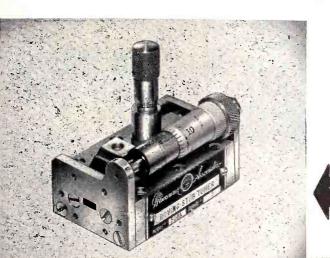
CENTIMETER AND MILLIMETER WAVE

MAGNETRONS — GAS DISCHARGE TUBES — WAVEGUIDE COMPONENTS
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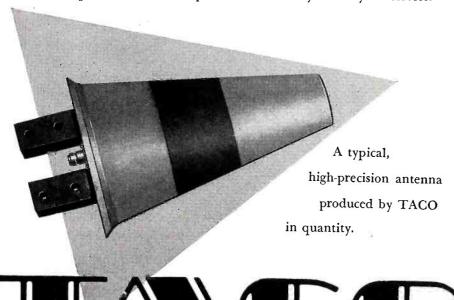
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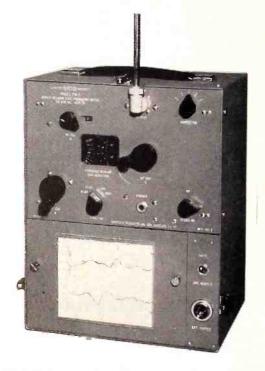
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## MODEL FM-3

DIRECT READING VHF FREQUENCY METER

20—640 MC.— ± 0.001% ACCURACY STABILITY— ± 0.001%—RESETABILITY ± 0.0005%



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#### PERFORMANCE DATA:

#### ACCURACY:

With Constant Temperature,  $25^{\circ}$ C.:  $\pm 0.001\%$ With Variable Temperature, -15 to  $+55^{\circ}$ C.:  $\pm 0.0025\%$ 

#### STABILITY:

Long Term, Constant Temperature:  $\pm 0.002\%$ Short Term, Constant Temperature:  $\pm 0.001\%$ 

#### FREQUENCY RESETABILITY:

Any Constant Temperature: ±0.0005%

For further details, contact either the Factory or your nearest GERTSCH Engineering Representative.

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Measures short time intervals between two closely spaced pulses. Particularly adaptable for measuring speeds of missiles, etc. Basic unit has 100 KC crystal oscillator time base, coupled to a gating and scaling circuit capable of indicating up to 9,999. Crystal frequency can be changed to satisfy other applications as needed. Indicated count easily converted to microsecond spacing between pulses. spacing between pulses,



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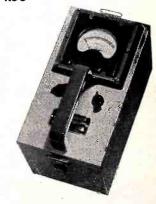
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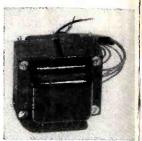


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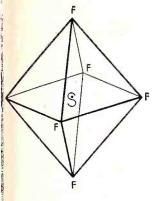
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#### NEW PRODUCTS FOR YOUR PROBLEMS

# INCREDUCTOR Line of Current - Controlled Variable Inductors

Controllable inductor units sold under the trade mark Increductor, utilize the change in permeability which takes



place in a magnetic core as the flux in that core is increased toward saturation. Types are produced for a range of frequencies extending all the way from sub-audio to V.H.F.

Features of the device include:

- 1. Remote Control
- 2. Wide Range
- 3. High Sensitivity
- 4. Fast Response

The basic structure of the Increductor consists of two windings arranged on a common core. One is called the signal winding and is the inductance which is connected into the circuit to be controlled. The other is called the control winding and carries the current which produces the change in inductance. The two windings are arranged in such a way that transformer effect is minimized. Electrostatic shielding between windings is also provided.

Range of inductance control for the individual types varies from 200 to 1 for the higher inductance units to 20 to 1 for V.H.F. units. Most users find that the range is considerably in excess of the requirements, thus permitting operation at a fraction of rated (one

watt) control power.

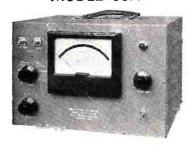
For sweep or FM applications the control winding impedance is low enough to permit sweep frequency rates far beyond the capabilities of mechanical systems. Increductor types are produced which will accept modulation frequencies as high as 150 KC.

The line of standard Increductor units is produced for such applications

- 1. Sweep oscillators of all kinds
- 2. Frequency modulated oscillators
- 3. Automatic frequency control systems
- 4. Remote tuning control
- 5. Switching circuits
- 6. Variable filters

In addition units housing two or more controllable inductors in a common hermetically sealed can are produced for specific applications. The small size of the basic inductor provides great flexibility in arrangement within the housing; hence, it is usually possible to tailor the unit to the customer's exact requirements.

#### PEAK PULSE VOLTMETER MODEL 80A



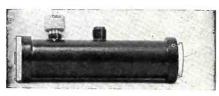
**VOLT RANGES:** 0-10, 0-50, 0-100, 0-500, 0-1000, 0-5000 volts.

**PULSE WIDTH:** 0.25 microseconds to 50 milliseconds.

REPETITION RATES: 10 to 20,000 pps. ACCURACY: ±3% of full scale INPUT IMPEDANCE: 200,000 ohms.

An automatic slideback instrument which secures rapid and accurate readings at pulse widths of .25 microseconds and at 10 pps. Controls include on-off switch, range selector switch, input polarity switch, zero-set control, and peak to peak switch.

#### MINIATURIZED S-BAND CAVITIES



#### TYPICAL DATA:

Length 4½", 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, 3000 mc on CW models. Temperature drifts as low as  $\pm 2$  mc from -50 to +70°C are available. All applicable JAN specifications are met, including shock and vibration.



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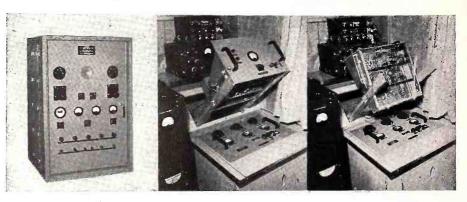
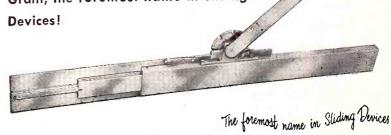


Photo shows Raydist navigation, tracking and surveying system master station where components are installed in vertical position, using Grant Slides at top and bottom of rack. Developed by Hastings Instrument Co., Inc., Hampton, Va.

Grant No. 363 Slide applicable where unit is desired to slide fully out of chassis and tilt for servicing of parts otherwise inaccessible. Capacity: 100lbs./pair. Telescoping, 3 section slide with ball bearing action. Aluminum with steel ball spacers.

There is a Grant Slide to meet every requirement... whether to tilt a unit a total of 180 degrees, lock unit in closed, open or pivoted position or meet load requirements from 25 to 2,000 lbs.—call upon, depend upon—Grant, the foremost name in Sliding



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Ask for Bulletins VF-43-1A-1B-1C-1D, and General Catalog 652

#### NEW DEVELOPMENT

400 Cycle Dual Range -2, 5 and 10 Cycle Steps



del 41-FX — Designed originally for highlity electrical analyzers of heavy aircraft, this meter is finding many additional applications. top window with 13 reeds gives a vernier at indicating 380-420 cycles, with 2 cycle increats in the critical range of 396-404 cycles. The om window frames 21 reeds 300-500 cycles in ycle steps for a general idea of the frequency er test. When used with external switching, e voltages: 200-240; 115; and 30 volts can supplied.

are 400 cycle readings are important, the Model X is the all-round working standard — precise the laboratory, rugged for shop and field.

#### ELAPSED TIME METERS

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del 31-EX (illustrated) also known as runninge or total time meter, registers in 1/10 hours to 99.9 hours, then automatically resets. Normally aked for 60 cycles, 110-130 volts. 3½" standard ter mounting, Variations such as 50 cycles; 230 ts; 0-99,999 hours; and 3" rectangular case allable on special order.

#### SEALED TIME METERS

del 31-EHXX—Completely sealed meter, read-0-9,999.9 hours, same as Model 31-EX above vss-to-metal construction, solder terminals, and and detachable flange, all match XX metal freency meter case. For mounting, use Sketch SK-53. lile not presently stocked, these meters are in 31/2" SEALED Frequency Meters



FHXX Type Meters, sealed, glass-to-metal construction, with solder terminals, meets or exceeds the sealing and electrical requirements of JAN-1-6 and MIL-M-6A including the 3000 volt breakdown, and uses the front mounting dimensions specified. Max. barrel diameter, 2 11/16"; 27%" overall depth behind flange. Various reed groupings and frequency ranges from 12 to 525 cycles and above; 100-130 volts standard. While not regularly stocked, these meters are in production. See print SK-51 and Cotalog 652 SK-51, and Catalog 652.

> 1 1/2" SEALED Frequency Meters



Model 15-FHAC (illustrated half actual size). 60 and 400 cycles, 2 reeds, 8-10 volts, for cathode follower circuit. Widely used on audio oscillators to standardize output. Meets intent JAN-1-6 and amendments on sealed meters. Barrel, 1½" diam-eter; detachable flange, 2.094" diameter; solder terminals.

Model 15-FH (not illustrated)--same case, sealed, 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.

#### NOTE ON METER VOLTAGE

J-8-T Vibrating Reed Frequency Meters of all sizes normally are made with two studs and are designed to be connected across one phase of a multi-phase line. The single phase voltage where the meter will be used thus becomes the voltage to be specified for the meter. Special meters with extra studs are made only for the purpose of reading two or more voltages, not additional phases.

#### FREQUENCY-TIME METERS

Combination Reed-Type 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. Useful on electrical and electronic equipment, also power units, where both frequency and periodic maintenance are important. 31/4" flange, metal case, 4 11/32" overall depth standard. 31/2" 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. For other details, see Elapsed Time Meters in column to the left.

#### INSTRUMENT **TYPE**

#### MOLDED **SWITCHES**

**Fully Enclosed** Single and Multi-Gang Shorting and Non-Shorting 14 and 20 **Positions** 

1 to 6 Decks



Model MS-14-2

All moving contacts enclosed — eliminates dirt and corrosion.

Contact lugs permanently integrated into switch

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 S5-14 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.

Ask for Catalog 652

#### INSTRUMENT **TYPE** LAMINATED **SWITCHES**



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.

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#### Tensolité VINYL PRODUCTS

Stranded Sizes from AWG 40 to 20



CLASS A Hook-up Wire

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CLASS D
Textile-Braid-Covered,
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CLASS E Twisted (multi-conductor)

Cable
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CLASS G
Textile-Braid-Covered,
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CLASS H

Textile-Braid-Covered, Shielded, Twisted (multi-conductor) Cable

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Cable







#### Tensolite custom constructions



Constructions to customer specifications

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#### Special wire and cable assemblies (units)

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Tensolite produces a virtually unlimited variety of miniature wire and cable. Service is prompt, efficient and economical. Write for free samples and complete catalog today, on your company letterhead.



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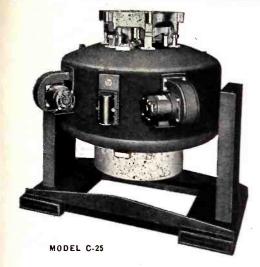
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#### FOR VIBRATION TESTING



#### 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 on aircraft structures.

These exciters are designed to conduct vibration tests to MIL-E-5272 and 41065-B specifications.

Model	Rated	Total	Power	Usable Range
No.	Force	Stroke	Supply	
S-D	10 lb.	⅓ in.	Electronic	20 to 20,000
C-31*	25 lb.	⅓ in.	Electronic	4 to 70,000
C-1*	50 fb.	½ in.	Electronic	4 to 70,000
C-11*	50 lb.	½ in.	Electronic	4 to 70,000
S-3	200 lb.	1 in.	Rotating	3 to 500
C-s	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

\* Also suitable for calibration of vibration pickups.
\*\* Larger sizes available.

Model ACS-25 automatic cycling system for MB Models C-5 and C-25 Vibration Exciters. Exceeds requirements of MIL-E-5272. Provides for (I) Automatic control of frequency and acceleration or amplitude. (2) Automatic amplitude or acceleration control, manual tion control, manual frequency variation.



#### 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, batteryor AC-operated, and portable, these istruments 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 borizontal to vertical use . . , electrically damped . . . maintains calibration over wide temperature ranges . . . resonant frequency below 5 c.p.s. Several models including Type 122 usable at temperatures up to 500°F.





#### VIBRATION ISOLATION



MIL-I-5432 (AN-I-16a) can be met with Isomode\* Type 17 vibration isolators which are available for loadings of ½ 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

OTHER TYPE ISOLATORS also available, including units for special applications; Isomode grommers; mounts with small dimensions. Contact us on your specific requirements.

\* Reg. U. S. Pat. Off.

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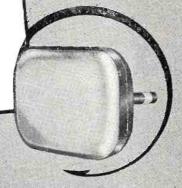
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MODEL 162



#### GLOW TRANSFER COUNTER

- a self-indicating electronic counter using Atomic's designed circuits, with maximum capacity of 1,000,000 counts and maximum speed of 2,000 cps. Cold-cathode glow transfer tubes do all counting, indicating and transferring. Available with manual push button or remote control. Higher counts may be secured by cascading with additional units.

Individual scaling unit glow tube assemblies are available without power supply. Also for preset count and other industrial applications - Kindly write.



#### Precision Amplitude Pulse Generator

HIGH ACCURACY - MODEL 607

Newly designed by Atomic for laboratory and production uses with continued precision and reliability.

Output pulse specifications:

Rise time: 0.75 microseconds Decay time: 1.0 microseconds

Overshoot: none measurable with high impedance load Pulse slope: none measurable with high impedance load Pulse length: 10 to 125 microseconds (adjustable) Pulse height: to 100 volts, positive and negative across

1000 ohms load, minimum

Stability: less than 1% change in output for input variation from 105 to 125 volts

Generators furnished with calibration check switch and power switch for line control.

#### **Atomic's Rapid Data Printer**

Prints 500 per second 3-digit Arabic numerals

Model 10 ABC comprises converter (A); Counter (B); and

Printer (C).

For details on large wind tunnel, guided missile, computor and other projects please write.

#### Atomic's New 20-channel Pulse Height Analyzer

Model 520 allows data to be taken and recorded in 20 channels simultaneously. Provides spectrum data on long-life isotopes in less time and on short-lived isotopes with fewer decay corrections. Adapted readily for gathering data on distribution of fog particle sizes, and on distribution of radar amplitudes and similar distribution studies.

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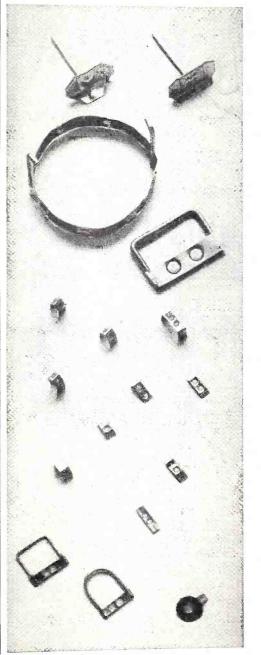
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king LABORATORIES, INC. has been a leading supplier of GETTERS for electron tube production for many years. Throughout tube development we have produced better and more economical GETTERS to the most stringent specifications.

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### LABORATORY PULSE GENERATOR

MODEL

- Internally generated single pulses and recurrent pulses 20 cycles to
- External synchronization 0 to 20 KC from almost any waveform
- Direct reading Recurrence Rate Meter, 20 cycles to 20 KC
- Pulse duration continuously variable and calibrated from 0.1 to 50 a seconds
- Rise and decay times less than 0.03 a seconds, 10% to 90% amplitude
- Position continuously variable and calibrated from 50 a seconds advanced to 50 at seconds delayed with respect to synch output trigger
- Amplitude 1 to 100 volts open circuit, positive or negative, driving impedance 50 ohms
- Amplitude control isolated from un-terminated DC coupled output for maximum flexibility
- Maximum average load current 0.1 amperes automatically limited



MANUFACTURERS OF ELECTRONIC INSTRUMENTS AND PRODUCTION TEST EQUIPMENT

## Pulse Generator and Calibrator



MODEL **PC-100R** 

- Paired pulses 5 to 5000 microseconds interval, 50 cycles to 5 Kc. recurrence rate with meter indication
- Width 1 microsecond, rise and decay times 0.1 microsecond, amplitudes 0-75 volts open circuit, 220 ohm internal impedance
- Polarities and amplitudes independently controlled, separate or mixed outputs
- Sync internal or from external positive 10 volt trigger
- Positive 50 volt sync output trigger coincident with fixed pulse, 220 ohm internal impedance
- Time markers 1, 10 or 100 microseconds; negative pulses 0 to 10 volts, 220 ohms internal impedance
- Amplitude calibration 60 cycle square wave, 0.1 to 100 volts in steps
- Model PC-100 cabinet mounted, PC-100R relay rack panel mounted

Incorporates design of HAZELTINE ELECTRONICS CORP. Model 1456 Senior Pulser

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## a plus feature

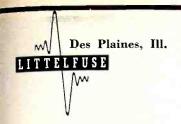
Immediately following the Product Listings in the DIRECTORY SECTION

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.



## Precision Engineered Fuses



**8** AG

361000 Series Instrument Littelfuses—You can rely on the efficiency and high speed action of these fuses—always "quicker than a short circuit". Designed for high-speed action. For the protection of delicate electrical equipment—microammeters, galvanometers, milliammeters, wattmeters, radio "B" circuits, thermocouples, voltmeters, test equipment, telephone systems, small rectifier and power tubes, railway signal meters, set analyzers, therapeutic machines and general instrument protection.



312000 Series Littelfuses—Quickacting fuses—for low time-lag applications. Protective-coated elements, on fuses to 3 amperes, prevent oxidation and promote clean break on fusion. Diagonal element alignment of this fuse assures accurate alignment and calibration, even when the fuse element is expanded by heat.



313000 Series Littelfuses—Slo-Blo fuses with high time-lag to withstand heavy surges—quick on shorts. Designed for circuits with equipment having high inductive or capacitative surges, such as magnets, solenoids, etc., and for circuits with heavy starting currents, such as motors and lamp circuits. Anti-fatigue construction (compound element, with spring and resistor) makes these fuses ideal for intermittent-duty circuits on vibrators, control circuits, hi-tension electric fences, small magnets, coils, etc.



314000 Series Littelfuses — The smallest Underwriters' Laboratory approved fuses in ratings this high. Steatite enclosed, arc-quenching, powder filled fuses. Shatter-proofed against quick shorts. Medium time lag. Recommended for use with amplifiers, rectifiers, battery charging equipment, small generators, control panels, amusement devices, communication and electronic equipment, radios, signal apparatus, small motor circuits, etc.

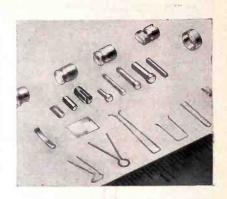
Also, S.F.E., 4 AG, 4 AB, 5 AG, 5 AB Fuses, Fuse Extractor Posts, Fuse Mountings, Fuse Retainers, Fusible Binding Posts.

## NEY GOLD 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

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

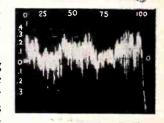
Illustrations at right are typical test results of PALINEY\* #7...a Ney Precious Metal Alloy...being used for sliding contacts on nickel-chrome wire-wound potentiometers in comparison with phosphor bronze contacts.

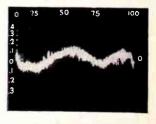
Figures show low initial error and maintained linearity of PALINEY\* #7 performance. Condition of both contacts and windings after test indicate practically no wear.

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 ± .12% and this linearity was maintained throughout the test.

\*Reg. T.M. of The J. M. NEY Co.





Write for your copy of new 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.

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## ESIC

**Red Label Irons** 



These are the irons that are used so universally in factory production lines. They are light weight, finely balanced, and have the coolest handles of any irons on the market. Elements are mounted and held in place with a knurled nut which engages the back end of the element and seats against the shoulder of the case shell, holding the element firmly in place regardless of the most rugged use. They are ideal from a maintenance standpoint for, due to their two piece combination terminal and handle, elements are replaceable in three minutes or less. The only iron on the market designed for use with or without a ground wire.

Irons are normally supplied in four wattages. They are obtainable, when required in quantity, in special wattages at no extra cost. Standard voltages are 105-120 and 220-240. Special voltages may be had. List prices of irons are as follows: No. 38-100 watt \$7.65, No. 58-200 watt \$9.85, No. 78-300 watt \$12.05 and No. 98-550 watt \$14.25. The iron illustrated is the No. 38 and is  $\frac{1}{3}$ actual size.

#### No. 61 Pencil Iron



This pencil iron is only seven inches in length and weighs just 21/2 ounces exclusive of cord. The handle temperature at the point where it is held in the fingers, is actually no higher than body temperature. Diameter of handle is 34" and may be used as a pencil for the most delicate soldering operations. The element construction is of the same type as used in ESICO industrial irons and will give long service. The tip is the so called plug type, held in place with a set screw. Three shapes of tips are available, Type B— $\frac{1}{4}$ " dia. pyramid point, Type A— $\frac{1}{8}$ " dia. straight pencil point and Type C-1/8" dia. bent 90 degrees with a pencil point.

The No. 61 is regularly wound to 25 watts at 105-120 volts, but may be had in higher wattages, when required in quantities at no extra cost. List price of iron is \$5.45. Tips A, B, or C 40¢ each list. Irons are available thru any of the better tool or Radio & Electronic Supply houses. If your distributor can not supply you from stock, send your order direct to us, but please be sure and give name of your distributor.

#### Solder Pots

Ruggedly constructed cast iron pots, with easily replaceable elements.

Model No. 12-3/4 lb cap. 200 watt

Net \$4.95

Model No. 36-21/4 lbs cap. 250 watt

Net \$6.05

Model No. 60-33/4 lbs cap. 325 watt

Net \$7.15



#### **Temperature Control Stand**

This control stand is thermostatically actuated by the tip temperature of the iron. This is the only logical way to control the temperature of a soldering iron, for there is too much lag between element and tip temperature for the application of a thermostat to the element, whether in an iron or a control stand. Cat. No. 5, Irons up to 1" dia. tip; Cat. No. 6, irons 1" to 15%" dia. tips. List price \$7.15



ELECTRIC SOLDERING IRON CO., Inc.

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#### HIGH VOLTAGE **POWER SUPPLIES**

Beta power su
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available from standa
designs THAT HAVE ALREAE
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ous use by satisfied customers.

Below are listed some of the scores of designs available:

250—300 Volts, 600 ma—Model 252 0—1000 Volts, 500 ma—Model 246 0—2000 Volts, 2 ma—Model 223 0—5000 Volts AC, 1 ma—Model 236 0—10,000 Volts AC/DC, 30 ma—Model 231 0—15,000 Volts, 300 microamperes, regulated—Model 501-E

30,000 Volts, 2 ma, Series 201, portable

units

units -30,000 Volts, 30 ma—Model 245 -40,000 Volts, 2 ma—Model 224 -50,000 Volts, 2 ma—Model 242 -60,000 Volts, 25 ma cable tester—Model

2011 0—100,000 Volts, 2 ma—Model 217 0—150,000 Volts, 100 ma cable tester— Model 219 0—250,000 Volts, 5 ma—Model 213

Also available are kilovoltmeters, up to 200 KV DC; electronic microammeters, 0.001 microamps. sensitivity; portable projection oscilloscopes; electronic rheostats.

Write for further details about any of the above or for a quotation on a power supply custom-built to your exact specifications.

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Earl Lipscomb Assoc. 3561 Marquetts St. Dallas, Texas

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E. V. Roberts & Assoc. 5068 W. Washington Blvd. Los Angeles 16, Calif.

Canada

Stark Electronic Instr. Ltd. Ajax, Ontario, Canada

Overseas

Rocke International Corp. 13 East 40 St. New York, N. Y.



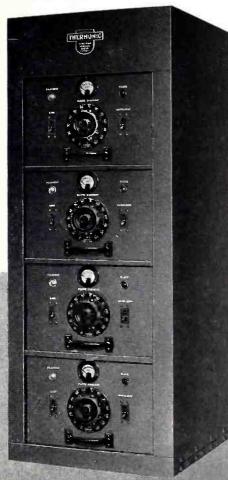
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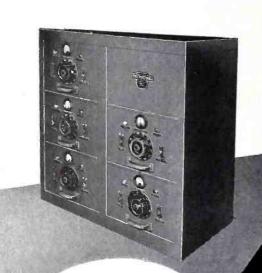
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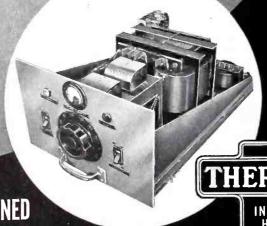
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This new equipment fills the void between low and high power generators. Provides multiples of 2½ KW units in a single cabinet—supplies power to remotely located stations—will prove especially welcome to high production industries.

The flexible "filing" cabinet feature permits quick interchange of units in the event of breakdown. Complete details available. Inquiries invited!

INDUCTION HEATING CORPORATION 181 WYTHE AVENUE • BROOKLYN 11, N.

Largest Producers of Electronic Heat Treating Equipment





### - CML TEST EQUIPMENT PERFORMANCE

#### **Model 1435 Variable Frequency Electronic Generator**

Frequency Range: 0-6000 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 con-

tinuous 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 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.



Similar to Model 1435 except power output is 1400 watts. Power input 1400 Watts.



#### Model 1100-1110 Electronically Regulated **Power Supplies**

Power Source: 105-115-125 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. regulated 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 Li Testing.

Checks equipment for opens or shorts wiring. Checks tolerance of resistors 5%, 10% or 20% as required.

Resistance Test Range: 200 ohms to megohms at 5%. Tests smaller a Tests smaller a

larger values at 10%.

Tests one circuit per second, up to 119 circuits in one cyc PROVIDES NUMERICAL indication of every defective circular

#### Model 1210B Stroboscope

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Output ripple less than 1 millivolt.

Output impedance maximum 50,000 ohms.

Unregulated heater supply 6.3 volts at 5 amp.
Power source requirements 105-125 volts 50-60 cycles.



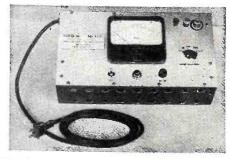
#### Model 1135 Regulated Power Supply

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Output #1: 0-200 ma from 0-170 volts; 160-300 volts in the

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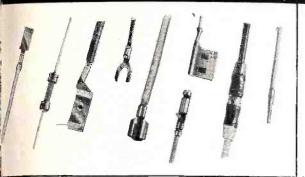
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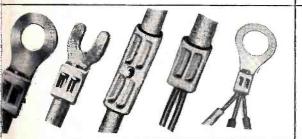
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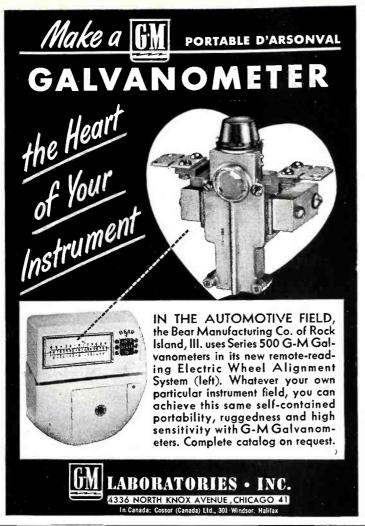


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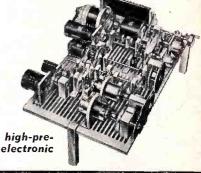
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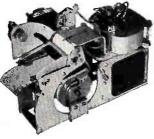
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GENERAL PURPOSE-AC operated driver amplifiers; comprising three direct coupled push-pull stages.

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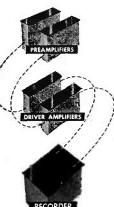
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BIW TYPE PFGV consists of flexible copper conductor insulated with a laminated layer of DuPont Teflon sealed with silicone to form a moisture-proof insulation which remains flexible after exposure to high processing temperatures and may be operated at 200°C continuously. Covered with a unique heat and abrasion resistant braid. BIW Type PFGGV with double braid covering.

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COX-3FS-011-GL or NL		.090	5	6	24	70	.16	Flexible
COX-4FS-011-GL or NL		.125	7	9	17	93	. 21	Cables
COX-2FS-22-NL	#22 str.	.125	10	14	30	50	.16	Small
COX-2FS-22-RS	"	.170	10	25	30	50	.18	diameter
COX-2FS-22-GV		.135	10	18	30	50	. 25	flexible
COX-2FS-22-GGV		.150	10	20	30	5ს	. 28	cables
COX-3FS-22-GL or NL		.170	13	20	20	73	. 25	Smaller than 59/U
COX-3FS-22-GGV		.195	13	30	20	73	.60	Size of 58A/U
COX-3FS-026-GV	"	.240	13	40	20	73	.70	RG-124/U
COX-3FS-026-RS	:	.250	13	45	20	73	.80	Equal to 59/U
COX-4FS-22-GV		.210	22	35	16	93	.90	Size of 62/U
COX-4FS-026-RS		.300	22	50	17	90	1.00	
COX-4FS-026-GV	.026" cw	.245	22	40	17	90	1.00	Size of 62/U
COX-4FS-026-GV		.195	14	30	28	52	.32	Equal to 58A/U
		.165	14	25	28	52	.45	Smaller than 58A/U
COX-2FS-20-GV	W =	.190	26	36	28	52	.52	Equal to 55/U
COX-2FS-032-GV		.185	22	38	46	25	.90	Special type
COX-1FS-16-GV		.260	30	50	30	50	1 25	Equal to 5A/U
COX-2FS-16-GV		.37	72	140	30	50	2.00	RG-115/U
COX-2FS-13-GV		.445	120	200	30	50	4.80	RG-94/U
COX-2FS-10-GV	#10 str. Ag.	.710	220	475	30	50	13.00	RG-93/U
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#391-2 #14 high voltage, #14 ground 5 #18-300 volt control circuits.





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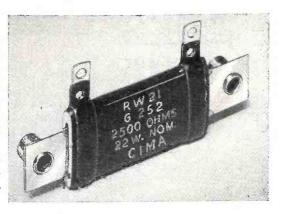
## BOSTON INSULATED WIRE AND CABLE CO.

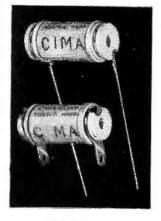
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These and other types available to meet requirements of Jan-R-26A characteristic G & I





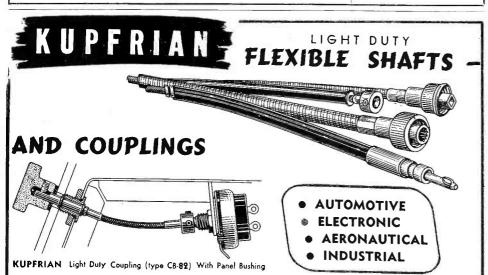
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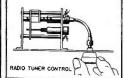


119 BRAINTREE STREET ALLSTON 34, MASS

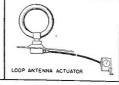


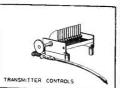


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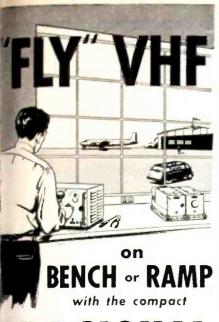
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Standard signal source for complete testing of VHF Airborne omnirange and localizer receivers in aircraft or on the bench. Checks up to 24 omni courses, omni course sensitivity, to-from and flag-alarm operation, left-center-right on 90/150 cycle and phase-localizers, and all necessary quantitative bench tests. For bench checks, 0-10,000 microvolts; for ramp checks, RF output 1 volt into \$2 ohm line. Equal to Mil. SG-66/ARM-5.

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The familiar ICA trade-mark has been the symbol of quality for 30 years, embracing the most comprehensive grouping of products in the Radio, Electronic, Automotive and Television industries.

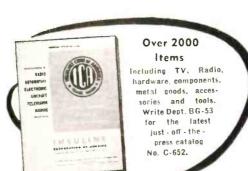
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Frequencies 200 to 2500 cycles. Dividers and Multipliers available for lower and higher frequencies. Miniaturized and JAN construction. Output, 6 volts.



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Consists of Type 2001-2 and booster to provide 10 watts at 110V at precision frequencies from 50 to 500 cycles at input power frequencies of 50 to 500 cycles, 45 watts.



TYPE 2121-A, LAB. STANDARD

Outputs, 60 cycle, 0-110 Volts, 10 Watts: 120-240 cycle impulses. Input, 50-400 cycles, 45 Watts.



**ACCURATE** TO 1 PART IN 100,000 (.001%)



TYPE 2111, POWER UNIT 50 Watt output, 0-110-220V at 60 cycles, or any frequency 50 to 1000 cycles, Input, 50-100 cycles, 275 watts.

THE basis of these frequency standards is an elec-I tronic fork which is temperature-compensated and hermetically sealed against humidity and barometric pressure.

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Natural insulations have excellent electrical and physical properties, and meet the requirements of ASTM, NEMA, and other applicable standards with ease. These industry standards for such properties as dielectric strength, tensile strength, heat and oil esistance, as determined by specified test procedure, protect the buyer against inferior materials. At the same time, they provide the buyer with a alid basis for comparison which should enable him to buy quality materials best suited to his needs. Full test reports on Natvar insulations are available

ERFORMANCE Performance is the prime consideration in the manufacture of Natvar insulations. New materials and new methods are constantly being studied and developed to provide improved performance under service conditions. As an example, Natvar 0 extruded vinyl tubing, accepted for its high heat resistance (approved for 105°C) is also outstanding in its resistance to oil, and shows no tendency ward embrittlement when immersed in hot oil for prolonged periods. From the standpoint of performance this is important, because it means that ads insulated and protected with Natvar 400 stay flexible after varnish baking.

INIFORMITY Natvar insulations give extra protection because of their exceptional uniformity. This uniformity also means that Natvar insulations can be depended upon to be the same, no malter when or where the order is placed.

ONTROL Raw materials, fabrics and papers are laboratory checked against our specifications. Materials in process are subject to constant laboratory control. Both plant and equipment are modern. Natvar insulations are made by experienced production men.

Shipments of Natvar standard insulations are usually made on the same day the order is received either from distributors' stock or direct. Orders for special insulations are handled promptly. For problems where special insulations are required to meet unusual nditions, engineering service is available, without obligation. To expedite shipment, give complete details with each order.

#### VARNISHED CAMBRIC

raight cut for application on regular smooth surfaces; bias for irregar surfaces. Supplied in all normal commercial sizes and thicknesses, yellow or black, and in four finishes, greasy, tacky, dusty and dry.

ysical and electrical properties comply with ASTM Specifications with aple safety factor.

#### VARNISHED CAMBRIC TAPE

Supplied straight cut or seamless bias, in all normal widths and thicksses, yellow or black, greasy, tacky, dusty or dry. Characteristics same for VC. Accurately slit for use in taping heads.

#### VARNISHED CANVAS AND DUCK

For use where greater mechanical protection is required. High strength brics coated with same high grade varnishes as VC.

#### VARNISHED SILK

For use where requirements call for very thin, high dielectric insulation.

#### VARNISHED SPECIAL RAYON

For use where high tensile and high dielectric strength are required addition to smoothness and minimum clearance.

#### VARNISHED FIBERGLAS

Natvar Varnished Fiberglas is Class B insulation for equipment which perotes of temperatures above normal safe working range of varnished imbric. Has great mechanical strength and excellent dielectric proper-35. Available in rolls, tape and full width sheets to 36".

#### SILICONE COATED FIBERGLAS

For higher permissible temperatures. Available in tape, sheets and alls 36" wide.

#### SLOT INSULATION

Combination of Copaco 100% rag paper stock to which a layer of atvar VC is firmly bonded. The high dielectric strength and moisture sistance of Natvar VC together with the toughness and abrasion resistace of 100% rag paper make a slot insulator which will withstand ounding and chafing without impairment of its electric properties. Rolls sheets approximately 36" wide.

#### VARNISHED PAPERS

Chemically inert rope and kraft stocks selected for uniform thickness, tensile and dielectric strength and for freedom from pinholes. In yellow varnished, condenser type tissues and yellow or black varnished heavy papers.

#### SATURATED SLEEVING

Smooth rayon or Fiberglas braid, single, double or triple saturated with varnish or synthetic. Flexible and smooth for fast application to soft or stranded leads. Wide range of vivid colors for coding. All sizes.

#### VARNISHED AND LACQUERED TUBING

Smooth rayon or Fiberglas braid impregnated and coated with varnish, or coated with lacquer, in a continuous coating. Exceptionally smooth and flexible. Meets ASTM and NEMA Specifications with ample margin. Several grades to meet various dielectric, aging and heat endurance requirements. Also in heavy-wall cotton braid where higher mechanical strength is required and O.D. is not a limiting factor. Vivid colors for coding. All sizes.

#### EXTRUDED 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, and stays flexible when immersed in hot oil for prolonged periods. It is a well balanced tubing that is tough, elastic, flexible, resistant to abrasion and tear, inert and resistant to oils, waxes, alkalies, acids and most solvents. Available in black, white, transparent and several colors.

V.I.T. 200 is an all-purpose tubing with excellent flexibility through a temperature range of -40°C. to +85°C. Melts at high temperatures but 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.

#### IDENTIFICATION MARKERS

Short sleeves of varnished braid or extruded vinyl, marked with numbers or letters or both for identifying terminals of complex wiring systems, such as airplane ignition systems. Wide color range, any size, any marking.

#### SPECIAL PRODUCTS

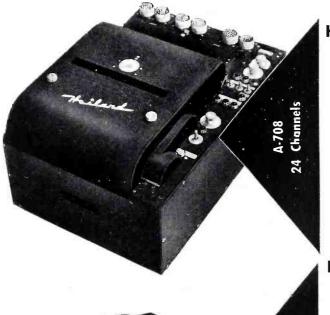
Our laboratory, manufacturing facilities and engineers are at your service to help with problems not solved by standard materials.



Heiland Oscillograph Recorders have been designed and developed to enable the testing engineer and scientist to solve a wide variety of problems involving the measurement of physical phenomens such as strains, stresses, vibrations, impact, pressures, temperatures etc. Accurate and dependable oscillograph records permit the stud of various recorded data comparatively, individually and col lectively making for better product design and performance.

Oscillograph Recorders, Galvanometers

for aircraft, industria and laboratory applications



#### Heiland "700" Oscillograph Recorders

#### **Exclusive Features**

- Operation, control and loading from one surface.
- Designed for rack or table mounting.
- Direct monitoring of galvanometer light spots.
- Damping resistor panel.

Other features include simultaneous monitoring, scanning, at recording; "daylight" loading; multiple chart widths; adjustab automatic record length; footage counter; selective record speed automatic diaphragm adjustment with chart speed change; pr cision time lines; event timer; static reference trace; trace iden fication; remote and multiple operation; lamp indicators; sho or vibration mounted base. Three models are available in the '700" Series utilizing 8, 12 and 18-inch paper and accommodation 24 to 60 channels. Each model is available for either 12 volt D. 24 volt D.C. or 115 volt, 60 cycles A.C. operation.

#### Heiland A-500 Portable Oscillograph Recorder Lightweight . . . Compact . . . Rugged

The Heiland A-500 is a compact and lightweight recorder p viding portability and versatility where it is desired to record to 12 phenomena. The A-500 recorder embodies many feature found only in larger instruments . . . easy loading, four qui change paper speeds; precision time lines; trace indentification paper movement indicator; direct monitoring of galvanome light spots. Case dimensions  $6\frac{3}{4}$ " x  $9\frac{7}{8}$ " x  $12\frac{3}{4}$ ", weight 33 ll paper 4"—100' long. Available for either 12 volt or 24 v D.C. operation.

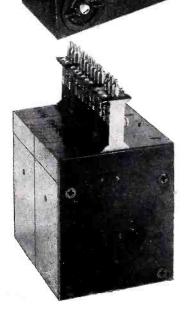
Optional 8 volt battery pack provides self-contained pow source affording complete portability and flexibility to the Heiland A-401 Recorder (not illustrated). Other features of the A-401 are similar to the A-500 Pares width 3" 100' less than A-5 A-401 are similar to the A-500. Paper width 2"-100' los Single speed. For operation on 8 volt D.C. battery pack, 12 v

or 24 volt D.C. external power supply. 6 channels.

#### **Heiland Galvanometers**

#### Sensitive . . . Rugged . . . Dependable

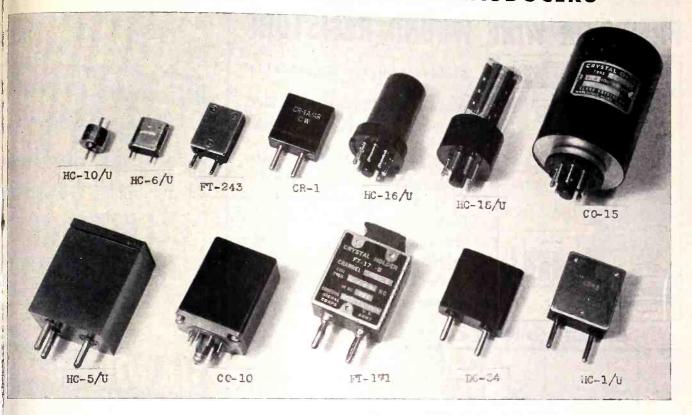
Heiland galvanometers, available in a wide range of frequence are rigidly tested and inspected to meet precise specifications a standards of performance and accuracy. Heiland Permanent Ma net Galvanometer Assemblies (illustrated) permit the mounting galvanometers in a minimum of space. Individual wedgelocks the assembly allow for vertical adjustment and easy removal any galvanometer without disturbing the connections of adjacent galvanometer.



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QUENCY ANGE	FREQUENCY TOLERANCE	TEMPERATURE RANGE	CIRCUIT RESONANCE	CIRCUIT CAPACITY	MILITARY SPECIFICATION	CRYSTAL UNIT	CRYSTAL HOLDER	CLARK TYPE NO.
₹50 Mc	±.005%	-55 to +90°C	series				HC-6/U	HSM-2UH
₹5 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
50 Mc 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
6 Mc	±.005%	-55 to +90°C	parallel	32 mmf	MIL-C-3098A	CR-18/U	HC-6/U	HSM-2M
6 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	M1L-C-3098A	CR-44/U*	HC-6/U	HSM-2MO
5 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	porallel	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
AO Mc	±.02%	-40 to +70°C	parallel	12 mmf	MIL-C-10405	CR-6/U	FT-243	PM-2
000 Mc	±.005%	-40 to +70 °C	parallel	25 mmf	MIL-C-10405	CR-10/U	FT-243	PM-2P
250 Mc	±.02%	-40 to +70 °C	series		MIL-C-10405	CR-13/U	FT-243	PM-2F
O Mc	±.02%	-40 to +70°C	series		MIL-C-10405	CR-8/U	FT-243	PM-25
10 Mc	±.02% ±.01%	-40 to +70°C	parallel		SC-Data Sheet	HC-1/U	HC-1/U	PM-4P
-6 Mc	±.02%		parallel	30 mmf	MIL-C-10405	DC-34	DC-34	PM-3LT
-6 Mc		-40 to +70°C	parallel	96 mmf	MIL-C-10405	DC-35	DC-35	PM-3LR
6 Mc 6 Mc -2.8 Mc	=.02%	-40 to +70°C	parallel	40 mmf	MIL-C-10405	FT-171-B	FT-171	PM-11T
2 0 MC	=.02%	-40 to +70°C	parallel	25 mmf	MIL-C-10405	FT-171-B	FT-171	PM-11R
	= .02%	-40 to +70°C	parallel	32 mmf	MIL-C-3098A	CR-48/U	HC-6/U	HSM-2M
	= .0075%	-55 to +90°C	parallel	32 111111	71-3021	CR-4/U	FT-241-A	WM-2H
	= .02%	-40 to +70°C	parallel		71-3021	CR-3/U	FT-241-A	WM-2M
	±.02%	-40 to +70°C	parallel		71-3021	CR-2/U	FT-241-A	WM-5
D Mc D Mc	±.01%	-40 to +70°C	parallel		71-3021	CR-2/U	FT-241-A	WM-2
D Mc	±.01%	-40 to +70°C	parallel		MIL-C-3098A	CR-45/U	HC-6/U	HSM-2F
21	±.02%	−40 to +70°C	series	20 mmf	MIL-C-3098A	CR-46/U	HC-6/U	HSM-2LF
4	±.01%	-40 to +70°C	parallei	20 mmf	MIL-C-3098A	CR-47/U*	HC-6/U	HSM-2LO
	±.002%	75 ± 5°C*	parallel	20 mm	MIL-C-3098A	CR-25/U	HC-6/U	HSM-2LS
5 Mc	±.01%	-40 to +70°C	series	7.5.5	MIL-C-3098A	CR-26/U*	HC-6/U	HSM-2LSO
.5 Mc	±.002%	75 ± 5°C*	series		MIL-C-3098A	CR-39/U	HC-15/U	HSG-15LS
33 Mc	±.007%	-55 to +75°C	series	111	MIL-C-3098A	CR-40/U	HC-15/U	HSG-15LSO
33 Mc	±.003%	70 ± 5°C*	series		MIL-C-3098A	CR-37/U	HC-13/U	HSM-13
25 Mc	±.02%	-40 to +70°C	parallel	20 mmf	MIL-C-3098A	CR-42/U*	HC-13/U	HSM-130
25 Mc	±.002%	75 ± 5°C*	parallel	20 mmf	MIL-C-3098A	CR-15/U	HC-5/U	WM-6P
2 Mc	±.01%°	-40 to +70°C	parallei	32 mmf	MIL-C-3098A	CR-16/U	HC-5/U	WM-65
2 Mc	±.01%	-40 to +70°C	series		MIL-C-3098A	CR-29/U*	HC5/U	WM-6PO
2 Mc	±.002	75 ± 5°C*	parallel	32 mmf	MIL-C-3098A	CR-30/U*	HC-5/U	WM-6SO
2 Mc	±.002%	75 = 5°C*	series		MIL-C-3098A	CR-43/U	HC-16/U	HSM-9LP
-3 Mc	=.01%	-30 to +75°C	parallel	45 mmf	MIL-C-3098A	CR-38/U	HC-13/U	HSM-13L
51 Mc	±.012%	-40 to +70°C	parallel	20 mmf	WIL-C-3070M	CK-30/0	, 0, 0	1.000

\*The Crystal Ovens described below are designed for use with these crystal

#### STAL OVENS for Military and Commercial Applications

CO-10 is available for all crystal units employing the HC-6/U holder. CO-14 is available for all crystal units employing the HC-13/U holder. CO-15 is available for all crystal units employing the HC-5/U holder. CO-16 is available for all crystal units employing the HC-15/U and HC-16/U holders.

ifications for military and commercial ovens on request.

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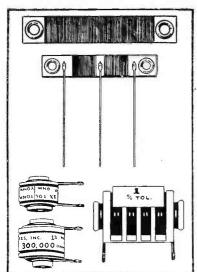
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#### **CONDENSED TABLE OF JAN-R-93 TYPES**

	WA	TTAGE	DIMENSI	ONS		RESISTANC	Œ
JAN. TYPE	MAX. JAN.	MAX. COMM.	LENGTH	DIA.	MIN.	*MAX. MEGOHMS	MAX. JANR-93 MEGOHMS
RB 10	1/4	.5	15/32	%16	.1 OHM	.75	.185
RB 11	1/3	1.0	5/8	5/8	.1 OHM	1.5	.30
RB 12	1/2	1.0	1	5/8	.1 OHM	4	.30
RB 13	1/2	1.0	1 %32	3/4	.2 OHM	7.5	.75
RB 14	l î	2,0	21/32	7/8	.5 OHM	15.0	4.0

\*With Special Wire

**Tolerance:** Standard tolerance 1%. Any tolerance within 1/20% can be supplied at slight added cost.

Temperature Coefficient: Standard .02%/°C. wire with a coefficient of .002%/°C. can be supplied upon request.

Aging Stability: No appreciable change in resistance over extended periods of time.

Insulator Resistance: Each resistor is throughly impregnated to resist the severest temperature and climactic changes in accordance with the most rigid specifications.

Inductance: Balanced winding in multi-pie sections minimize inductive effects to 50 K.C. Special winds such as Aryton-Perry are available to make inductive effect of resistor negligible on wide ranges of frequencies.

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1 1 0 - 1 2 0 Volts, 50-60 cycles.

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- 2. A.C. Ranges: 0 to 10-30-100-300 and 1,000 volts. Sensitivity: 1,000 ohms per volt. Accuracy 5 % ± .
- Ohmmeter Ranges: 0-1,000 ohms, 0-10,000 ohms, 0-100,000 ohms, 0-1 meghom, 0-10 megohms, and 0-1,000 megohms.

   R. F. Voltage Ranges: 0/3-10 30-50, 50 Volts to be measured on 100 Volt range (using the Ediprobe.)
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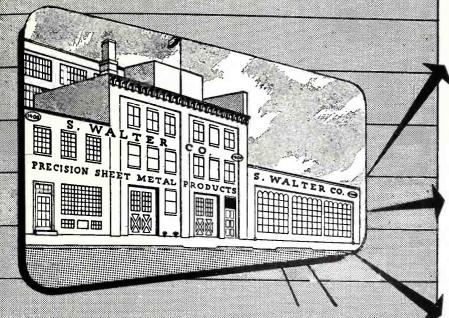
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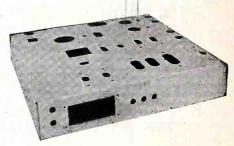
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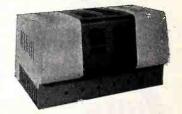
INSTRUMENT CASES



RADAR & TRANSMITTER EQUIPMENT



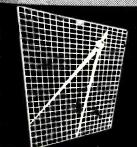
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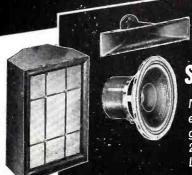
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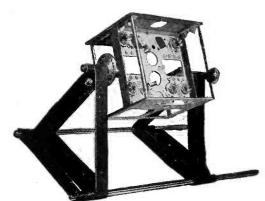
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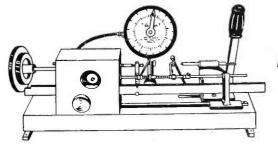
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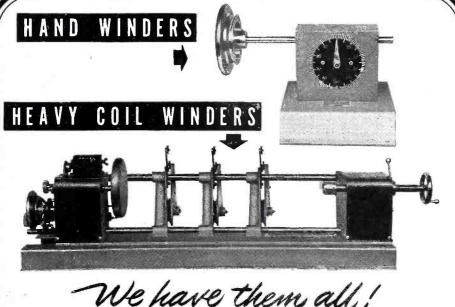
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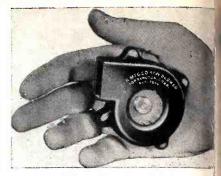
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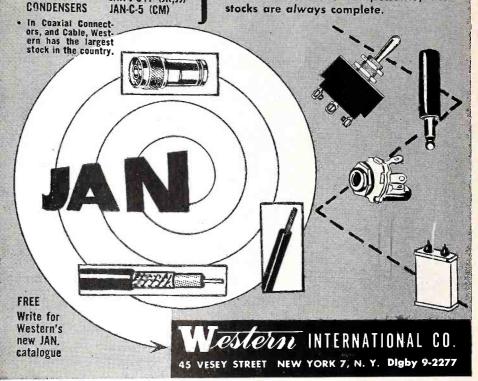
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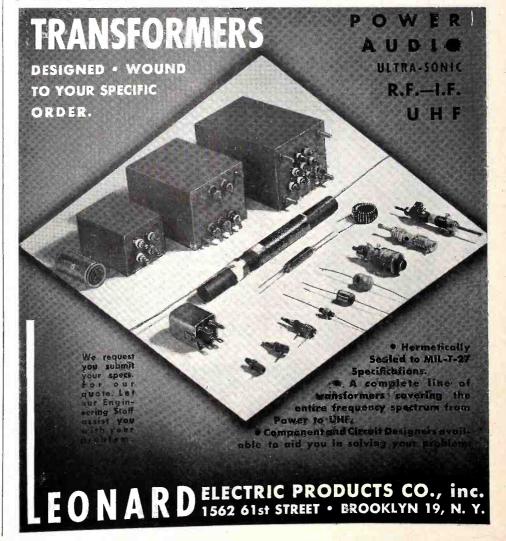
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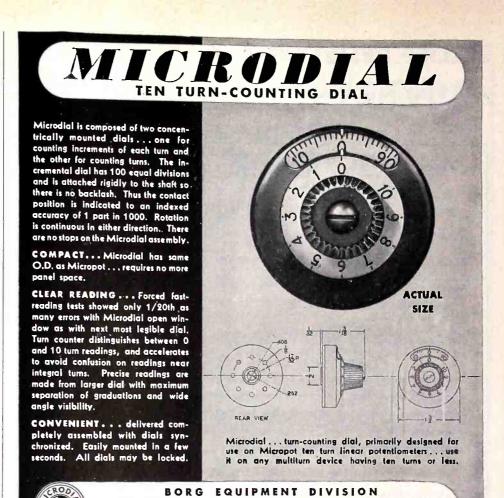
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S-10	1/10 sec.	1000 sec.	±.02 sec.
S6	1/1000 min.	10 min.	±.0002 min
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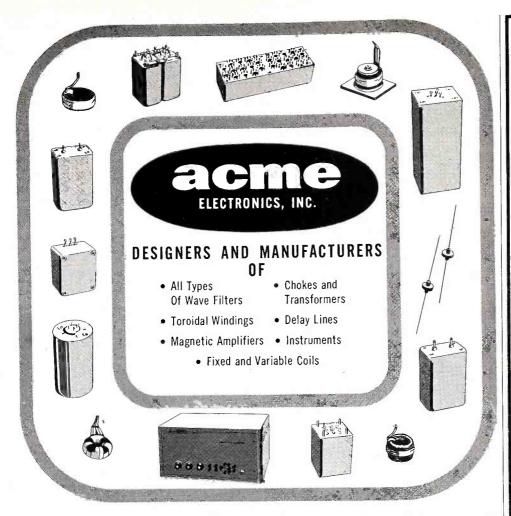
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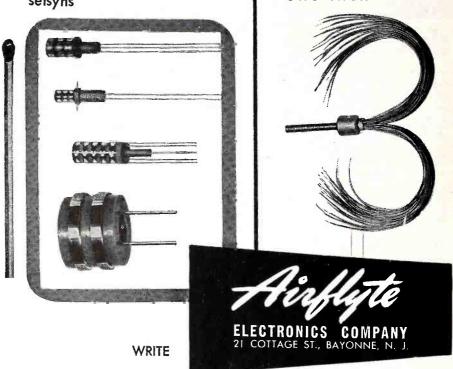
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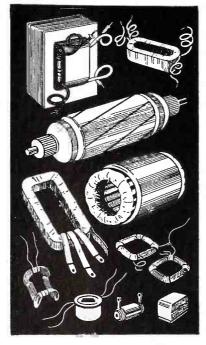
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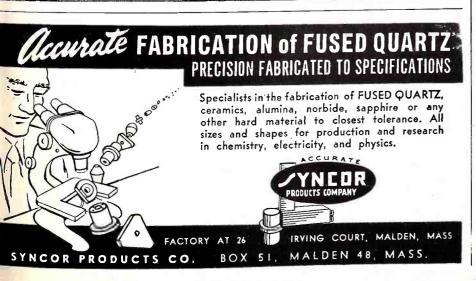
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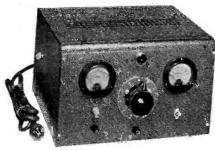
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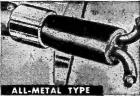
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36/28	30	52.00
36/28	45	73.00
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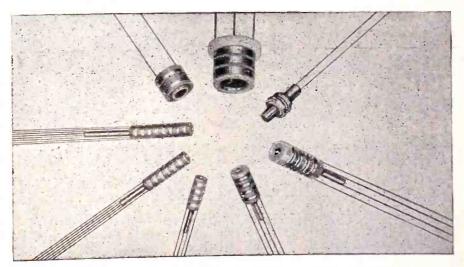
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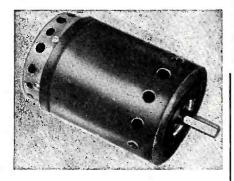
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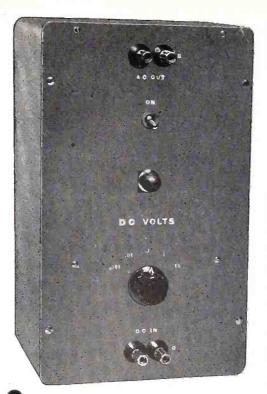
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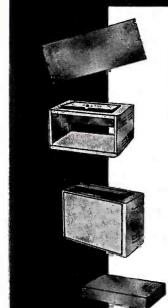
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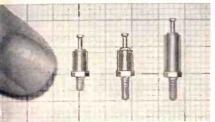
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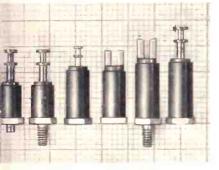


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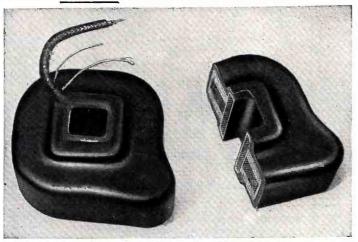
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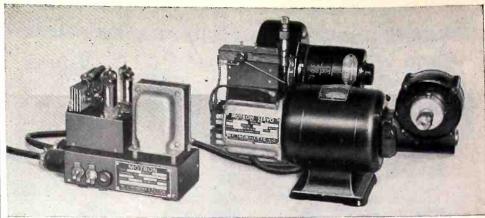
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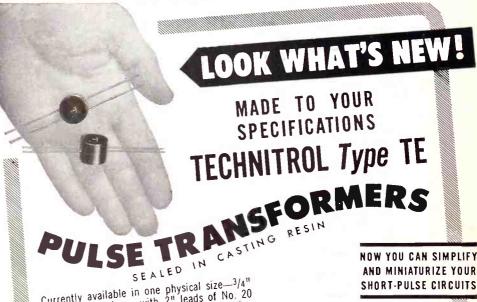
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Non-snap action. Momentary contact, single pole, single throw type. Over-travel approx. .046", pre-travel .078". Single hole panel mounting. Bushing (15/32"—32 thread) and hex nut assembly.

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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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BENCH MODEL 5

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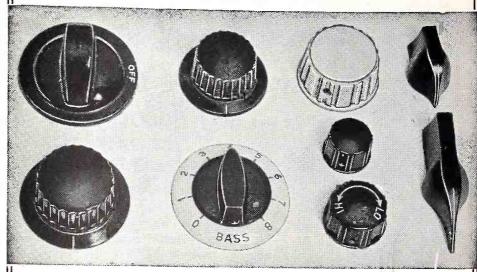
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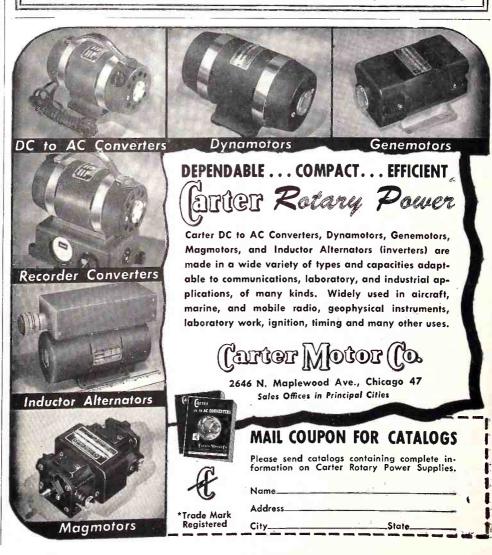


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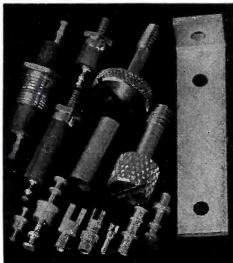
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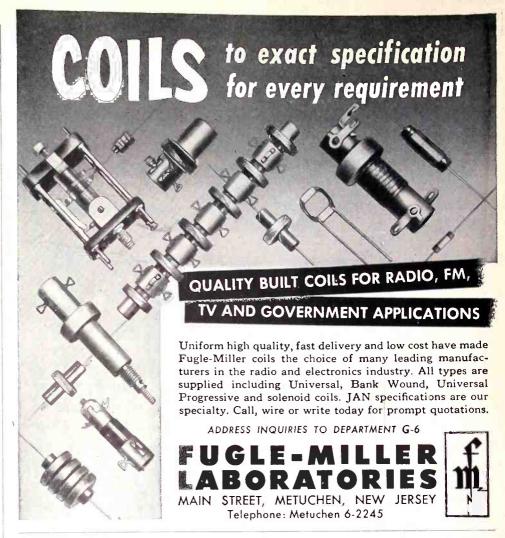
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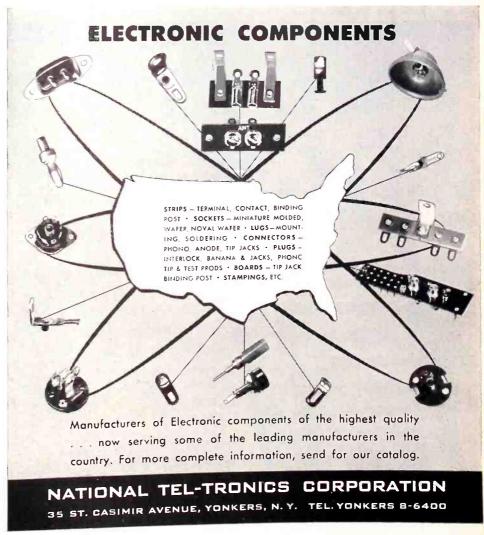
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#### TUNGSTEN RIBBON

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" .002" .003" .004" .005" .007" .011"	to .001"  to .006" to .010" to .030" to .040"	± .00005" ± .0001" ± .0002" ± .00015" ± .00025" ± .00035" ± .0005"
Widths:	.006" .011" .021" .031" .061"	to 0.10" to .020" to .030" to .060" to .093" to .125"	± .0005" ± .0015" ± .0015" ± .002" ± .003" ± .005"
Supplied	to mg.	watif	required.

#### STRIP

Widths up to  $11/2^{\prime\prime}$  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

Sizes: Widths from .006" up to .250"

MOLYBDENUM RIBBON

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

1	<b>TOLER</b>	ANCES	:
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 I	required.

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Wgt. per Sq. In. at .001" Thickness is 0.167 Grams

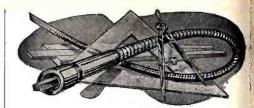
TANTALUM RIBBONS are available in sizes and tolerances similar to those shown for molybdenum. STRIP .001" down to .0005" at widths up to 2".

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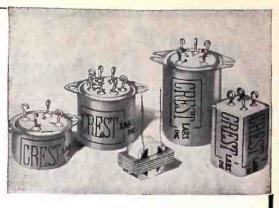
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- extensive trade name listings
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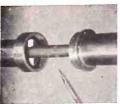
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Series 800. A premium broadband coaxial transmission line, designed for continuous service at any frequency up to 3500 mcs. Nominal impedance, 50 ohms; hard temper OFHC copper tubing; Teflon insulated. Electrically transparent, can be cut at any point without regard for frequency. Military versions available in %'' or 1%'' sizes under separate AN nomenclature. Commercial lines to 6%'' diameter.

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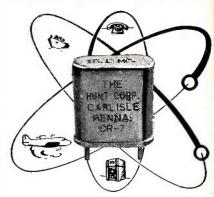
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# STABILITY

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Miniature Type CR-7
Crystal Unit

(Illustration is actual size)



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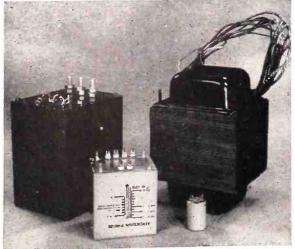


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FOR AUTOMATICALLY PLOTTING both ANGULAR and STRAIGHT LINE functions on either POLAR or RECTILINEAR coordinates in any COMBINATION . . .

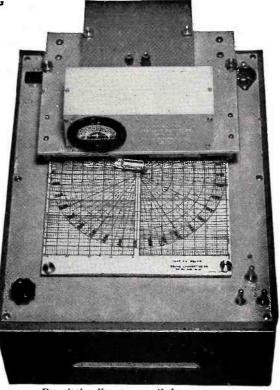
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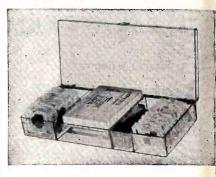
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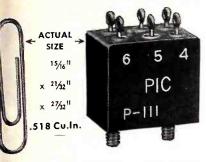
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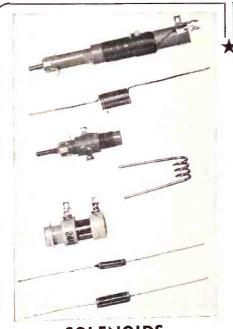
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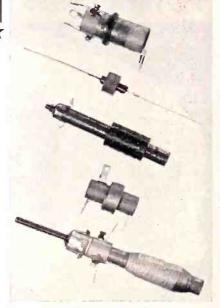
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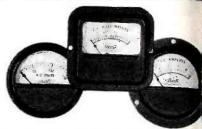
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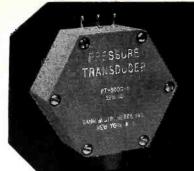
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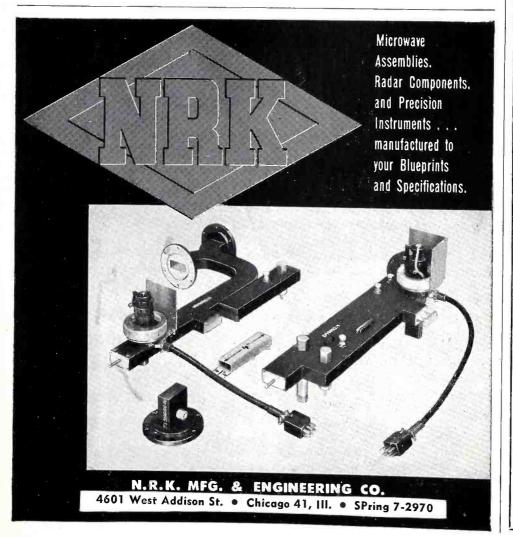
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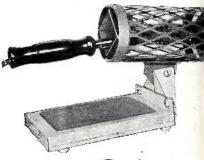


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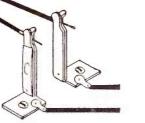
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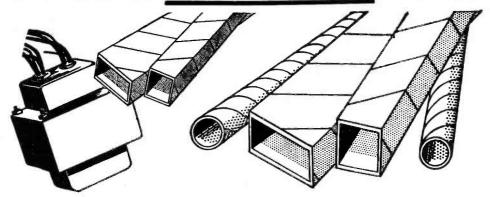
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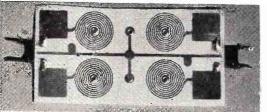
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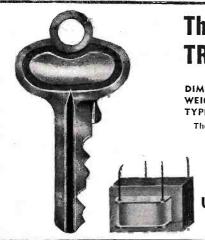
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- **Q.** How does scrap figure in the production of steel?
- A. Steel is composed, generally speaking, 50% of pig iron, 25% of "production" scrap (that is, the scrap which is produced as a by-product of steel-making) and 25% of "purchased" scrap.
- Q. Is scrap getting scarce?
- **A.** Yes. The supply of *purchased* scrap is not increasing fast enough to meet the needs of increasing steel production.
- Q. What if the needed scrap isn't obtained?
- A. Open-hearth furnaces will not be

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- Q. Why not use pig iron instead of scrap?
- A. Every ton of scrap conserves approximately 2 tons of iron ore, 1 ton of coal, nearly ½ ton of limestone and many other vital natural resources—to say nothing of the extra transportation facilities that would be otherwise required.
- Q. How can more scrap be furnished?
- A. By everybody pitching in—as we always do in every emergency—and searching out all possible sources of scrap.
- Q. What are these sources?
- A. Metal-fabricating plants normally

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Is
Scrap?

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- Q. What do we do with it when we find it?
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Grossman & Sons, Inc., L., 130 Granite St., Quincy, Mass. Hatry & Young, 811 Boylston St., Boston, Mass. Herbach & Rademan, 522 Market St., Philadelphia 6, Pa. Hershel Radio Co., 5249 Grand River, Detroit 8, Mich. HORLICK CO., WILLIAM I., 266 Summer St., Boston, Mass.

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OA2	\$1.40	2]31	\$90.05	4130	199.00	274B	\$3.00	718AY/EY		866A	\$1.79
OA3	1.75	2]32	69.95	4J41	199.00	304TH	15.00	719A	29.50	869B	37.50
OB2	1.75	2136	105.00	C5B	3.95	13041L	14.50	721 A		869BX	35.00
OC3	1.25	2138		5BP1	6.95	307A	4.95	722A		872A	3.95
OD3	1.25	2]40	35.00	5BP4	6.95	310A	7.95	723A/B	17.95	878	1.95
C1A	4.95	2]49		5CP1	6.95	311 A		724A	4.95	884	1.95
C1B	6.95	2)50	69.50	5D21	27.50	312A	3.95	724B		885	1.75
1B21 A	2.75	2]55	95.00	5 JP1	27.50	323A	25.00	725A	9.95	889R	
1B22	3.95	2 61		5 JP2	19.50	327A	3.95		6.95	914	75.00
1B23	9.95	2 62	75.00	5 IP4	27.50	328A	9.95	726B		931 A	
1B24		2K25		WE6AK	2.50	350 A	7.95	726C	69.00	954	.35
1B26	2.95	2K28		6C21	29.50	350B	5.95	728AY	27.00	955	
1B27	19.50	2K29	37.50	C6A	8.95	357A	20.00		1.00	956	
1B32	4.10	2K41	150.00	C6J	10.95	368AS	6.95	802	4.25	957	
1B38	33.00	2K45	149.50	7BP7	7.95	371B	2.95	803	7.95	958A	
1B42	19.95	2V3G	2.10	7DP4		385A	4.95	804		991	.65
1B51	9.95	3BP1	7.50	12AP4		388A	2.95	805	5.95	E1148	.35
1B56	49.95	3B24	5.50	15E	1.95	394A	7.95	806		1280	1.95
1B60	69.95	3B24W	7.50	15R	.95	MX408U	.75			1611	1.95
1N21	1.35	EL3C		NE16		417A	27.95	808	3.50	1613	1.38
1N21,A	1.75	3C22	120.00	FG17		434A	29.95	810	11.00		2.95
1N21B	4.25	3C24		RX21		446A	1.95	811 A		1619	.89
1N22	1.75	3C31		FG33	12.95	446B	5.40	813	8.95	1622	2.75
1N23	2.00	3DP1A	10.95	35T	4.95	450TH	45.00	814	3.95	1624	2.00
1N23A	3.75	3DP1S2	12.00	45 Special		450TL	45.00			1625	.45
1N23B	6.00	3E29		RK39	2.95	464A	9.95		1.45	1851	1.85
1N27	5.00	3GP1	5.50	HF50	1.75	471A	2.75	829	12.95	2050	1.85
1N43	2.50	SN4		VT52		527	15.00	829A	13.95	2051	1.80
1521	6.95	4A1	1.75	RK72	1.95	WL530	3.50		15.95	8012	4.25
2B22	1.95	4A21		RK73	1.95	WL531	22.50	830B	3.50	8013	2.95
2B26	3.75	4B26		100TH		WL533	17.50	832	7.95	8013A	5.95
2C34	.35	4C27		FG105	19.00	700A/D	25.00		9.95	8019	1.75
2C40	20.00	4C28	35.00	F123A		701 A	7.50	833A		8020	3.50
2C43	27.00	4E27		203A		703A	6.95			8025	6.95
2C44	.90		199.00	211	.95	705 A	3.95	836	4.95	PD8367	89.00
2D21	1.75		199.00	217C	18.00	707A	17.95	837	2.95	9001	1.75
2E22	3.75		199.00	242C	10.00	707B		838	6.95	9002	1.50
2E30	2.75		199.00	244A	12.95	714AY	17.95		5.59	9003	1.75
2J21	17.95		199.00	249C	4.95	715A	7.95		52.50	9004	1.75
2]22	17.95	4J33		250TL		715B	18.00		80.50	9005	
2J26	27.75 29.95	4J37			19.90	715C	25.00		4.95	9006	.35
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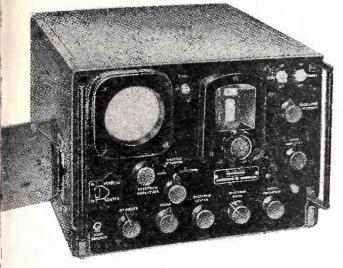
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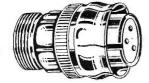
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ISS-IP   IS-SS   20-IP   20-25S   22-IBP   24-SS   24-A3SS   28-A6B4   32-IBF   36-ISF   40-I3S   16-2P   18-9S   20-2P   20-26S   22-IBP   24-6S   24-85P   28-A6S4   32-IBF   36-ISF   40-I3S   36-ISS   36-IS				18-404S								
16.5.1S   18-9P   29-1S   20-26P   22-1SS   24-6P   24-85S   28-684S   32-16P   36-12P   16-2S   18-10P   20-2S   20-27P   22-19S   24-7P   24-85S   28-684S   32-16F   36-16S   40-14P   40-15S   40-14P   40-1			18-8S	20-1P						32-155	26.145	
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18-63-3P   18-10S   20-3P   20-2ZS   22-20P   24-7S   28-11P   28-533   32-11S   36-16S   44-1P   16-35   18-11P   20-43   20-22S   22-20P   24-1S   28-69SP   32-18F   36-17S   44-1S   44-		16-2S				22-19S				32-10D 32-17P	36-15D	40-141
165-3S   18-11P   20-3S   20-28P   22-21P   24-9S   28-1S   28-69SP   32-18P   36-17P   44-1S   165-4S   18-12P   20-45   20-29P   22-21S   24-10P   28-2S   28-702P   32-18P   36-17P   44-2S   165-5P   18-12S   20-5P   20-29S   22-22P   24-10S   28-3P   22-702S   32-19P   36-18P   44-2S   165-5P   18-13S   20-5P   20-30P   22-22S   24-11P   28-3S   22-74P   32-19P   36-19P   44-3S   44-3P   165-6P   18-13S   20-6P   20-30S   22-22P   24-10S   28-4P   28-476S   32-20P   36-19P   44-3S   44-4P   16-7F   18-14S   20-7P   20-31S   22-24P   24-12S   28-5P   28-766S   32-101S   36-20P   44-4S   16-7P   18-14S   20-7P   20-31S   22-24P   24-12S   28-5P   28-33S   32-102S   36-21S   44-6P   16-8P   18-15S   20-8P   20-32S   22-25P   24-14S   28-5P   28-33S   32-102S   36-21S   44-6P   16-8P   18-16S   20-8P   20-32S   22-25P   24-14S   28-6P   28-83S   32-102S   36-21S   44-6P   16-8S   18-16P   20-8S   20-33P   22-25S   24-18P   28-6S   28-80P   32-10P   36-20P   44-6S   16-9S   18-17P   20-9S   22-1P   22-27S   24-16F   28-7S   28-80S   32-10Z   36-21S   44-6P   44-6S   18-18P   20-10S   22-2P   22-22S   24-11F   28-6S   28-80P   32-722P   36-646P   44-6S   18-18P   20-10S   22-2P   22-22S   24-11F   28-8S   28-80P   32-811P   36-79S   48-12F   36-79S   48-12F   36-79S   48-12F   36-79S   48-12F   36-79S   48-12F   36-79S   48-22F   36-34S   36-35S   48-3P   36-79S   36-35S   48-3P   36-79S   36-35S   36-3		16S-3P		20-3P		22-20P				32-175	36 16S	
P 165-4P 18-11S 20-4P 20-28P 22-21F 24-10S 28-2P 28-69S 32-18S 36-17S 44-2P 165-4S 18-12P 20-4S 20-29P 22-21S 24-10P 28-2S 28-70Z 32-19P 36-18P 44-2S 20-5P 18-13S 20-6P 20-29S 22-22P 24-10S 28-3P 28-70Z 32-19S 36-18S 44-3P 165-6S 18-14P 20-6S 20-30F 22-22P 24-11S 28-3P 28-70Z 32-19S 36-18S 44-3P 165-6S 18-14P 20-6S 20-31P 22-23S 24-11P 28-3S 28-745P 32-20P 36-19P 44-3S 165-6S 18-14P 20-6S 20-31P 22-23S 24-12P 28-4S 28-766P 32-101P 36-20P 44-4S 165-6S 18-14P 20-6S 20-32P 22-24S 24-12P 28-4S 28-766P 32-101S 36-20S 44-5P 16-7S 18-15S 20-8P 20-32S 22-24P 24-12S 28-5P 28-833P 32-102P 36-20P 34-4S 165-8P 18-15S 20-8P 20-32S 22-25S 24-12P 28-4S 28-66P 32-101P 36-20P 34-4S 165-8P 18-15S 20-8P 20-32S 22-25S 24-12P 28-5S 28-833P 32-102P 36-20P 34-4S 165-8P 18-16S 20-8P 20-32S 22-25S 24-15P 28-65 28-80P 32-701P 36-20P 34-4S 16-9P 18-16S 20-9P 20-33S 22-27P 24-15S 28-6P 28-833P 32-102P 36-646P 44-6S 16-9P 18-16S 20-9P 20-33S 22-27P 24-16S 28-7P 28-86S 32-328-30 36-21P 44-6S 16-10P 18-17S 20-10P 22-1F 22-27S 24-16F 28-75 28-85P 28-80S 32-722S 36-646S 48-1P 16-10P 18-17S 20-10P 22-1S 22-28P 24-16S 28-8P 28-85Z 32-810S 36-697S 48-1P 16-10S 18-18P 20-11S 22-3P 22-28S 24-17P 28-8S 28-880P 32-811P 36-79S 48-2P 16-11S 18-19P 20-11S 22-3P 22-23S 24-17P 28-8S 28-880P 32-811P 36-79S 48-2P 16-11S 18-19P 20-11S 22-3P 22-31S 24-20P 28-10S 32-1S 36-1S 36-853P 48-2P 16-11S 18-19P 20-11S 22-3F 22-31S 24-20P 28-11S 32-2S 36-2S 40-1P 48-5S 16-11S 18-20P 20-12S 22-4P 22-30S 24-19P 28-10S 32-1S 36-1S 36-853P 48-2P 36-13P 36-79S 48-3P 36-14P 38-2P 36-13P 36-79S 38-3P 36-79S 38-79S 3					20-285	22-20S		28-1S		32-11D	36-103	
P				20-4P	20-28P	22-21P	24-95	28-2P		32-101	26 175	
S         18-12S         20-SP         20-29S         22-22P         24-11D         28-3P         28-70S         32-19S         36-18S         44-3P           1 6S-6P         18-13P         20-6P         20-30P         22-22S         24-11P         28-3S         28-74FP         32-20P         36-19F         44-3S           1 6S-6P         18-14P         20-6P         20-30P         22-23P         24-11B         28-3S         28-76FP         32-10IP         36-19F         44-48P           1 6-7F         18-15P         20-7TP         20-31S         22-24P         24-12S         28-5P         28-766F         32-10IP         36-20S         44-4S         16-7S         18-15P         20-7TP         20-31S         22-24P         24-12B         28-5P         28-833P         32-10IP         36-20S         44-4S         16-5P         18-16F         20-8P         20-32S         22-2FP         24-14S         28-6S         28-840P         32-10IP         36-61E         36-2IS         44-5P         14-5P         16-18F         18-17P         20-33P         22-2FP         24-16S         28-8P         28-840P         32-10IP         36-646P         44-5P         14-5P         16-19P         18-17S         20-10F         22-1F	P	165-45	18-12P		20-29P	22-215	24-10P	28-25	20-0333 28 702P	32-10D 32-10D	26 18P	44-21
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16S-6F   18-13S   20-6F   20-30S   22-23F   24-11S   28-4F   28-74SS   32-101F   36-20P   44-4F   16-75   18-14F   20-6S   20-31F   22-23F   24-12F   28-45   28-766F   32-101F   36-20P   44-4F   16-75   18-15F   20-75   20-32F   22-24F   24-12S   28-5F   28-836F   32-101S   36-20P   44-4S   16-8F   18-15S   20-8F   20-32F   22-24F   24-14S   28-5F   28-833F   32-102F   36-21F   44-5F   16-85   18-16F   20-8S   20-33F   22-25F   24-14F   28-5S   28-833F   32-102F   36-21F   44-5F   16-9F   18-16S   20-9F   20-33S   22-27F   24-15S   28-6F   28-833S   32-102S   36-21F   44-5F   16-9F   18-16S   20-9F   20-33S   22-27F   24-15S   28-7F   28-840F   32-722F   36-646F   44-6S   16-9F   18-16S   20-9F   20-33S   22-77F   24-15S   28-7F   28-840F   32-722F   36-646F   44-6S   16-9F   18-16S   20-19F   22-15S   22-22F   24-16F   28-75   28-852F   32-810F   36-697S   48-2F   16-10S   18-18F   20-10S   22-2F   22-28F   24-17F   28-8S   28-880F   32-811P   36-697S   48-2F   16-11S   18-19F   20-11S   22-3F   22-29F   24-18S   28-10F   32-11F   36-795F   48-2S   16-12F   18-19S   20-12F   22-3S   22-30F   24-18F   28-9F   28-80S   32-811S   36-795F   48-2S   16-13F   18-20S   20-12F   22-3S   22-30F   24-18F   28-10S   32-1S   36-1S   36-853F   48-4F   36-14F   38-20S   20-12F   22-3S   22-31F   24-19F   28-10S   32-1S   36-1S   36-853F   48-4F   36-14F   38-20F   20-12F   22-3S   22-31F   24-20F   28-11S   32-2F   36-3F   40-1S   3057-3   165-14S   18-22F   20-14F   22-5S   22-33F   24-20F   28-11S   32-2F   36-3S   40-2F   3057-6   16-15S   18-23F   20-16F   22-85   22-33F   24-20F   28-13S   32-4F   36-4F   40-2S   3057-6   16-15F   18-23S   20-15F   22-6F   22-33S   24-22F   28-13F   32-4F   36-4F   40-2S   3057-10-6   16-15F   18-23S   20-16F   22-85   22-34F   24-22S   28-11F   32-2F   36-3F   40-15F   3057-8   16-16F   18-23S   20-16F   22-85   22-34F   24-23S   28-11F   32-5F   36-5F   40-3F   3057-10-6   16-15F   18-25F   20-17F   22-95S   22-35F   22-35F   22-35F   22-35F   22-35F   22-35F   33-5F   36-5F   40-3	S					22-225		28 35		32-133 32-133	26 10D	44-31
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168-8S   18-16P   20-8S   20-33P   22-25S   24-15P   28-6S   28-840P   32-722P   36-646S   48-1P   16-9P   18-16S   20-9P   20-33S   22-27P   24-15S   28-7F   28-852P   32-810P   36-646S   48-1P   16-10P   18-17S   20-10P   22-1S   22-28P   24-16S   28-8P   28-852P   32-810P   36-646S   48-1P   16-10P   18-17S   20-10P   22-1S   22-28P   24-16S   28-8P   28-852P   32-810P   36-697P   48-1S   36-10P   31-18P   20-10S   22-2P   22-28S   24-17P   28-8S   28-880P   32-811P   36-795P   48-2S   36-161S   18-18P   20-11S   22-3P   22-29S   24-18P   28-9S   28-880S   32-811S   36-795P   48-2S   36-11S   36-795P   48-2S   36-11S   36-795P   48-2S   36-11S   36-795P   48-2S   36-11S   36-11S   38-19P   20-11S   22-3P   22-29S   24-18P   28-9S   32-11S   36-11S   36-795P   48-3S   36-11S   36-795P   48-3S   36-11S   36-795P   48-3S   36-11S   36-795P   48-2S   36-12P   36-795P   48-3S   36-12S   36-						22-245 22 25D		20-33 20 CD				
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16-10S								28-73		32-0101		
16-11P   18-18S   20-11P   22-2S   22-29P   24-17S   28-9S   28-880S   32-811S   36-79SS   48-3P   48-3S   36-12P   18-19P   20-11S   22-3P   22-30P   24-18F   28-10P   32-1P   36-1P   36-799P   30-799P   36-799P   30-799P						22-28		28-81		32-8103 32-811D		
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16-12P		16-11P						28-91	28-8805	32-8113		
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16-13P   18-20S   20-13P   22-4S   22-31P   24-19S   28-11P   32-2P   36-2P   36-853S   48-5P     16-13S   18-21P   20-13S   22-5P   22-31S   24-20P   28-11S   32-2S   36-2S   40-1P   48-5S     165-14P   18-21S   20-14P   22-5S   22-32P   24-20S   28-12P   32-3P   36-3P   40-1S   3057-3     16S-14S   18-22P   20-14S   22-6P   22-32S   24-21P   28-12S   32-3S   36-3S   40-2P   3057-4     16-15P   18-22S   20-15P   22-6S   22-33P   24-21S   28-13P   32-4P   36-4P   40-2S   3057-6     16-15S   18-23P   20-15S   22-8P   22-33S   24-22P   28-13S   32-4S   36-4S   40-3P   3057-6     16-16S   18-23P   20-16S   22-8P   22-33S   24-22P   28-13S   32-4S   36-4S   40-3P   3057-8     16-16P   18-23S   20-16P   22-8S   22-34P   24-22S   28-14P   32-5P   36-5P   40-3S   3057-10-6     16-16S   18-24P   20-16S   22-9P   22-34S   24-23P   28-14S   32-5S   36-5S   40-4P   3057-10-6     16S-17P   18-24S   20-17P   22-9S   22-35P   24-23S   28-14F   32-5S   36-6S   40-4P   3057-10-6     16S-17S   18-25P   20-17S   22-10P   22-35S   24-24P   28-15S   32-6S   36-6S   40-5P   3057-12-6     18-1P   18-25S   20-18P   22-10S   22-36P   24-24S   28-16P   32-7P   36-7P   40-5S   3057-16     18-1S   18-26P   20-18S   22-11P   22-36S   24-25P   28-16S   32-7S   36-7S   40-6P   3057-20     18-2P   18-26S   20-19P   22-11S   22-37P   24-25S   28-17P   32-8P   36-8P   40-6S   3057-24     18-2S   18-27P   20-19S   22-12P   22-37P   24-25S   28-17P   32-8P   36-9P   40-7S   3057-28     18-3P   18-28S   20-21P   22-13S   22-404S   24-27P   28-18S   32-9S   36-9S   40-8P   3057-32     18-4S   18-29P   20-21S   22-44S   24-2P   24-28P   28-19S   32-10P   36-10P   40-9S     18-4S   18-29P   20-21S   22-14P   24-1S   24-28P   28-19S   32-10S   36-11P   40-9S     18-5S   18-30P   20-22S   22-15P   24-2S   24-684S   28-21P   32-13S   36-12S   40-11P     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18-31P   2		16-12P		20-12P	2Z-3S		24-185		32-IP	36-17		
16-13S   18-21P   20-13S   22-5P   22-31S   24-20P   28-11S   32-2S   36-2S   40-1P   48-5S     16S-14P   18-21S   20-14P   22-5S   22-32P   24-20S   28-12P   32-3P   36-3P   40-1S   3057-3     16S-14S   18-22P   20-14S   22-6P   22-32S   24-21P   28-12S   32-3P   36-3P   40-1S   3057-3     16-15P   18-22S   20-15P   22-6S   22-33P   24-21F   28-13S   32-4P   36-4P   40-2S   3057-6     16-15S   18-23P   20-15S   22-8P   22-33S   24-22P   28-13S   32-4S   36-4S   40-3P   3057-6     16-16P   18-23S   20-16P   22-8S   22-34P   24-22S   28-14P   32-5P   36-5P   40-3S   3057-10     16-16S   18-24P   20-16S   22-9P   22-34S   24-23P   28-14S   32-5S   36-5S   40-4P   3057-10-6     16S-17P   18-24S   20-17P   22-9S   22-35P   24-23S   24-24P   28-15S   32-6P   36-6P   40-4S   3057-12     16S-17S   18-25P   20-17S   22-10P   22-35S   24-24P   28-15S   32-6S   36-6S   40-5P   3057-12     18-1P   18-25S   20-18P   22-10S   22-36P   24-24S   28-16P   32-7P   36-7P   40-5S   3057-16     18-1S   18-26P   20-18S   22-11P   22-36S   24-25P   28-16S   32-7S   36-7S   40-6P   3057-20     18-2P   18-26S   20-19P   22-11S   22-37P   24-25S   28-17P   32-8P   36-8P   40-6S   3057-20     18-2P   18-2S   20-19S   22-12P   22-37S   24-26P   28-17S   32-8P   36-9P   40-7S   3057-28     18-3P   18-27S   20-20P   22-12S   22-404P   24-26S   28-18P   32-9P   36-9P   40-7S   3057-28     18-4P   18-28S   20-21P   22-13S   24-1P   24-27S   28-19S   32-10S   36-10S   40-9P     18-4P   18-28S   20-21P   22-13S   24-1P   24-27S   28-19F   32-10P   36-10P   40-9S     18-5P   18-30S   20-23P   22-14S   24-2P   24-28S   28-20P   32-12P   36-11F   40-9S     18-6P   18-30S   20-23P   22-15S   24-3P   24-684S   28-21P   32-13P   36-12P   40-10S     18-6S   18-31P   20-23S   22-16P   24-3S   24-69P   28-15S   32-13P   36-12P   40-10S     18-6S   18-31P   20-23S   22-16P   24-3S   24-69P   28-21S   32-13P   36-12P   40-10S     18-6S   18-31P   20-23S   22-16P   24-3S   24-69P   28-21S   32-13P   36-12P   40-10S     18-6S   18-31P   20-23S   22-16P						22-305	24-191	28-105	32-15	30-13		48-45
16S-14P   18-21S   20-14P   22-5S   22-32P   24-20S   28-12P   32-3P   36-3P   40-1S   3057-3     16S-14S   18-22P   20-14S   22-6P   22-32S   24-21P   28-12S   32-3S   36-3S   40-2P   3057-4     16-15P   18-22S   20-15P   22-6S   22-33P   24-21S   28-13P   32-4P   36-4P   40-2S   3057-6     16-15S   18-23P   20-15S   22-8P   22-33S   24-21P   28-13S   32-4S   36-4S   40-3P   3057-8     16-16P   18-23S   20-16P   22-8S   22-34P   24-22S   28-14P   32-5P   36-5P   40-3S   3057-8     16-16S   18-24P   20-16S   22-9P   22-34S   24-22P   28-14S   32-5S   36-5S   40-4P   3057-10-6     16S-17P   18-24S   20-17P   22-9S   22-34S   24-23P   28-14S   32-5S   36-5S   40-4P   3057-10-6     16S-17S   18-25P   20-17S   22-10P   22-3SS   24-24P   28-15S   32-6S   36-6S   40-5P   3057-12-6     18-1P   18-25S   20-18P   22-10S   22-36P   24-24S   28-16P   32-7P   36-7P   40-5S   3057-16     18-1S   18-26P   20-18S   22-11P   22-36S   24-25P   28-16S   32-7S   36-7S   40-6P   3057-24     18-2S   18-27P   20-19S   22-11P   22-37P   24-25S   28-17P   32-8P   36-8P   40-6S   3057-24     18-2S   18-27P   20-19S   22-12S   22-404P   24-26S   28-18P   32-9P   36-9P   40-7S   3057-28     18-3S   18-28P   20-20S   22-13P   22-404S   24-27P   28-18S   32-9S   36-10S   40-9P     18-4S   18-29P   20-21S   22-14P   24-1S   24-28P   28-19S   32-10P   36-10P   40-8S   3057-40     18-4S   18-29P   20-21S   22-14P   24-1S   24-28P   28-19S   32-10P   36-10P   40-9S   3057-40     18-6P   18-30S   20-23P   22-15S   24-3P   24-684S   28-21P   32-13P   36-12P   40-10S   40-11P   40-10S   40-11P   40-10S   40-11P   40-10S   40-11P   40-10S   40-11P   40-10S   40-11P					22-45	22-31P	24-195		32-2P	36-2F	36-8533	48-5P
16S-14S				20-135	22-5P	22-315	24-20P	28-115	32-25	36-23		
16-15P       18-22S       20-15P       22-6S       22-33P       24-21S       28-13P       32-4P       36-4P       40-2S       3057-6         16-15S       18-23P       20-15S       22-8P       22-33S       24-22P       28-13S       32-4S       36-4S       40-3P       3057-6         16-16P       18-23S       20-16P       22-8S       22-34P       24-22S       28-14P       32-5P       36-5P       40-3S       3057-10         16-16S       18-24P       20-16S       22-9P       22-34S       24-23P       28-14S       32-5P       36-5P       40-3S       3057-10-6         16S-17P       18-24S       20-17P       22-9S       22-35S       24-23P       28-14S       32-5P       36-6P       40-4P       3057-10-6         16S-17P       18-24S       20-17P       22-9S       22-35S       24-24S       28-15P       32-6P       36-6P       40-4S       3057-10-6         16S-17P       18-25P       20-17S       22-10P       22-35S       24-24P       28-15S       32-6S       36-6P       40-4S       3057-12-6         18-1P       18-26S       20-18P       22-11P       22-36S       24-24P       28-16P       32-7P       36-7P       40-5			18-215		22-58	22-32P	24-208	28-12P	32-3P	36-31	40-15	
16-15S       18-23P       20-15S       22-8P       22-33S       24-22P       28-13S       32-4S       36-4S       40-3P       3057-8         16-16P       18-23S       20-16P       22-8S       22-34P       24-22S       28-14P       32-5P       36-5P       40-3S       3057-10         16-16S       18-24P       20-16S       22-9P       22-34S       24-23P       28-14S       32-5S       36-5S       40-4P       3057-10-6         16S-17P       18-24S       20-17P       22-9S       22-35P       24-23S       28-15P       32-6P       36-6P       40-4S       3057-10-6         16S-17S       18-25P       20-17S       22-10P       22-35S       24-24P       28-15S       32-6S       36-6B       40-5P       3057-12-6         18-1P       18-25S       20-18P       22-10P       22-36P       24-24S       28-16P       32-7P       36-7S       40-6P       3057-12-6         18-1S       18-26P       20-18S       22-11P       22-36S       24-25P       28-16S       32-7S       36-7S       40-6P       3057-12-6         18-2P       18-26S       20-19P       22-11S       22-37S       24-25P       28-16S       32-7S       36-8P       40						22-328				36-35		
16-16P       18-23S       20-16P       22-8S       22-34P       24-22S       28-14P       32-5P       36-5P       40-3S       3057-10         16-16S       18-24P       20-16S       22-9P       22-34S       24-23P       28-14S       32-5S       36-5S       40-4P       3057-10-6         16S-17P       18-24S       20-17P       22-9S       22-35P       24-23S       28-15P       32-6P       36-6P       40-4S       3057-10-6         16S-17S       18-25P       20-17S       22-10P       22-35S       24-24P       28-15P       32-6S       36-6P       40-4S       3057-12-6         18-1P       18-25S       20-18P       22-10S       22-36P       24-24S       28-16P       32-7P       36-7P       40-5S       3057-12-6         18-1S       18-26P       20-18S       22-11P       22-36S       24-25P       28-16S       32-7S       36-7F       40-6P       3057-20         18-2P       18-26S       20-19P       22-11S       22-37P       24-25S       28-17P       32-8P       36-8P       40-6S       3057-24         18-3P       18-27S       20-19S       22-12S       22-404P       24-26S       28-18P       32-9P       36-9P       40			18-225		22-68	22-33P					40-25	
16-16S         18-24P         20-16S         22-9P         22-34S         24-23P         28-14S         32-5S         36-5S         40-4P         3057-10-6           16S-17P         18-24S         20-17P         22-9S         22-35P         24-23S         28-15P         32-6P         36-6P         40-4F         3057-10-6           16S-17S         18-25P         20-17S         22-10P         22-35S         24-24P         28-15S         32-6S         36-6P         40-4S         3057-12-6           18-1P         18-25S         20-18P         22-10S         22-36P         24-24S         28-16P         32-7P         36-7P         40-5S         3057-12-6           18-1S         18-26P         20-18S         22-11P         22-36S         24-25P         28-16S         32-7P         36-7P         40-5S         3057-12-6           18-1S         18-26P         20-18S         22-11P         22-36S         24-25P         28-16S         32-7S         36-7P         40-5S         3057-12-6         3057-20         3057-12-6         3057-20         3057-20         3057-12         32-38P         36-8P         40-6P         3057-20         3057-12         32-37S         36-7S         40-6S         3057-20         3057-					22-8P	22-335		28-135		36-45		
16S-17P         18-24S         20-17P         22-9S         22-35P         24-23S         28-15P         32-6P         36-6P         40-4S         3057-12           16S-17S         18-25P         20-17S         22-10P         22-35S         24-24P         28-15S         32-6F         36-6S         40-5P         3057-12-6           18-1P         18-25S         20-18P         22-10S         22-36P         24-24S         28-16P         32-7P         36-7P         40-5S         3057-12-6           18-1S         18-26P         20-18S         22-11P         22-36S         24-24S         28-16P         32-7P         36-7P         40-5S         3057-12-6           18-1S         18-26P         20-18S         22-11P         22-36S         24-25P         28-16S         32-7S         36-7P         40-5S         3057-16-8         3057-24           18-2P         18-26S         20-19P         22-11S         22-37P         24-25S         28-17P         32-8P         36-8P         40-6S         3057-24           18-2S         18-27P         20-19S         22-12P         22-37S         24-26P         28-17S         32-8S         36-8S         40-7P         3057-24           18-3P         18-2				20-16P			24-228		32-5P	36-5P	40-35	3057-10
16S-17S         18-25P         20-17S         22-10P         22-35S         24-24P         28-15S         32-6S         35-6S         40-5P         3057-12-6           18-1P         18-25S         20-18P         22-10S         22-36P         24-24S         28-16P         32-7P         36-7P         40-5S         3057-16           18-1S         18-26P         20-18S         22-11P         22-36S         24-25P         28-16S         32-7S         36-7S         40-6P         3057-20           18-2P         18-26S         20-19P         22-11S         22-37F         24-25S         28-17P         32-8P         36-8P         40-6S         3057-20           18-2S         18-27F         20-19S         22-12P         22-37S         24-26P         28-17S         32-8S         36-8P         40-6S         3057-24           18-3P         18-27S         20-20P         22-12S         22-404P         24-26S         28-18P         32-9P         36-9P         40-7S         3057-32           18-3S         18-28P         20-20S         22-13P         22-404S         24-27P         28-18S         32-9S         36-9P         40-7S         3057-32           18-4P         18-28S         20-21P <td></td> <td></td> <td></td> <td></td> <td></td> <td>22-34S</td> <td></td> <td></td> <td></td> <td>35-55</td> <td></td> <td></td>						22-34S				35-55		
18-1P     18-2SS     20-18P     22-10S     22-36P     24-24S     28-16P     32-7P     36-7P     40-5S     3057-16       18-1S     18-26P     20-18S     22-11P     22-36S     24-25P     28-16S     32-7S     36-7S     40-6P     3057-20       18-2P     18-26S     20-19P     22-11S     22-37P     24-25S     28-17P     32-8P     36-8P     40-6S     3057-24       18-2S     18-27P     20-19S     22-12P     22-37S     24-26P     28-17S     32-8P     36-8P     40-6S     3057-24       18-3P     18-27S     20-20P     22-12S     22-404P     24-26S     28-18P     32-9P     36-9P     40-7S     3057-28       18-3S     18-28P     20-20S     22-13P     22-404S     24-27P     28-18S     32-9S     36-9P     40-7S     3057-32       18-4P     18-28S     20-21P     22-13S     24-1P     24-27S     28-19P     32-10P     36-10P     40-8P       18-4S     18-29P     20-21S     22-14P     24-1S     24-28P     28-19S     32-10S     36-10S     40-9P       18-5P     18-30P     20-22P     22-14S     24-2P     24-28S     28-20P     32-12P     36-11P     40-9P <td< td=""><td></td><td></td><td></td><td></td><td></td><td>22-35P</td><td>24-23S</td><td></td><td>32-6P</td><td>36-6P</td><td>40-45</td><td></td></td<>						22-35P	24-23S		32-6P	36-6P	40-45	
18-1S     18-26P     20-18S     22-11P     22-36S     24-25P     28-16S     32-7S     36-7S     40-6P     3057-20       18-2P     18-26S     20-19P     22-11S     22-37P     24-25S     28-17P     32-8P     36-8P     40-6S     3057-20       18-2S     18-27P     20-19S     22-12P     22-37S     24-26P     28-17S     32-8S     36-8S     40-7P     3057-28       18-3P     18-27S     20-20P     22-12S     22-404P     24-26S     28-18P     32-9P     36-9P     40-7S     3057-32       18-3S     18-28P     20-20S     22-13P     22-404S     24-27P     28-18S     32-9S     36-9S     40-8P       18-4P     18-28S     20-21P     22-13S     24-1P     24-27S     28-19P     32-10P     36-10P     40-8P       18-4S     18-29P     20-21S     22-14P     24-1S     24-28P     28-19S     32-10S     36-10S     40-9P       18-5P     18-29S     20-22P     22-14S     24-2P     24-28S     28-20P     32-12P     36-11P     40-9S       18-6P     18-30S     20-23P     22-15S     24-3P     24-684S     28-21P     32-13P     36-12P     40-10S       18-6S     18-31P <td< td=""><td></td><td></td><td></td><td></td><td>22-10P</td><td>22-35S</td><td>24-24P</td><td>28-15S</td><td>32-65</td><td>35-65</td><td>40-5P</td><td></td></td<>					22-10P	22-35S	24-24P	28-15S	32-65	35-65	40-5P	
18-2P     18-26S     20-19P     22-11S     22-37P     24-25S     28-17P     32-8P     36-8P     40-6S     3057-24       18-2S     18-27P     20-19S     22-12P     22-37S     24-26P     28-17S     32-8S     36-8S     40-7P     3057-28       18-3P     18-27S     20-20P     22-12S     22-404P     24-26S     28-18P     32-9P     36-9P     40-7S     3057-32       18-3S     18-28P     20-20S     22-13P     22-404S     24-27P     28-18S     32-9S     36-9S     40-8P       18-4P     18-28S     20-21P     22-13S     24-1P     24-27S     28-18P     32-10P     36-10P     40-8S       18-4S     18-29P     20-21S     22-14P     24-28P     28-19S     32-10S     36-10P     40-8S       18-5P     18-29S     20-22P     22-14S     24-2P     24-28S     28-20P     32-12P     36-11P     40-9S       18-6P     18-30P     20-22S     22-15P     24-2S     24-684P     28-20S     32-12S     36-11S     40-10P       18-6S     18-31P     20-23S     22-16P     24-3S     24-684S     28-21P     32-13S     36-12S     40-11P       18-6S     18-31P     20-23S     22-16P		18-1P	18-25S	20-18P	22-10S	22-36P	24-245		32-7P	36-7P	40-55	
18-2S 18-27P 20-19S 22-12P 22-37S 24-26P 28-17S 32-8S 36-8S 40-7P 3057-28 18-3P 18-27S 20-20P 22-12S 22-404P 24-26S 28-18P 32-9P 36-9P 40-7S 3057-32 36-9S 40-8P 3057-32 36-9S 40-8P 3057-32 36-9S 40-8P 3057-32 36-9S 40-8P 32-10P 32-10		18-1S				22-36S			32-75	36-75		
18-3P     18-27S     20-20P     22-12S     22-404P     24-26S     28-18P     32-9P     36-9P     40-7S     3057-32       18-3S     18-28P     20-20S     22-13P     22-404S     24-27P     28-18S     32-9S     36-9S     40-8P       18-4P     18-28S     20-21P     22-13S     24-1P     24-27S     28-19P     32-10P     36-10P     40-8S       18-4S     18-29P     20-21S     22-14P     24-1S     24-28P     28-19S     32-10S     36-10S     40-9P       18-5P     18-29S     20-22P     22-14S     24-2P     24-28S     28-20P     32-12P     36-11P     40-9S       18-5S     18-30P     20-22S     22-15P     24-2S     24-684P     28-20S     32-12S     36-11S     40-10P       18-6P     18-30S     20-23P     22-15S     24-3P     24-684S     28-21P     32-13P     36-12P     40-10S       18-6S     18-31P     20-23S     22-16P     24-3S     24-691P     28-21S     32-13S     36-12S     40-11P				20-19P			24-25S		32-8P	36-8P	40-65	
18-3S		18-2S			22-12 <b>P</b>					36-85		
18-4P	1			20-20P						36-9P	40-75	
18-4S   18-29P   20-21S   22-14P   24-1S   24-28P   28-19S   32-10S   36-10S   36-		18-3S		20-20S								3057-40
18-5P   18-29S   20-22P   22-14S   24-2P   24-28S   28-20P   32-12P   36-11P   40-9S     18-5S   18-30P   20-22S   22-15P   24-2S   24-684P   28-20S   32-12S   36-11S   40-10P     18-6P   18-30S   20-23P   22-15S   24-3P   24-684S   28-21P   32-13P   36-12P   40-10S     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   22-21S   32-13S   36-12S   40-11P     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   22-21S   32-13S   36-12S   40-11P     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18-6S   18-31P   20-23S   22-16P   24-3S   24-691P   28-21S   32-13S   36-12S   40-11P     18-6S   18		18-4P	18-28S							36-10P		
18-5P 18-29S 20-22P 22-14S 24-2P 24-28S 28-20P 32-12P 36-11P 40-9S 18-30P 20-22S 22-15P 24-684P 28-20S 32-12S 36-11S 40-10P 36-12P 36-11S 36-11S 36-11P 40-10P 36-12P 36-12P 36-11S 36-12P 36-1		18-4S		20-21S			24-28P		32-10S	36-105		
18-5S   18-30P   20-22S   22-15P   24-2S   24-684P   28-20S   32-12S   36-11S   40-10P   40-10S   40-10S   40-10S   40-10S   40-10S   40-10S   40-10S   40-10S   40-10S   40-11P   40-11S   40-11P   40	•	18-5P	18-29S			24-2P	24-28S	28-20P	32-12P	36-11P		
18-6P 18-30S 20-23P 22-15S 24-3P 24-684S 28-21P 32-13P 36-12P 40-10S 18-6S 18-31P 20-23S 22-16P 24-3S 24-691P 28-21S 32-13S 36-12S 40-11P 40-11S		18-5S	18-30P	20-22S	22-15P	24-2S		28-20S				
18-6S 18-31P 20-23S 22-16P 24-3S 24-691P 28-21S 32-13S 36-12S 40-11P		18-6P		20-23P	22-15S							
						24-3S			32-13S			
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SO-1

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MK IV

SO-8

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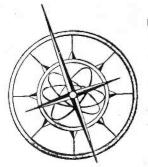
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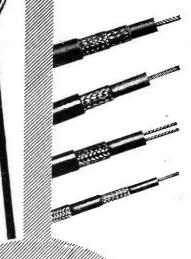
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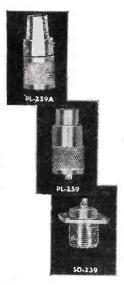
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RG 6A/U       76.0 ohms       250.00         RG 7/U       97.5 ohms       120.00         RG 8/U       52.0 ohms       100.00         RG 9A/U       51.0 ohms       260.00         RG 9A/U       51.0 ohms       275.00         RG 9B/U       51.0 ohms       395.00         RG 10/U       52.0 ohms       395.00         RG 11/U       75.0 ohms       100.00         RG 11/U       75.0 ohms       100.00         RG 12/U       75.0 ohms       100.00         RG 12/U       75.0 ohms       225.00         RG 12/U       75.0 ohms       300.00         RG 12/U       75.0 ohms       650.00         RG 14/U       52.0 ohms       650.00         RG 17A/U       52.0 ohms       650.00         RG 17A/U       52.0 ohms       850.00         RG 19/U       52.0 ohms       850.00         RG 29/U       53.0 ohms       850.00         RG 22/U       95.0 ohms       160.00         RG 22/U       95.0 ohms       450.00         RG 27/U       48.0 ohms       450.00         RG 39/U       72.5 ohms       650.00         RG 39/U       72.5 ohms       60.00 <td>RG 5B/U</td> <td>52.5 ohms</td> <td>275.00</td>	RG 5B/U	52.5 ohms	275.00
RG 8/U       52.0 ohms       100.00         RG 8A/U       52.0 ohms       195.00         RG 9/U       51.0 ohms       260.00         RG 9B/U       51.0 ohms       395.00         RG 10/U       52.0 ohms       395.00         RG 11/U       75.0 ohms       100.00         RG 11/U       75.0 ohms       100.00         RG 11A/U       75.0 ohms       200.00         RG 13/U       74.0 ohms       200.00         RG 17A/U       52.0 ohms       300.00         RG 17A/U       52.0 ohms       650.00         RG 17A/U       52.0 ohms       850.00         RG 19/U       52.0 ohms       1550.00         RG 20/U       52.0 ohms       1550.00         RG 21/U       53.0 ohms       1550.00         RG 22/U       95.0 ohms       320.00         RG 22/U       95.0 ohms       450.00         RG 25/U       48.0 ohms       450.00         RG 27/U       48.0 ohms       450.00         RG 29/U       53.5 ohms       400.00         RG 39/U       72.5 ohms       400.00         RG 39/U       72.5 ohms       600.00         RG 55/U       58.0 ohms       75.0	RG 6A/U	76.0 ohms	250.00
RG 9/Ú         51.0 ohms         260.00           RG 9A/U         51.0 ohms         275.00           RG 9B/U         51.0 ohms         395.00           RG 10/U         52.0 ohms         245.00           RG 11/U         75.0 ohms         100.00           RG 11A/U         75.0 ohms         200.00           RG 12/U         75.0 ohms         200.00           RG 12/U         75.0 ohms         300.00           RG 12/U         75.0 ohms         225.00           RG 14/U         52.0 ohms         300.00           RG 17/U         52.0 ohms         650.00           RG 17A/U         52.0 ohms         850.00           RG 19/U         52.0 ohms         850.00           RG 29/U         52.0 ohms         850.00           RG 29/U         53.0 ohms         250.00           RG 22/U         95.0 ohms         450.00           RG 25/U         48.0 ohms         450.00           RG 27/U         48.0 ohms         450.00           RG 39/U         72.5 ohms         400.00           RG 34/U         71.0 ohms         250.00           RG 54/U         58.0 ohms         60.00           RG 55/U         58.	RG 8/U	52.0 ohms	100.00
RG 9B/U       51.0 ohms       395.00         RG 10/U       75.0 ohms       100.00         RG 11A/U       75.0 ohms       100.00         RG 12/U       75.0 ohms       200.00         RG 13/U       74.0 ohms       300.00         RG 13/U       74.0 ohms       300.00         RG 17/U       52.0 ohms       650.00         RG 17A/U       52.0 ohms       650.00         RG 19/U       52.0 ohms       850.00         RG 29/U       52.0 ohms       850.00         RG 20/U       52.0 ohms       850.00         RG 29/U       53.0 ohms       250.00         RG 22/U       95.0 ohms       160.00         RG 22B/U       95.0 ohms       450.00         RG 25/U       48.0 ohms       450.00         RG 27/U       48.0 ohms       450.00         RG 29/U       53.5 ohms       400.00         RG 39/U       72.5 ohms       180.00         RG 39/U       72.5 ohms       60.00         RG 54/U       58.0 ohms       75.00         RG 57/U       95.0 ohms       125.00         RG 57/U       95.0 ohms       60.00         RG 58/U       53.5 ohms       60.00 <td>RG 9/Ú</td> <td>51.0 ohms</td> <td>260.00</td>	RG 9/Ú	51.0 ohms	260.00
RG 11/U       75.0 ohms       100.00         RG 11A/U       75.0 ohms       175.00         RG 12/U       75.0 ohms       200.00         RG 13/U       74.0 ohms       300.00         RG 14/U       52.0 ohms       300.00         RG 17A/U       52.0 ohms       650.00         RG 17A/U       52.0 ohms       850.00         RG 19/U       52.0 ohms       850.00         RG 20/U       52.0 ohms       850.00         RG 29/U       52.0 ohms       850.00         RG 29/U       53.0 ohms       250.00         RG 22/U       95.0 ohms       160.00         RG 22/U       95.0 ohms       450.00         RG 25/U       48.0 ohms       450.00         RG 27/U       48.0 ohms       450.00         RG 29/U       53.5 ohms       400.00         RG 39/U       72.5 ohms       180.00         RG 39/U       72.5 ohms       180.00         RG 54/U       58.0 ohms       75.00         RG 57/U       95.0 ohms       60.00         RG 58/U       53.5 ohms       60.00         RG 58/U       53.5 ohms       75.00         RG 58/U       53.5 ohms       60.00	RG 9B/U	51.0 ohms	395.00
RG 12/U       75.0 ohms       200.00         RG 13/U       74.0 ohms       300.00         RG 14/U       52.0 ohms       650.00         RG 17A/U       52.0 ohms       850.00         RG 18/U       52.0 ohms       850.00         RG 19/U       52.0 ohms       850.00         RG 29/U       52.0 ohms       850.00         RG 20/U       52.0 ohms       250.00         RG 21/U       53.0 ohms       250.00         RG 22/U       95.0 ohms       250.00         RG 22/U       95.0 ohms       160.00         RG 25/U       48.0 ohms       450.00         RG 27/U       48.0 ohms       450.00         RG 29/U       53.5 ohms       400.00         RG 39/U       72.5 ohms       400.00         RG 39/U       72.5 ohms       400.00         RG 54/U       58.0 ohms       60.00         RG 55/U       58.0 ohms       60.00         RG 57/U       95.0 ohms       425.00         RG 58/U       53.5 ohms       60.00         RG 58/U       53.5 ohms       60.00         RG 59/U       73.0 ohms       65.00         RG 59A/U       73.0 ohms       65.00	RG 11/U	75.0 ohms	100.00
RG 17/U       52.0 ohms       650.00         RG 17A/U       52.0 ohms       650.00         RG 18/U       52.0 ohms       850.00         RG 19/U       52.0 ohms       1250.00         RG 20/U       52.0 ohms       250.00         RG 21/U       53.0 ohms       250.00         RG 22/U       95.0 ohms       160.00         RG 22B/U       95.0 ohms       320.00         RG 22B/U       95.0 ohms       450.00         RG 25/U       48.0 ohms       450.00         RG 27/U       48.0 ohms       450.00         RG 28/U       50.0 ohms       650.00         RG 29/U       53.5 ohms       40.00         RG 39/U       72.5 ohms       180.00         RG 39/U       72.5 ohms       400.00         RG 54/U       58.0 ohms       75.00         RG 55/U       58.0 ohms       60.00         RG 57/U       95.0 ohms       425.00         RG 58/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       75.00         RG 58A/U       53.5 ohms       80.00         RG 59A/U       73.0 ohms       65.00         RG 59A/U       73.0 ohms       65.00 <td>RG 12/U</td> <td>75.0 ohms</td> <td>200.00</td>	RG 12/U	75.0 ohms	200.00
RG 18/U       52.0 ohms       850.00         RG 19/U       52.0 ohms       1250.00         RG 20/U       52.0 ohms       1550.00         RG 21/U       53.0 ohms       250.00         RG 22/U       95.0 ohms       160.00         RG 22B/U       95.0 ohms       320.00         RG 22B/U       95.0 ohms       450.00         RG 25/U       48.0 ohms       450.00         RG 27/U       48.0 ohms       450.00         RG 28/U       50.0 ohms       650.00         RG 29/U       53.5 ohms       40.00         RG 34/U       71.0 ohms       250.00         RG 34/U       72.5 ohms       400.00         RG 54/U       58.0 ohms       75.00         RG 54/U       58.0 ohms       60.00         RG 57/U       95.0 ohms       425.00         RG 57/U       95.0 ohms       60.00         RG 58/U       53.5 ohms       75.00         RG 58/U       53.5 ohms       80.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       65.00         RG 62/U       93.0 ohms       100.00         RG 63/U       93.0 ohms       175.00	RG 17/U	52.0 ohms	650.00
RG 20/U       52.0 ohms       1550.00         RG 21/U       53.0 ohms       250.00         RG 22/U       95.0 ohms       160.00         RG 22B/U       95.0 ohms       450.00         RG 25/U       48.0 ohms       495.00         RG 27/U       48.0 ohms       450.00         RG 28/U       50.0 ohms       650.00         RG 29/U       53.5 ohms       40.00         RG 34/U       71.0 ohms       250.00         RG 39/U       72.5 ohms       400.00         RG 39/U       72.5 ohms       400.00         RG 54/U       58.0 ohms       60.00         RG 55/U       53.5 ohms       60.00         RG 57/U       95.0 ohms       425.00         RG 57A/U       95.0 ohms       60.00         RG 58A/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       75.00         RG 58A/U       53.5 ohms       60.00         RG 59A/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       750.00         RG 62/U       93.0 ohms       100.00         RG 65/U       93.0 ohms       175.00 <td>RG 18/U</td> <td>52.0 ohms</td> <td>850.00</td>	RG 18/U	52.0 ohms	850.00
RG 92/U       95.0 ohms       160.00         RG 92B/U       95.0 ohms       320.00         RG 924/U       125.0 ohms       450.00         RG 925/U       48.0 ohms       495.00         RG 927/U       48.0 ohms       450.00         RG 929/U       53.5 ohms       40.00         RG 34/U       71.0 ohms       250.00         RG 39/U       72.5 ohms       400.00         RG 39/U       72.5 ohms       400.00         RG 34/U       67.5 ohms       60.00         RG 54/U       58.0 ohms       60.00         RG 55/U       53.5 ohms       60.00         RG 57A/U       95.0 ohms       425.00         RG 58A/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       80.00         RG 59A/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       60.00         RG 62/U       93.0 ohms       65.00         RG 65/U       93.0 ohms       750.00         RG 65/U       93.0 ohms       750.00         RG 65/U       93.0 ohms       80.00         RG 71/U       93.0 ohms       80.00 <td>RG 20/U</td> <td>52.0 ohms</td> <td>1550.00</td>	RG 20/U	52.0 ohms	1550.00
RG 24/U       125.0 ohms       450.00         RG 25/U       48.0 ohms       495.00         RG 27/U       48.0 ohms       450.00         RG 28/U       50.0 ohms       650.00         RG 29/U       53.5 ohms       40.00         RG 34/U       71.0 ohms       250.00         RG 39/U       72.5 ohms       400.00         RG 39/U       72.5 ohms       400.00         RG 41/U       67.5 ohms       400.00         RG 54/U       58.0 ohms       60.00         RG 55/U       53.5 ohms       60.00         RG 57/U       95.0 ohms       425.00         RG 58/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       75.00         RG 58A/U       53.5 ohms       60.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       60.00         RG 62/U       93.0 ohms       100.00         RG 63/U       950.0 ohms       750.00         RG 65/U       93.0 ohms       100.00         RG 65/U       93.0 ohms       160.00         RG 71/U       93.0 ohms       160.00         RG 74/U       52.0 ohms       80.00	RG 22/U	95.0 ohms	160.00
RG 27/U       48.0 ohms       450.00         RG 28/U       50.0 ohms       650.00         RG 29/U       53.5 ohms       40.00         RG 34/U       71.0 ohms       250.00         RG 39/U       72.5 ohms       180.00         RG 41/U       67.5 ohms       400.00         RG 54/U       58.0 ohms       60.00         RG 55/U       53.5 ohms       110.00         RG 57/U       95.0 ohms       425.00         RG 57A/U       95.0 ohms       60.00         RG 58/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       75.00         RG 58C/U       53.5 ohms       60.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       60.00         RG 62/U       93.0 ohms       100.00         RG 63/U       125.0 ohms       750.00         RG 65/U       950.0 ohms       100.00         RG 65/U       93.0 ohms       160.00         RG 71/U       93.0 ohms       160.00         RG 74/U       52.0 ohms       80.00         RG 78/U       48.0 ohms       80.00	RG 24/U	125.0 ohms	450.00
RG 29/U       53.5 ohms       40.00         RG 34/U       71.0 ohms       250.00         RG 39/U       72.5 ohms       180.00         RG 41/U       67.5 ohms       400.00         RG 54/U       58.0 ohms       75.00         RG 54A/U       58.0 ohms       60.00         RG 55/U       53.5 ohms       110.00         RG 57/U       95.0 ohms       425.00         RG 57A/U       95.0 ohms       60.00         RG 58/U       53.5 ohms       75.00         RG 58A/U       53.5 ohms       80.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       60.00         RG 62/U       93.0 ohms       100.00         RG 63/U       125.0 ohms       175.00         RG 65/U       93.0 ohms       175.00         RG 67/U       93.0 ohms       160.00         RG 71/U       93.0 ohms       160.00         RG 74/U       52.0 ohms       350.00         RG 78/U       48.0 ohms       80.00	RG 27/U	48.0 ohms	450.00
RG 39/U       72.5 ohms       180.00         RG 41/U       67.5 ohms       400.00         RG 54/U       58.0 ohms       75.00         RG 54A/U       58.0 ohms       60.00         RG 55/U       53.5 ohms       110.00         RG 57/U       95.0 ohms       125.00         RG 57A/U       95.0 ohms       60.00         RG 58/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       75.00         RG 58C/U       53.5 ohms       80.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       100.00         RG 62/U       93.0 ohms       175.00         RG 63/U       125.0 ohms       175.00         RG 65/U       93.0 ohms       175.00         RG 67/U       93.0 ohms       160.00         RG 71/U       93.0 ohms       350.00         RG 77/U       48.0 ohms       80.00         Add 25% to prices shown for lengths	RG 29/U	53.5 ohms	40.00
RG 54A/U       58.0 ohms       60.00         RG 55/U       53.5 ohms       110.00         RG 57/U       95.0 ohms       125.00         RG 57A/U       95.0 ohms       425.00         RG 58/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       75.00         RG 58C/U       53.5 ohms       80.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       100.00         RG 62/U       93.0 ohms       100.00         RG 63/U       125.0 ohms       175.00         RG 65/U       93.0 ohms       175.00         RG 671/U       93.0 ohms       350.00         RG 71/U       52.0 ohms       350.00         RG 77/U       48.0 ohms       80.00         Add 25% to prices shown for lengths	RG 39/U	72.5 ohms	180.00
RG 57/U       95.0 ohms       125.00         RG 57A/U       95.0 ohms       425.00         RG 58/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       75.00         RG 58C/U       53.5 ohms       80.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       65.00         RG 62/U       93.0 ohms       65.00         RG 62AU       93.0 ohms       175.00         RG 63/U       125.0 ohms       175.00         RG 65/U       950.0 ohms       160.00         RG 71/U       93.0 ohms       160.00         RG 74/U       52.0 ohms       350.00         RG 78/U       48.0 ohms       80.00	RG 54A/U	58.0 ohms	60.00
RG 58/U       53.5 ohms       60.00         RG 58A/U       53.5 ohms       75.00         RG 58C/U       53.5 ohms       80.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       100.00         RG 62/U       93.0 ohms       65.00         RG 62AU       93.0 ohms       175.00         RG 63/U       125.0 ohms       750.00         RG 65/U       93.0 ohms       160.00         RG 71/U       93.0 ohms       350.00         RG 77/U       48.0 ohms       80.00         Add 25% to prices shown for lengths	RG 57/U	95.0 ohms	125.00
RG 58C/U       53.5 ohms       80.00         RG 59/U       73.0 ohms       60.00         RG 59A/U       73.0 ohms       100.00         RG 62/U       93.0 ohms       65.00         RG 62AU       93.0 ohms       100.00         RG 63/U       125.0 ohms       750.00         RG 65/U       950.0 ohms       160.00         RG 71/U       93.0 ohms       350.00         RG 74/U       52.0 ohms       80.00         RG 78/U       48.0 ohms       80.00	RG 58/U	53.5 ohms	60.00
RG 59A/U       73.0 ohms       100.00         RG 62/U       93.0 ohms       65.00         RG 62AU       93.0 ohms       100.00         RG 63/U       125.0 ohms       175.00         RG 65/U       950.0 ohms       750.00         RG 71/U       93.0 ohms       160.00         RG 74/U       52.0 ohms       350.00         RG 77/U       48.0 ohms       80.00         Add 25% to prices shown for lengths	RG 58C/U	53.5 ohms	80.00
RG 62AU       93.0 ohms       100.00         RG 63/U       125.0 ohms       175.00         RG 65/U       950.0 ohms       750.00         RG 71/U       93.0 ohms       160.00         RG 74/U       52.0 ohms       350.00         RG 77/U       48.0 ohms       80.00         RG 78/U       48.0 ohms       80.00	RG 59A/U	73.0 ohms	100.00
RG 65/U       950.0 ohms       750.00         RG 71/U       93.0 ohms       160.00         RG 74/U       52.0 ohms       350.00         RG 77/U       48.0 ohms       80.00         RG 78/U       48.0 ohms       80.00	RG 62AU	93.0 ohms	100.00
RG 77/U 48.0 ohms 80.00 RG 78/U 48.0 ohms 80.00	RG 65/U	950.0 ohms	750.00
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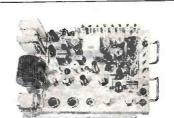
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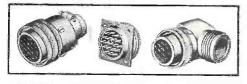
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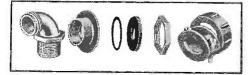
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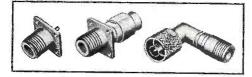
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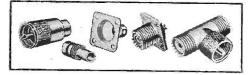
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1A7GT	6AR5 6AR6	6R7	12SH7	117P7GT /
1C5GT	6AS5	6R8	12517	117Z4GT
1C6	6AU5GT	6S7	12SJ7GT	117Z6GT
1G4GT		6SA7	12SK7	*211
1G6GT	6AV5GT 6AX5GT	*6SA7GT	*125K7GT	*304TH
1H5GT 1J6GT	6B4G	6SB7Y	12SL7GT	*304TL
	6B8G	6SC7	12SQ7	*307A
1L6 1N5GT	6BA7	6SC7GTY	*125Q7GT	*450TH
1Q5GT	6BF6	6SF5	12SR7	*450TL
184	6BK7	6SF5GT	12Z3	*807
1 1 2	6BL7GT	6SF7	19	*813
1X2A	6BN6	6SG7	19J6	*829B
2A4G	6BQ7	6SH7	19BG6G	*832
2B7	*6C21	6SJ7	24A	*866A
2E22	6C5	6SK7	25A7GT	* <b>9</b> 54
*2J31	6C5GT	*6SK7GT	25W4GT	* <b>9</b> 55
*2132	6C6	6SQ7	25Z5	*956
*2133	6D6	*6SQ7GT	25Z6GT	*957
*2J34	6D8G	6SR7	26	*2050
3A8GT	6E5	6SS7	26Z5W	*2051
*3DP1	6F5	6SU7GTY	27	5654
*3E29	6F5GT	6U5/6G5	32 32L7GT	5687
*3Q5GT	6F6	6U7G	32L7G1	5881
5A6	6F6G	6U8	33	*8020
5V4G	6F6GT	6V6	34	*9001 *9002
5W4GT	6H6	6W6GT	35/51	*9003
5X4G	6H6GT	6X4W	36 38	*9004
5Y3G	6J5	6X5GT	39/44	*9005
5Y.4G	6J5GT	6Y6G	41	*9006
5 <b>Z</b> 3	616	12A8GT 12AH7GT	42	10BP4
5Z4	6J7	12AL5	43	10BP4A
6A7	6J7GT	12AV6	45	12LP4
6A8	6K5GT	12AY7	45Z3	12LP4A
6A8G	6K6GT	12BA7	46	14PB4
6A8GT	6K7	12BD6	47	7JP4
6AB4	6K7G 6K7GT	12BH7	50	16AP4
6AC5GT	6K8	12J5GT	50Y6GT	16GP4
6AC7/1852	6L5G	12J7GT	50Y7GT	16JP4
6AG7	6L6	12K7GT	53	16RP4
6AH6	6L6G	12K8GT	56, 57, 58 70L7GT	16TP4
*6AJ5	6L7	12Q7GT	70L7GT	17BP4A
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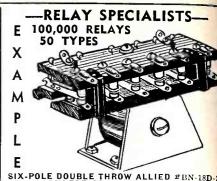
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Kit form.	All 115V/	GOey inpr	ats		23.91
up to 28V	DC at 12	amps			31.98
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# Volts/12Amp 2 Kvins. —9.12—18V/4Amp. —9—12—18V/12Amp. —9—12—18V/24Amp.

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723A 723A B 2K25

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3C22 4C35 3C45 KU627 5C22

FG17 - FG32 - FG33 - FG-35 - FG104 FG105 - FG172 - FG95 - 6D4 - 6J4

#### ALL TYPES CRYSTAL DIODES

1N21B 1N23B 1N21C 1N25 1N23C 1N26 1N21A 1N23A 1N21 1N23

RECEIVING TUBES TRANSMITTING
6A7 - 75 - 127 - 1521 - 250TH - 450TH - 579B
- 804 - 807 - 810 - 811 - 812 - 813 - 866A 872A - 845 - 35TG - 750T - 884 - 1612 - 1614
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# CRYSTAL DIODES DUO-DIODES VARISTORS



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  $\pm 1$  volt applied.

Ratings shown are for each diode. Types 1N40, 1N42 and 1N71 are plug-in type; 1N41 is lug type.



**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.

#### GERMANIUM DIODES AND DUO-DIODES

Туре	Cont. Reverse Working Voltage	Reverse Voltage*	Fwd. Curr. at + 1v (ma min.)	Av. Anode Current (ma max.)	Reverse Current (µa 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 @-150y
1N56	40v max.	50v min.	15.0	60	300 @—30 <sub>V</sub>
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

<sup>\*</sup>For zero dynamic resistance.

#### **GERMANIUM VARISTORS**

Туре	Cont. Reverse Working Voltage	Reverse Voltage*	Fwd. Curr. at + 1.5v (ma min.)	Av. Anode Current (ma max.)	Recurrent Pea Anode Curr. (ma 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
1N71	40v max.	50v min.	15 (@ +1.0v.)	60		625 @—100v 300 @—30v

<sup>\*</sup>For zero dynamic resistance.

#### MICROWAVE CRYSTAL DIODES

Туре	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	UH		ited in specified cir	cuit
Туре	Min. Fig. of merit	Video Imp. (ohms)	Burnout Test	Carrier Freq. (mc)	Video Freq.
1N31	55	6,000-23,000	Bp=0.02 watt		
1N32	100	5,000-20,000	Bp=0.36 watt	10,000	500 cps—5 mc
1N76	(Rated in specifie	ed circuit)	up-0.30 watt	3,000	500 cps-5 mc
1N79	Operating range	0-3,000 mc inst	rument rectifier	10,000	500 cps—5 mc

Bs=total energy in simulated spike of pulse from TR box in radar service.

Bp=peak power pulse under pulsed conditions.



<sup>\*\*</sup>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.

<sup>†</sup>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 5μfd. capacitor is a minimum of 1.55 volts peak-to-peak.

# MICROWAVE COMPONENTS





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-37.

Frequency Range (mc)	Pulsed Power Out (kw)	Avg. Power Out (watts)
9345-9405	7-14	14
9345-9405	18-35	18
9345-9405	300	225
9345-9405	65-120	65
9003-9168	300	225
	9345-9405 9345-9405 9345-9405 9345-9405	Range (mc)         Out (kw)           9345-9405         7-14           9345-9405         18-35           9345-9405         300           9345-9405         65-120

#### **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

36 is a pulse-modulated oscillator for frequencies to 1200 mc.

37 is designed for use as a c.w. oscillator up to 3300. Plate disc is flat, grid disc folded.

64 is a pulse-modulated oscillator for use up to

65 is for use as a c.w. oscillator without external dback in the range from 900 to 3000 mc.

67 is a c.w. oscillator for use up to 3300 mc. Both cs are folded.

68 is intended for use as a c.w. amplifier-multiplier to 3000 mc.

18 is intended for use as a c.w. amplifier-multiplier to 3000 mc.

r complete information, write for bulletin ES-4810.

#### 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

Туре	Frequency Range (mc)	Insertion Loss (db)	Max. Recovery Time (µsec. at —3 db)
1824	8490-9600	0.85-1.50	4
1B63	8565-9487 (1)	0.8	4
1863A	8490-9578 (2)	0.7 max.	4
	8565-9487 (3)		

Туре	Frequency Range (mc)	Transmitter Peak Power (kw min.)	Tuning Susceptance (mhos)	Arc Loss (db. max.)
1835	9000-9600	5	06 to +.06	0.8

(1) 1.6 VSWR.

(2) 1.9 VSWR.

(3) 1.4 VSWR.

#### **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. 5836 and 5837 are suitable for either c.w. or pulsed operation. Write for catalog EC-41.



	Kange (mc)
134	1600-4000
234	2100-4500
3¾	4000-5500
1¾	550-2300
2¾	1100-3000
1¾	1600-4000
23/4	2100-4500
3¾	4000-5500
134	550-2300
23/4	1100-3000
	2¾ 3¾ 1¾ 2¾ 1¾ 2¾ 3¾

Mode

Frequency

6BL6

Sylvania Hydrogen Thyratrons are designed for pulsing service at high repetition frequencies, high peak currents and high voltages. An out-

standing feature is very short de-

HYDROGEN THYRATRONS

In Thyratrons are ionization time, which permits an unusually high switching rate.

For information on ratings and operating characteristics, write for Data Sheets EC-24 and EC-25.



5C22





# INDUSTRIAL ELECTRONIC TUBES



# SYLVANIA TYPE RA340 MADE IN U.S.A

R4340

#### **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.

Flashing rate of the R4340 is 4 per minute maximum, peak light output 12,000,000 lumens, integrated output 18,000 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 and R4350 produce bluish-white light pulses, and are ideal for application where true-color viewing is essential. Maximum flashing rate of the R4350 is 15 per second; of the SA-309, 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/SN4

R1131C

#### **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.



Modulating Freq. Range, cps 15-15,000
Useful Light Range, Angstroms 3,500-6,500
Crater Diameter, inches .056

Operating Voltage, max.

Operating current, ma

150 135 5-35 3-25 15-15,000 15-15,000 3,500-6,500 3,500-6,500

R1130B

R1130B



# 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  $\mu$ a. current) . . .

15.5-17.0 ohms

Operating Voltage . . . 1.5 volts

#### MISCELLANEOUS TUBES

#### SS501 Gas Discharge Tube

This tube is of the externally triggered, cold cathode type, for use as an electronic switch capable of handling high instantaneous currents in high voltage circuits.

#### **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 3,500 volts ac.

# Complete information on all Electronics Division products is available at the following Electronics Division Sales Offices:

Boston 15, Massachusetts 43 Leon Street Cincinnati, Ohio 600 Terrace Plaza Building

Chicago 51, Illinois 3450 West Division Street Los Angeles 50, California 2936 West 46th Street

New York 19, New York 1740 Broadway Washington 5, D.C. 734 15th Street N.W.



# **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— $25 \phi$ .



## 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
Gas Discharge Tube— Type S\$501	EC-128
Pirani Tube—Type R1111	EC-14B
Electronic Tubes	. , EC-20H
Flash Tube—Type R4330	EC-23A
Hydrogen Thyraton Type 5C22	EC-25
Stroboton Type SN4-& 1D21	EC-26
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Germanium Crystal Diodes	EC-36D
Magnetrons	EC-37C
Microwave Crystal	
Rectifiers	EC-38
Sylvania Selenium Rectifiers	, , EC-39A
Broadband Reflex Klystrons	EC-40
Germanium Photodiode— Type 1N77	. ES-5102
21 Circuits for Sylvania Germanium Crystal Diodes	es and

For literature described on this page, write:

Sylvania Electric Products Inc. Advertising Dept., Emporium, Pa.

SYNANA S

# INDUSTRIAL ELECTRONIC TUBES





R4340

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1D21/SN4

D11216

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K B 130D	KIISIC
150	135
5-35	3-25
15-15,000	15-15,000
3,500-6,500	3,500-6,500
.056	.093
	5-35 15-15,000 3,500-6,500

D1120D

R1130B



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# FREE ELECTRONICS DIVISION CATALOG SHEETS

	Catalog
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Crystal Diode Replacement Guide	*1
Sylvania Rocket Tubes (Planar Triodes)	. ES-4810
Sylvania Glow Modulator Tubes Types 1859/R1130B & R1131C.	. EC-15B
Gas Discharge Tube—	
Type SS501	EC-12B
Pirani Tube—Type R1111	EC-14B
Electronic Tubes	. EC-20H
Flash Tube—Type R4330	EC-23A
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Stroboton Type SN4-& 1D21	
Triggertube Type OA5	
Germanium Crystal Diodes	EC-36D
Magnetrons	
Microwave Crystal	
Rectifiers	EC-38
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Klystrons	EC-40
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21 Circuits for Sylvania Germanium Crystal Diodes	. 7

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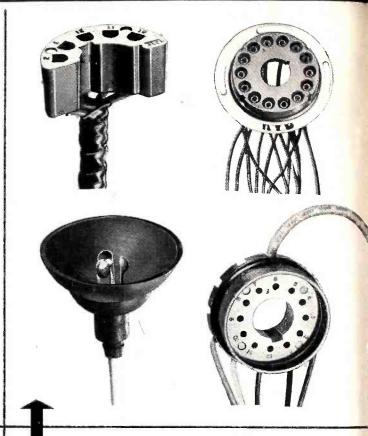
SYNANIA S

## SYLVANIA ELECTRONIC COMPONENTS

Precision parts engineered for highest quality and finest performance . . . custom-designed to your specifications.

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. A-1452, Parts Division, Warren, Pa.

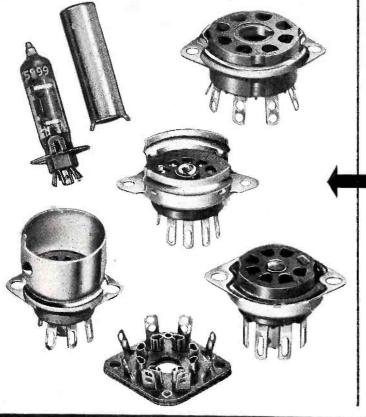


#### **CATHODE RAY TUBE SOCKETS**

Are available in types to meet any equipment design specifications. Full-mold and half-mold duo-decal sockets furnished complete with color-coded lead wires. Magnal and dipheptal cathode ray tube sockets also available with low-loss insulators if required. Also 2nd anode connectors furnished to meet the requirements of any manufacturer.

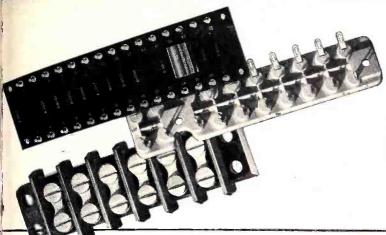
#### RADIO TUBE SOCKETS

Sylvania's complete line of tube sockets includes both molded and laminated types made to rigid JAN and RTMA specifications. Molded sockets are available for button type sub-miniature, 7 and 9 pin miniature and octal tubes, vibrators and GRC octals. 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 or low-loss phenolic plastic, and also ceramic in standard JAN-S-28A sockets. All sockets are made under Sylvania's highest standards of quality control.





# SYLVANIA ELECTRONIC COMPONENTS

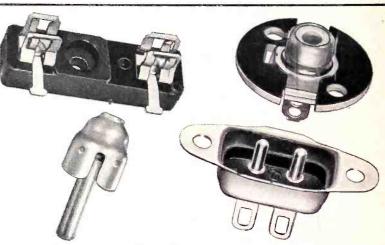


#### TERMINAL BOARDS AND STRIPS

Are now available from Sylvania in a wide variety of types. Insulators are of phenolic, bakelite, or melamine. Contacts supplied to any standard or special form are of brass or steel cadmium plated.

#### **PLUGS AND CONNECTORS**

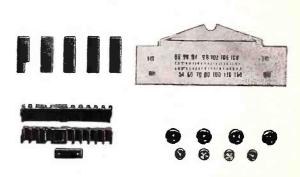
Finest quality plugs and connectors are now offered by Sylvania to meet every need. Standard metal and bakelite units include antenna jacks and plugs, banana jacks and plugs, interlock plugs, battery plugs, and speaker plugs. Metal contacts cadmium-plated brass.





## STAMPED CIRCUITS AND LOOP ANTENNAS

Utilizing the most advanced die-stamping techniques, Sylvania offers complete efficient circuits, amplifiers, and loop antennas. Our engineering staff will welcome the opportunity of working with set manufacturers in designing these specialized assemblies.



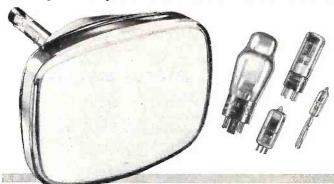
#### **MOLDED PLASTICS**

Sylvania is now equipped to offer manufacturers the widest possible variety of 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.



# SYLVANIA TUBES and TEST EQUIPMENT

## You'll improve your business and win goodwill with Sylvania quality products



Your customers know about Sylvania's dependability and fine performance. So, whether it's tubes or test equipment, you'll enjoy the advantage of working with a recognized leader when you say SYLVANIA.

Sylvania Tubes are produced under the most rigid standards of quality control. Made in types for every need . . . from tiny subminiature receiving tubes to large glass, round and rectangular Television Picture Tubes.



**Type 216** 

FM-AM Signal Generator. Useful as a TV Marker. A versatile AM-FM generator, doubly useful for peaking alignment of TV and as a TV marker. Accurately calibrated. Fundamentals 80 kc to 120 mc. Fundaments to 240 mc. Modulation: 0-100% AM; 0-30/150/700 kc FM. 1.0 volt max. output. Low leakage. Built-in crystal circuit. Size: 11%" x 17½" x 105%". Price: \$139.50.

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 3μμf shunt capacitance) on RF. Special subminiature diode tube in RF probe gives flat response to 300 megacycles on scales

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.

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.



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.



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.



Type 400

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.



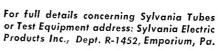
Type 501



Type 300

Voltage Calibrator — Type 300. 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.

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.





Type X-7018



# electronics Cumulative index

January 1940
through
December 1949

McGRAW-HILL PUBLISHING CO., INC. . 330 West 42nd Street . New York 36, N. Y.

#### ELECTRONICS CUMULATIVE INDEX 1940-1949

This index, which lists in alphabetical order all feature articles and most of the departmental items published in Electronics during the second ten years of publication, January 1940 to December 1949, was compiled from the original published material. A similar index published in the June 1951 Buyer's Guide issue covered the first ten years, April 1930 to December 1939.

The articles are listed in three ways: by title, by subject and by author. The title and subject listings are combined and appear first in this index. They are printed three columns to the page. The author listings follow, printed in two columns to the page.

TITLE LISTINGS. The exact title of each feature as it originally appeared (omitting only the articles "a", "an", and "the") and the exact title or a slight rearrangement of the exact title of departmental items are listed in alphabetical order with the last name or names of the author or authors. Exact titles may be identified by the presence of the author's name. In addition, some titles of both features and departmental items are listed by using a rearrangement of exact title, so that the reader may more readily locate the desired material.

#### Subject Listings . . .

**SUBJECT LISTINGS:** Each article is also listed alphabetically by the subject or subjects it represents. Categories of subjects are identified by boldface type. The terms used in the subject index reflect current usage.

**AUTHOR LISTINGS:** The author index contains an entry (name and initials) for every author of every

article, together with the exact title of the article.

PAGE, MONTH AND YEAR: Every listing whether by title, subject or author, contains the page number, month of issue and year, in that order, as indicated at the top of each column.

FEATURE ARTICLES AND DE-PARTMENT ITEMS: Feature articles, those printed as full pages in the front of the editorial section each month, carry no identification. Department items, shorter articles printed at the back of the editorial section and collected under such headings as "Tubes at Work" and "The Electron Art", are identified by the symbol D after the page number. "New Products" and current news items are not listed because of their great number and lack of current interest in them. Book reviews are indicated by (BR) after the title.

HOW TO USE THE INDEX. If the exact title or the author's name is known, the articles can be quickly located. If, as is generally the case, the exact title is not known, there are many clues by which the article can be found. The general subject matter, an amplifier, for example, is a good place to start. The use to which the circuit, or device is put—broadcasting for example—is another clue. The easiest way to find such an article is to disregard the qualifying or defining adjectives. Thus, the place to find an article on a "versatile" or a "direct-coupled" amplifier is under "amplifier."

#### **BSORPTION ANALYZER**

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## WELZ

## ZWORYKIN

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Welz, W. C., & Aiken, C. B., D-c amplifier for low- level signals	Winlund, E. S., & Perry, C. S., Modern 10-kw frequency-modulation transmitter
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wey, n. J., & Jupe, J. H., Electronic operation of a	Wood, A., "Acoustics" (BR)
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	cations" (BR)

# **DIRECTORY SECTION**

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



Directory Section

# 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 style 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-lonization.

The only exceptions are INSULATING COMPOUNDS: INSULATION MATERIALS; INSULATION PARTS; METALS; PLASTIC MATERIALS; and TUBE PARTS. Products falling in these classifications are arranged alphabetically under those six 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

# THE ONLY Completely Verified LISTING OF MANUFACTURERS OF ELECTRONIC AND ALLIED

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ENIX AVIATION CORP., PACIFIC DIVISION, 11600
Shinan Way, N. Hollywood, Calif. ADV. PG. 129.

ALI'NE CO., THE, 751 Main St., Winchester, Mass.

AT PG. 210.

Winchester, Mass.

AT PG. 210.

Selectric Co., 2700 Southport Ave., Chicago 14, III.

CLE-PIONEER DIV. BENDIX AVIATION CORP.,

Telboro, N. J. ADV. PG. 127, 128.

1919 ing Research Associates, Inc., 1902 W. Minnehal Ave., St. Paul, Minn.

ade Inc., Frederic, 1330 Laskey Rd., Toledo 12,

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On: & Co., Inc., G. M., 254 W. Colorado St., Iralena I, Calif. encorp., Metuchen, N. J. Lodfg. Corp., Metuchen, N. J. thay Instrument Co., 1315 S. Clarkson St., Denver 10, alo.

10, plo.
DutRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detit 10, Mich. ADV. PG. 122, 123.
1902 Co., The, Components Div., Fort Wayne 4, Ind.
1850 Alaboratories, Inc., 5 Fottler Rd., Hingham, Mass.
1861 Herjorp., William, 325 N. Halstead St., Pasadena 8, Cali

CALL VINSTRUMENT CORP., 215 E. 91st St., New Yorl N. Y. ADV. PG. 473.

Tales: Engineering, Crescent Blvd., at Drexel Ave., Pennuken Township, Camden 11, N. J.

Total 39, Mass.

Polytical St. (Camputer St.)

prince, Hermon Hosmer, 385 Putnam Ave., Candrid 39, Mass.

RVCECHANISMS, INC., Post & Stewart Aves., Westpuryl, Y. ADV. PG. 392.

tha Laboratories, Inc., 12401 W. Olympic Blvd.,
05 ngeles 64, Calif.

evis Corp., 7466 W. Irving Park Road, Chicago 34,
11.

ns-mics, Inc., Bedford Airport, Bedford, Mass. TO EN INSTRUMENT CO., 5806 Hough Ave., Cleve-and, Ohio. ADV. PG. 348, 349.

## APERS—Battery

H., HUGH H., 4700 Stenton Ave., Philadelphia ADV. PG. 156.

Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.

#### ADAPTERS—Foreign

Cable Electric Products Co., Providence, R. I.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S.,
Long Island City, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford,
III. ADV. PG. 120.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Kulka Electric Mfg. Co., Inc., 30 South St., Mount
Vernon, N. Y.
Morse Co. Frank W. 1300 Soldiers Field Rd. Boston 35. 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. ADV. PG. 258.

#### ADAPTERS—Panoramic

New London Instrument Co., P. O. Box 189, New London, Conn.

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.

#### ADAPTERS—Phase

Cubic Corp., 2841 Canon St., San Diego 6, Calif.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena,
Calif. ADV. PG. 118, 119.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.
Varo Mfg. Co., Inc., Box 638, Garland, Texas.

#### ADAPTERS-Test

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.

Industrial Devices, Inc., 22 State Rd., Edgewater, N. J. Oak Ridge Products Mfg. Div., Video Televislon Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

United Technical Laboratories, Box 425-V, Morristown, N. J.

#### ADAPTERS—Tube

ADAPTERS—Tube

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 212.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

PRODUCTION TOOL & FIXTURE CO., 37 W. Main St., Oyster Bay, N. Y. ADV. PG. 488.

Supreme, Inc., Greenwood, Miss.

SYLVANITA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

Vector Electronic Co., 3352 San Fernando Rd., Los Angeles 65, Calif.

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.

American Products Mfg. Corp., 8127-33 Oleander St., New Orleans 18, La.
American Resinous Chemical Co., 103 Foster St., Peabody, Mass.

Armstrong Cork Co., Lancaster, Pa.
Avery Adhesive Label Corp., Monrovia, Calif.
Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Biggs Co., Carl H., 11616 W. Plco Blvd., Los Angeles, Calif.
BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove, N. J. ADV. PG. 273.

Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
COX & CO., INC., 50 Broad St., New York 4, N. Y.
ADV. PG. 484.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Plastics & Chemicals, Inc., 1921 Walck Rd.,

Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn. GENERAL CEMENT MFG. CO., 919 Taylor Ave, Rockford, III. ADV. PG. 120.
Goodyear Tire & Rubber Co., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
HARDMAN CO., INC., H. V., 571 Cortlandt St., Belleville, N. J. ADV. PG. 505.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y. Mass & Waldstein Co., 438 Riverside Ave., Newark 4, N. J.

MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.

MICRO-CIRCUITS 60., Nat. 462.

Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
Monsanto Chemical Co., Plastics Div., Springfield, Mass.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J.
ADV. PG. 258.
Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, III.

Philadelphia Quartz Co., 1146 Public Ledger Bldg., Phila-Philadelphia quality of the companies of

Pa. Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif. Union Bay State Chemical Co., Cambridge, Mass. U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

York 20, N. Y. U. S. Stoneware Co., The, Akron 9, Ohio. ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32, N. Y. ADV. PG. 517.

## ADHESIVES—Waterproof & Corrosion Proof Compounds

American Products Mfg. Corp., 8127-33 Oleander St., New Orleans 18, La. American Resinous Chemical Co., 103 Foster St., Pea-body, Mass.

American Mass.

body, Mass.

Armstrong Cork Co., Lancaster, Pa.

Biggs Co., Carl H., 11616 W. Pico Blvd., Los Angeles,

Castel Rd., Cedar Grove,

Calif.
BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove,
N. J. ADV. PG. 273.
Borden Co., Chemical Div., 350 Madison Ave., New
York 17, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98,

Del.
Durez Plastics & Chemicals Inc., 1921 Walck Road, Durez Plastics & Chemicals Inc., 1721 Watch Road,
North Tonawanda, N. Y.
EMERSON & CUMING CO., 126 Massachusetts Ave.,
Boston 15, Mass. ADV. PG. 35.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford,

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
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.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 462.

462. Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St.

Paul 6, Minn.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4,
N. J. ADV. PG. 258.
Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24
Sylvan Ave., Toledo 6, Ohio.
Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh

15, Pa. Schott Co.,

15, Pa.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W.C.2., England.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.
Union Bay State Chemical Co., Cambridge, 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., 112-130 26th St., Brooklyin 32,
N. Y. ADV. PG. 517.

### AGING RACKS—Vacuum Tube

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

#### ALARMS-Intrusion

BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass ADV. PG. 46.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Industrial Electronics Co., Inc., Hanover, Mass.

Photobell Company, 116 Nassau St., New York 7, N. Y. Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass. Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J. Worner Electronic Devices, Rankln, III.

## 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. 263. ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, III. ADV. PG. 507. Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Hills, Calif.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

Amplifer Corp. of America, 398 Broadway, New York 13, N. Y.

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 Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave. New

Angeles 64, Calif.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New

York 19, N. Y. ADV. PG. 275.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.

Berkeley Custom Electronics, 2302 Roosevelt Ave., Berkeley 3, Calif.

Berlant Associates, 4917 W. Jefferson Bivd., Los Angeles 16, Calif.

Berndt-Bach, Inc., 7373 Beverly Bivd., Los Angeles 36, Calif.

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

British Industries Corp., 164 Duane St., New York 13, N. Y.
British Radio Electronics Ltd., 1 Thomas Circle, Wash-

ington 5, D. C.

Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.

Brook Electronic, Inc., Box 491, Elizabeth, N. J.

BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.

Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Califone Corp., 1041 N. Sycamore Ave., Laboratore Corp., 1041 N. Sycamore Corp., 10

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

86, 87.
Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.
Communications Co., Inc., 300 Greco Ave., Coral

Communications Co., Inc., 300 Green Ave., Cond., Gables 34, Fla.
Cook Laboratories, R-2, Stamford, Conn.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Dilks Co., The, Seymour, Conn.
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mace

Mass.

Dukane Corp., 135th & Indiana Sts., St. Charles, III.

Eldico of New York, Inc., 44-31 Douglaston Pkwy.,

Douglaston, N. Y.

Electronic Development Lab., 43-07 23rd Ave., Long Island City 5, N. Y.
ELECTRONIC MEASUREMENT CO., Red Bank, N. J.

ADV. PG. 488.
m Laboratories, 18 South Broadway, Dobbs Ferry,

N. Y.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Engineering Research Associates, 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., 549 Brushton Ave.,

Farmers Engineering & Mig. Co., 549 Brushton Ave., Pittsburgh 21, Pa.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 Monticello Ave., Skokie, III.
Ferrar Radio & Television Corp., 55 W. 26th St., New York 10, N. Y.
Fidelity Amplifier Co., 703 Willow St., Chicago 14, III.
Francon Mfg. & Sales Corp., 161 Washington St., New York, N. Y.

Francon Mfg. & Sale's Corp., 161 Washington St., New York, N. Y.
FREED TRANSFORMER, INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
Furst Electronics, 10 S. Jefferson St., Chicago, III.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., Los Angeles 25, Calif. ADV. PG. 449.
Glenco Corp., Metuchen, N. J.

Godfrey Mfg. Co., 2642 S. Michigan Ave., Chicago, III.
Gulton Mfg. Corp., Metuchen, N. J.
Hartley Co., Ltd., H. A., 152 Hammersmith Rd., London
W. 6, England.

HEATH CO., Benton Harbor, Mich. ADV. PG. 492. HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.

Westbury, N. Y. ADV. PG. 412. oll Audio Industries, 5014 N. Encinta Ave., Temple

Holl Audio Industries, 5014 N. Enclina Ave., Jemple City, Calif.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

Kalbfell Labs. Inc., 1076 Morena Blvd., San Diego 10,

Calif.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

LANGEVIM MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.

Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491.

Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.

MC INTOSH ENGINEERING LABORATORY, INC., 320 Water St., Binghamton, N. Y. ADV. PG. 302.

M. P. Concert Installations, Fairfield 10, Conn.

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. 361.

Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.

Maurer Inc., J. A., 37-01 31st St., Long Island City, N. Y.

MEASUREMENTS CORP., Boonton, N. J. ADV. De

MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

158, 159.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, III.
Morter Mfg. Co., 2106 Berwyn Ave., Chicago

Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, III. Minnesota Electronics Corp., 47 W. Water St., St. Paul

1, Minn.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.
National Intercommunicating Systems, 1130 N. Michlgan Ave., Chicago 22, III.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 50, 51.
Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.
Oleson Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28 Calif.

PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. Pedersen Electronics Co., Mount Diablo Blvd., Lafayette,

Calif.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
Pickard & Burns, Inc., Needham, Mass.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave.,
Chicago 22, III. ADV. PG. 358.
PRESTO RECORDING CORP., Paramus, N. J. ADV.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Craftsman, Inc., 1341 S. Micigan Ave., Chi-

cago 5, III. Radio Music Corp., 84 S. Water St., Port Chester,

Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, III. Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

Radio Co., 2814 19th St., San Francisco 10; Scala Calif

Scott, Inc., Herman Hosmer, 200 1 - 200 New York 23, bridge 39, Mass.
Shevers, Inc., Harold, 123 W. 64th St., New York 23, N. Y.

N. Y.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
Island City 3, N. Y.
Sonotone Corp., Saw Mill River Rd., P. O. Box 200,
Elmsford, N. Y.
Special Products Co., Silver Spring, Md.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
Standard Electronics Corp., 285 Emmet St., Newark,
N. J.

N. J.
Standard Electronics Research Corp., 2 East End
Ave., New York 21, N. Y.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Standard Transformer Corp., Elston, Kedzle & Addison,
Chicago 18, III.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City,
Calif.
Stromberg-Carlson Co. Pocketter 2.2 N. V.

Valif.

Stromberg-Carlson Co., Rochester 13, N. Y.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 499.

Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.

York 58, N. Y.
Technical Materiel Corp., P. O. Box 142, 121 Spencer Place, Mamaroneck, N. Y.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34, 111

elephonics Corp., Park Ave., Huntington, N. Y.
hordarson-Meissner Mfg. Divs., Mt. Carmel, III.
RAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
ransmitter Equipment Mfg. Co., Inc., 345 Hudson
St., New York 14, N. Y.
RIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302.
idaire Television Co., 576 W. Merrick Rd., Lynbrook, N. Y.
ideo Corp. of America. 229 W. 28th St. New York 3 ideo Corp. of America, 229 W. 28th St., New York 1, N. Y.
alkirt Co., 145 W. Hazel, Inglewood, Calif.
Vebster Electric Co., 1900 Clark St., Racine, Wis.
Veingarten Electronic Labs., Inc., 7556 Melrose Ave.,
Los Angeles 46, Calif.
Vestern Sound & Electric Labs., Inc., 805 S. 5th St.,
Milwaukee 4, Wis.
Vilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Vurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### MPLIFIERS—Audio Input Systems

tec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

JDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New
York 19, N. Y. ADV. PG. 275.

Ill Sound Systems, Inc., 555 Marion Rd., Columbus 7, rkeley Custom Electronics, 2302 Roosevelt Ave., Berkeley 3, Calif.

ook Electronics Inc., Box 491, Elizabeth, N. J.

NEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
Burbank, Calif. ADV. PG. 386.

SILLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. JLLINS RADIO CU., Cedar Rapios, 10wa. AUV. Po. 86, 87, 85or (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada. ectronic Development Lab., 43-07 23rd Ave., Long Island City 5, N. Y. ECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV DG 488 Island City 5, N. Y.
ECTRONIC MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488.

gineering Research Associates, Inc., 1902 W. Minhehaha Ave., St. Paul, Minn.
Irchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
Ier Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
rrar Radio & Television Corp., 55 W. 26th St., New York 10, N. Y.
Les Radio Co., Quincy, III.
NERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
nco Corp., Metuchen, N. J.
atton Mfg. Corp., Metuchen, N. J.
ttley Co., Ltd., H. A., 152 Hammersmith Rd., London W. 6, England.
HLAND ENGINEERING CO., Main St. & Urban Ave.,
Vestbury, N. Y. ADV. PG. 412.
Id Audio Industries, 5014 N. Encinta Ave., Temple
Lity, Calif.
WIL ELECTRONICS INC., 7945 Germantown Ave., Audio Industries, 5014 N. Encinta Ave., Temple Ity, Calif.

MIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

Sofiel Labs., Inc., 1076 Morena Blvd., San Diego O, Calif.

IGEVIN MANUFACTURING CORP., 37 W. 65th St., Lew York 23, N. Y. ADV. PG. 438.

Electric Co., 132 Beckwith Ave., Paterson, N. J. Sound Engineers, J. M., 2171 W. Washington Ivd., Los Angeles 18, Calif. Sound Engineers, J. M., 2171 W. Washington Ivd., Los Angeles 18, Calif. coni Wireless Telegraph Co., Ltd., 23-25 Beaver St., Jew York 4, N. Y. Sener Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Planch Radio & Television Corp., 61 Crescent St., rooklyn 8, N. Y., icomb Audio Products Co., 6824 Lexington Ave., ollywood 38, Calif. Ridge Products Mfg. Div., Video Television, Inc., 7-01 Vernon Blvd., Long Island City 1, N. Y. ton Co., Otto K., 1534 Cahuenga, Hollywood 28, Aalif.

Parsen Electronics Co., Mount Diablo Blvd., Lafayette,

hilf.

Stiehl Chemical Co., Metallurgical Div., 104 Lake few Ave., Waukegan, III.

KERING & Co., 309 Woods Ave., Oceanside, L. I.,
Y. ADV. PG. 412.

RIO CORP. OF AMERICA, Engineering Products Dept.,
Manden, N. J. ADV. PG. 295, Inside Back & Back Mand-Borg Corp., 3515 W. Addison St., Chicago 18,

Reer Co., Ltd., 2101 Bryant St., San Francisco 10, Str., Inc., Hermon Hosmer, 385 Putnam Ave., Cam-sidge 39, Mass.
Sisson Mfg. Co., Inc., Mark, 32-28 49th St., Long Stand City 3, N. Y.
Still-Hoffman Corp., 1016 N. Highland Ave., Holly-lod 38. Calif.

Calif. Strard Electronics Corp., 285 Emmet St., Newark,

St Jard Telephones & Cables Ltd., Connaught House, idwych, London, W. C. 2, England.
Stsens Mfg. Corp., 8538 Warner Drive, Culver City,

G. ELECTRIC CORP., 31 W. 27th St., New York 1,

Y. ADV. PG. 499.

Tharson-Meissner Mfg. Divs., Mt. Carmel, III.

TELEVISION CORP., 1001 First Ave., Asbury Park,
J. ADV. PG. 262.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y. AMPLIFIERS—Audio Subminiature AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396. Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y. Audio Instrument Co., Inc., 133 W. 14th St., New York Autio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, Avion Instrument Corp., Paramus, N. J.
Beil Sound Systems, Inc., 555 Marion Rd., Columbus
7, Ohio. Beil Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.

BENDIX AVIATION CORP., PACIFIC DIV., 11600 Sherman Way, North Hollywood, Calif. ADV. PG. 129.

CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.

Electro Craft Inc., 68 Jackson St., Stamford, Conn.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.

Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y. Engineering Research Associates, Inc., 1902 W. Minnehala Ave., St. Paul, Minn.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

Gulton Mfg. Corp., Metuchen, N. J.

HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.

Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, 54, N. Y.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Buffalo 8, N. Y.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave.,
Chicago 22, III. ADV. PG. 358.
RADIO CORP OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.
Radio Music Carp. 2008. Plastics & Electronics Co., Inc., P. O. Box 38, Station J, Radio Music Corp., 84 S. Water St., Port Chester, N. Y. Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Remler Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
UNITED TRANSFORMER CO., 150 Varick St., New
York 13, N. Y. ADV. PG. Inside Front Cover.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,
Mo.

#### AMPLIFIERS-d-c

1, Calif.
Audio Instrument Co., Inc., 133 W. 14th St., New York AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.

Avion Instrument Corp., Paramus, N. J.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.

BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 466.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153. BOGUE ELECTRIC MFG. CU., 52 lowa Ave., Paterson 3, N. J. ADV. PG. 153.

Bogue Railway Equipment Div., Bogue Eiectrlc Mfg. Co., 52 lowa Ave., Paterson 3, N. J. BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.

Computer Corp. of America, 149 Church St., New York, N. Y. Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md.
Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass. EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
Electronic Associates, Inc., Long Branch, N. J.
ELECTRONIC COMPUTER CORP., 160 Ave. of the Americas, New York 13, N. Y. ADV. PG. 298.
Electronic Control Corp., 1573 E. Forest St., Detroit,

Applied Physics Corp., 362 W. Colorado St., Pasadena

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ELECTRONIC MEASUREMENTS CU., Red Dalis, N. C. ADV. PG. 488.
Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Furst Electronics, 10 S. Jefferson St., Chicago 6, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Gulton Mfg. Corp., Metuchen, N. J.
Hanover Developments, 401 E. 74th St., New York 21, N. Y.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.
Manning, Maxwell & Moore, Inc., Stratford, Conn.

Manning, Maxwell & Moore, Inc., Stratford, Conn.
MEASUREMENTS CORP., Boonton, N. J., ADV. PG. 158, 159. Millivac Instrument Corp., 444 Second St., Box 997,

Schenectady, N. Y.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Moulic Specialties Co., 1005-107 W. Washington St., Bloomington, 111.

Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago

Bloomington,
Offner Electronics, Inc., 5320 n.
25, III.
Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
Philbrick Researches, Inc., George A., 230 Congress St.,
Boston 10, Mass.
Photron Instrument Co., 6516 Detroit Ave., Cleveland
2 Ohio.

Inc., P. O. Box 38, Station J,

Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
Plastics & Electronics Co., Inc., P. O. Box 38, Station J, Buffalo 8, N. Y.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,

N. Y.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 473.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.
Southwestern Industrial Electronics Co., 283%. Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Tektronix, Inc., P. O. Box 831, Portland, Ore.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Audlo Products Corp., 2265 Westwood Blvd., Los An-

#### AMPLIFIERS—Decade

geles 64, Calif.
BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 124.
Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md. Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
FREED TRANSFORMER CO., INC., 1736 Welrfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Furst Electronics, 10 S. Jefferson St., Chlcago 6, III.
Glenco Corp., Metuchen, N. J.
Gluton Míg. Corp., Metuchen, N. J.
INDUSTRIAL CONTROL CO., Straight Path & Arlington
Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass. Standard Electronics Research Corp., 2 East End Ave. New York 21, N. Y.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.
Thordarson-Melssner Mfg. Divs., Mt. Carmel, III.

#### AMPLIFIERS—Differential

Cubic Corp., 2841 Canon St., San Diego 6, Calif.
FREED TRANSFORMER CO., INC., 1736 Welrfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Furst Electronics, 10 S. Jefferson St., Chicago 6, III.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N.J. INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123. Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,

Tektronix, Inc., P. O. Box 831, Portland 7, Ore.

### AMPLIFIERS—f-m & a-m Antenna

Belling & Lee Ltd., 366 Madlson Ave., New York 17, N. Y.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, North Hollywood, Callf. ADV. PG. 129. Communications Co., Inc., 300 Greco Ave., Coral Gables Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

SENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Monroe Coil Co., 2839 Narragansett Ave., Chicago 34, Ill.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back

Covers.
Schuttig & Co., Inc., Ninth & Kearney Sts., N. E., Washington 17, D. C.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 351.
Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

Acme Telectronix Div., NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
ALDEN PRODUCTS CO., 112 N. Maln St., Brockton 64, Mass. ADV. PG. 24.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park Syracuse, N. Y. ADV. PG. 1-23.
Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.

N. Y. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. McElroy Mfg. Corp., Littleton, Mass. TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 526. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### AMPLIFIERS-i-f

AMPLIFIERS—Facsimile

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.
C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Collins Audio Products Co., P. O. Box 368, Westfield,
N. J.

Co., Inc., 300 Greco Ave., Coral Communications

Communications Co., Inc., Soo Glober St., Gables 34, Fla.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
General Communication Co., 530 Commonwealth Ave.,

General Communication Co., 530 Commonwealth Ave., Boston 15, Mass. Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, Ill. JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524. Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill. LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.

MEASUREMENTS
158, 159.

Melpar, Inc., 452 Swann Ave., Alexandria, Va.

Monarch Radio & Television Corp., 61 Crescent St.,

Brooklyn 8, N Y.

STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,

Chicago 39, III. ADV. PG. 59.

Chicago 39, III. ADV. PG. 59.

TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525.

VECTRON, INC., 235 High St., Waltham, Mass. ADV.

PG. 384. Video Corp. of America, 229 W. 28th St., New York 1, N. Y.

#### AMPLIFIERS—Keying

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

86, 87.
Eldico Of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.

N. Y.
Gates Radio Co., Quincy, III.
McElroy Mfg. Corp., Littleton, Mass.
Technical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,

### AMPLIFIERS—Logarithmic

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y. Cubic Corp., 2841 Canon St., San Diego 6, Calif. Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10. Calif. THOMPSON PRODUCTS CO., Electronics Div., 2196
Clarkwood Ave., Cleveland 3, Ohio. ADV. PG. 98.

### AMPLIFIERS—Magnetic

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 496.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

Chicago Electronic Engineering Co., 3224 W. Armitage Ave., Chicago 47, Ill. Computer Research Corp., 3348 W. El Segundo Bivd., Hawthorne, Calif. Cycle Electronics Laboratories, 356 Gienwood Ave., East Orange, N. J.

Cycle Electronics Laboratories, 350 Gighnood (1.5),
East Orange, N. J.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Gaveco Labs., Inc., Sub. of General Aviation Equipment
Co., Inc., 2 East End Ave., New York 21, N. Y.
GENERAL ELECTRIC CO., Apapratus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloom-

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood,
Calif. ADV. PG. 172.
Industrial Research Products, Inc., 9400 Belmont Ave.,
Franklin Park, III.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.
K-V Transformer Corp., 4414 Park Ave., New York
57, N. Y.

KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 415.
LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.
MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.
Magnavox Co., The, Components Div., Fort Wayne 4, Ind

Ind.
MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New
York 55, N. Y. ADV. PG. 361.
Magnetics, Inc., Box 230-A, Butler, Pa.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Magnetics, 100, Maguire Inquisition, Meissner Mfg. Div., Maguire Inquisition, Carmel, Ill.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.
Pollins Corp., P. O. Box 213, Lewes, Del.
Post & Stewart Aves., West-

39, Calif.
Rollins Corp., P. O. Box 213, Lewes, Del.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

III.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa.
ADV. PG. 379.
Vickers, Inc., 1815 Locust St., St. Louis 3, Mo.
Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### AMPLIFIERS—Medical Instrument

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass. EDIN CO., INC., 207 Main St., Worcester, Mass. ADV.

EDIN CO., INC., 207 Main Su., No., 1998.

PG. 441.

Electro-Mechanical Research, Inc., Ridgefield, Conn.

Electrodyne Co., 32 Oliver St., Boston, Mass.

Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.

Fidelity Amplifier Co., 703 Willow St., Chicago 14, III.

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG.

LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180. Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,

Magna Electronics Co., 9810 Anza Ave., F. O. Bux 330, Inglewood, Calif.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25,

Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago

25, III.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
Photocon Research Products, 421 N. Foothill Blvd., Pasa-

dena, Calif.
Photron Instrument Co., 6516 Detroit Ave., Cleveland

Radiation Counter Laboratories, Inc., 5122 W. Grove St.,

Skokie, III.

RAHM INSTRUMENTS, INC., 12 West Broadway, New York 7, N. Y. ADV. PG. 522.

Resdel Engineering, 2309 Riverside Drive, Los Angeles

Resdel Engineering, 2309 RIverside Drive, Los Angeles 39, Calif. SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474. Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y. Televiso Corp., 7466 W. Irving Park Road, Chicago 34, III. Tektronix, Inc., P. O. Box 831, Portland 7, Ore.

#### AMPLIFIERS-Microwave

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524. K-V Transformer Corp., 4414 Park Ave., New York 57,

N. Y.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn, N. Y. ADV. PG. 491.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.

Covers.

adio Engineering Labs., Inc., 36-40 37th St., Long
Island City 1, N. Y.

Bivarside Drive, Los Angeles

Island City 1, N. Y.
Resdel Engineering, 2309 Riverside Drive, Los Angeles
39, Calif.
SPERRY GYROSCOPE CO. DIV. OF THE SPERRY
CORP., Great Neck, N. Y. ADV. PG. 139, 140.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif.

ADV. PG. 213. Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind. Waveline, Inc., North Caldwell, N. J.

#### AMPLIFIERS—Microwave Radar

AMERICAN ELECTRONEERING CO., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

Cubic Corp., 2841 Canon St., San Diego 6, Calif. GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219. Resdel Engineering, 2309 Riverside Drive, Los Angeles

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif. SPERRY GYROSCOPE CO. DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 139, 140. VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213. Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo. Waveline, Inc., North Caldwell, N. J.

#### AMPLIFIERS—Musical Instrument

Alamo Electronic Corp., 105 Romana St., San Antonio 1,

Alamo Electronic Corp., 105 Romana St., San Antonlo 1, Texas.

ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, III. ADV. PG. 507.

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.
Electronic Development Lab., 43-07 23rd Ave., Long Island City 5, N. Y.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, III.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.

PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, III. ADV. PG. 358.

Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

RADIO CORP. OF AMERICA, Engineering Products Dept.,

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Radio Labs., Inc., 4451 N. Ravenswood Ave., Chicago 40, III.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. Valco Mfg. Co., 4700 W. Walton St., Chicago 51, Ill. Western Sound & Electric Labs., Inc., 805 S. 5th St.

Milwaukee 4, Wis. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### AMPLIFIERS-Null

AMPLIFIERS—Null

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Ore.

CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.

Cubic Corp., 2841 Canon St., San Diego 6, Callf. FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

INDUSTRIAL CONTROL CO., Straight Path & Arlingten Ave., Wyandanch, N. Y. ADV. PG. 260, 505.

Leds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

MACOONALD CO., INC., W. S. 33 University Rd., Cam-

44, Pa.
MACDONALD CO., INC., W. S. 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.
Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
ENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
hilbrick Researches, Inc., George A., 230 Congress St., Boston 10. Mass.

#### AMPLIFIERS—Peak Limiting

Itec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. OLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.
L-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
rco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
ates Radio Co., Quincy, III.
chuttig & Co., Inc., 9th & Kearney Sts., N. E.,
Washington 17, D. C.
tancil-Hoffman Corp., 1016 N. Highland Ave., Hollyl wood 38. Calif. andard Electronics Corp., 285 Emmet St., Newark, Andard Electronics Corp., 200 Linnet St., N. J.
andard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y.
L. G. ELECTRIC CORP., 31 W. 27th St., New York
1, N. Y. ADV. PG. 499.
schnical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
nordarson-Meissner Mfg. Divs., Mt. Carmel, III.
ransmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14, N. Y.

#### MPLIFIERS—Photocell

the Telectronix Div., NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
tec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif. Hills, Calif.

GUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. ADV. PG. 153.

-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, III.

Betro-Mechanical Research, Inc., Ridgefield, Conn.
Betrodyne Co., 32 Oliver St., Boston, Mass.
Betronic Control Corp., 1573 E. Forest St., Detroit, ectron Mich. Development Lab., 43-07 23rd St., Long sctronic Development Lab., 43-07 23rd St., Long Lisland City 5, N. Y. Wellity Amplifier Co., 703 Willow St., Chicago 14, III. NERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Ban Laboratories, Inc., 155 Perry St., New York 14, N. Y. Justrial Electronics Co., Inc., Hanover, Mass.

20 & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.

menite Electric Co., 407 S. Dearborn St., Chicago 5, Elroy Mfg. Corp., Littleton, Mass.
larch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
lulic Specialties Co., 1005-1007 W. Washington St.,
Stock M. Commission Corp., 62 Crescent St., Bloomington, III.

btobell Company, 116 Nassau St., New York 7, N. Y.

btocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
atron Instrument Co., 6516 Detroit Ave., Cleveland 2, DIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Camden, N. J. ADV. PG. 295, Inside Back & Angeles del Engineering, 2309 Riverside Drive, Los Angeles PS. Calif.

"LEY CO., INC., Middletown, Conn. ADV. PG. 490.

RVO CORP. OF AMERICA, 20-20 Jericho Turnpike,

N. Y. ADV. PG. 308, 309.

pson Mfg. Co., Inc., Mark, 32-28 49th St., Long

sland City 3, N. Y.

Cinema Supply Corp., 602 W. 52nd St., New

rork 19, N. Y. 9, Calif. LEY CO., Fork 19, N. Y.

Andrew York 21, N. Y.

TECHROME, INC., 88 Merrick Rd., Amityville, N. Y.

DV. PG. 311.

Maissner Mfg. Divs., Mt. Carmel, III. JOV. PG. 311.

Ardarson-Meissner Mfg. Divs., Mt. Carmel, III.

WSTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Vener Electronic Devices, Rankin, Illinois.

## APLIFIERS-Power

IED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, 41. ADV. PG. 507. Asc Lansing Corp., 9356 Santa Monica Blvd., everly Hills, Calif. Ablifier Corp. of America, 398 Broadway, New York 70046 Electronic Levels 1988 Aroved Electronic Instrument Corp., 928 Broadway, ew York 10, N. Y.

New York 19, N. Y.

New Yor

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, British Industries Corp., 164 Duane St., New York 13, N. Y.

Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.

York 28, N. Y.
Calbest Engineering & Electronics Co., 828 N. High-land Ave., Hollywood 38, Calif.
Cossor (Canada), Ltd., 301-303 Windsor St., Hallfax, N. S., Canada.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.

Dukane Corp., 135th & Indiana Sts., St. Charles, III.
Eldico of New York, Inc., 44-31 Douglaston, Pkwy.,
Douglaston, N. Y.
Electronic Development Lab., 43-07 23rd Ave., Long

Island City 5, N. Y.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ADV. PG. 488. EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.

ADV. TO.

EL-TRONICS, INC., 2649 N. Howard St., Philadelphia
33, Pa. ADV. PG. 451.

Fairchild Recording Equipment Corp., 154th St. & 7th
Ave., Whitestone, N. Y.

Farmers Engineering & Mfg. Co., 549 Brushton Ave.,
Pittsburgh 21, Pa.

Ferrar Radio & Television Corp., 55 W. 26th St.,
New York 10, N. Y.

Fidelity Amplifier Co., 703 Willow St., Chicago 14, III.
Fisher Radio Corp., 41 E. 47th St., New York, N. Y.

FREED TRANSFORMER CO., INC., 1763 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.

Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y.

GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

General Magnetics, Inc., 255 Massachusetts Ave., Cam-field, N. J. GENERAL RADIO CO., 275 Massachusetts Ave., Cam-bridge 39, Mass. ADV. PG. 82, 83. HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412. Holl Audio Industries, 5014 N. Encinta Ave., Temple

City, Calif.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.

Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.

Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.

Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
MCINTOSH ENGINEERING LABORATORY, INC., 320
Water St., Binghamton, N. Y. ADV. PG. 302.
M B MFG. CO., 1060 State St., New Haven 11, Conn.
ADV. PG. 459.
Meissner Mfg. Div., Maguire Industries, Inc., Mt.
Carmel, III.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
Newcomb Audio Products Co., 6824 Lexington Ave.,
Hollywood 38, Cabif.
Oleson Co., Otto K., 1534 Cahuenga, Hollywood 28,
Calif.

Calif.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, III. ADV. PG. 358.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back

Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y. Rauland-Borg Corp., 3515 W. Addison St., Chicago

18, III.
Sargent-Rayment Co., 212 Ninth St., Oakland, Calif.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Scott Radio Labs, Inc., 4451 N. Ravenswood Ave., Chicago 40, III.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

N. Y.
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. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Calif.
Stromberg-Carlson Co., Rochester 13, N. Y.
T.L.G. ELECTRIC CORP., 31 W. 27th St., New York
1, N. Y. ADV. PG. 499.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, ADV. PG. 262

N. J. ADV. PG. 202.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

Videon Electronic Corp., 312 E. Washington St., In-

Videon Electronic Corp., 312 E. wasnington St., Indianapolis 4, Ind.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
Webster Electric Co., 1900 Clark St., Racine, Wis.
Western Electro-Acoustic Labs., 204 S. Beverly Drive,

Beverly Hills, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,

#### AMPLIFIERS—Printed Circuit

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87. PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
Maico Co., Inc., 21 N. Third St., Minneapolis, Minn. PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. Plastics & Electronics Co., Inc., P. O. Box 38, Station J, Buffalo 8, N. Y.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 39.

Chicago 39, III. ADV. PG. 39. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades

#### AMPLIFIERS—Recording

ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, III. ADV. PG. 507.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Amplifier Corp. of America, 398 Broadway, New York\_13, Ampliner Corp. of America, 398 Broadway, New York\_13, N. Y.
Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.
Berlant Associates, 4917 W. Jefferson Blvd., Los Angeles 16, Calif. Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
Califone Corp., 1041 N. Sycamore Ave., Hollywood 38,

Calif. Century Geophysical Corp., 1333 N. Utica, Tulsa 3,

Okla.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
Burbank, Calif. ADV. PG. 386.
COLLINS RAD10 CO., Cedar Rapids, Iowa. ADV. PG.
86, 87.
Consolidated Engineering Corp., 300 N. Sierra Madre
Villa, Pasadena 8, Calif.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41,
III.

III.
Electronic Development Lab., 43-07 23rd Ave., Long Island City 5, N. Y.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
Felier Engineering & Mfg. Co., Dept. EBG, 8026 Monticello Ave., Skokie, III.
Gates Radio Co., Quincy, III.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver

Gates Radio Co., Quincy, III.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver
10, Colo.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
Holl Audio Industries, 5014 N. Encinta Ave., Temple
City, Calif.
JERSEY CITY TECHNICAL LABORATORY 880 Bergen
Ave., Jersey City 6, N. J. ADV. PG. 424.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23,
N. Y. ADV. PG. 438.
MAGNECORD, INC., 360 N. Michigan Ave., Chicago 1,
III. ADV. PG. 374.
McINTOSH ENGINEERING LABORATORY, INC., 320
Water St., Binghamton, N. Y. ADV. PG. 302.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
Inglewood, Calif.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
Newcomb Audio Products Co., 6824 Lexington Ave.,
Hollywood 38, Calif.
Pentron Corp., 221 E. Cullerton St., Chicago 16, III.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave.,
Chicago 22, III. ADV. PG. 358.
PRESTO RECORDING CORP., Paramus, N. J., ADV.
PG. 75.

PG. 75.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back

RAdio Music Corp., 84 S. Water St., Port Chester, N. Y. RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. ADV. PG. 522. Rek-O-Kut Co., 38-03A Queens Blvd., Long Island City, SANBORN CO. 39 Osborn St., Cambridge 39, Mass.

SANBORN CO., 39 Osborn St., Campringe 39, Mass. ADV. PG. 474.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38 Calif.

wood 38, Calif. Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. eleviso Corp., 7466 W. Irving Park Road, Chicago 34, Video Corp. of America, 229 W. 28th St., New York 1,

Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis. Milwaukee 4, Wis. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### AMPLIFIERS-r-f

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
C.G.S. LABORATORIES, INC., 391 Ludiow St., Stamford, Conn. ADV. PG. 454.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Cubic Corp., 2841 Canon St., San Diego 6, Calif. Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.

FEDERAL TELEPHONE AND RADIO CORP.,

land Rd., Clifton, N. J. ADV. PG. 189-193.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Industrial Television, Inc., 359 Lexington Ave., Clifton,

N. J. Joyner Corp., 462 N. Parkside Ave., Chicago 44, III. Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadel-

Lymmar Engineers, Inc., 1905, phia 21, Pa.
McINTOSH ENGINEERING LABORATORY, INC., 320
Water St., Binghamton, N. Y. ADV. PG. 302.
Millen Mfg. Co., James, 150 Exchange St., Malden,

Mass.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
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. Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chi-Island City 1, N. Y.
Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chicago 40, Ill.
Sierra Electronic Corp., San Carlos, Calif.
Standard Electronics Corp., 285 Emmet St., Newark,

N. J.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

PG. 448.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
WIICox Electric Co., 1400 Chestnut St., Kansas City,

#### AMPLIFIERS-Servo

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

Arma Corp., 254 36th St., Brooklyn 32, N. Y. Askania Regulator Co., 240 E. Ontario St., Chicago 11,

Audio Instrument Co., Inc., 133 W. 14th St., New

York 11, N. Y.

Avion Instrument Corp., Paramus, N. J.

Belock Instrument Corp., 13-11 111th St., College

Point, N. Y.

Belock Instrument Corp., 13-11 111th St., College Point, N. Y.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

Bristol Co., The, Waterbury 20, Conn.

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

Cubic Corp., 2841 Canon St., San Diego 6, Calif.

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.

Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y.

CORP., Teterboro, N. J. ADV. PG. 127, 128. Flader, Inc., Frederic, 1330 Laskey Rd., Toledo 12,

Ohio.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1
River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield,
N. J

N. J.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver
10, Colo.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
Hillyer Instrument Co., Inc., 54 Lafayette St., New
York 13. N. Y.

York 13, N. Y.
INDUSTRIAL CONTROL CO., Straight, Path & Arlington
Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
Kearfott Co., Inc., 1150 McBride Ave., Little Falls,

N. J. Loral Electronics Corp., 794 E. 140th St., New York 54,

N.Y.

MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N.Y. ADV. PG. 361.

MCINTOSH ENGINEERING LABORATORY, INC., 320 Water St., Binghamton, N.Y. ADV. PG. 302.

Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa Okla.

Midwestern Geophysical Laboratory, 3400 S. Harvard,
Tulsa, Okla.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44,
Plastics & Electronics Co., Inc., P. O. Box 38, Station J, Buffalo 8, N. Y.

REEVES INSTRUMENT CORP., 215 E. 91st St., New
York, N. Y. ADV. PG. 473.

ROBINETTE CO., W. C. 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SERVO CORP. OF AMERICA, 20-20 Invide Transit

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. 308, 309.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 499. Televiso Corp., 7466 W. Irving Park Road, Chicago 34, TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
TRANSICOIL CORP., 107 Grand St., New York 13, N. Y. ADV. PG. 37.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.

#### AMPLIFIERS—Strain Gage

Avion Instrument Corp., Paramus, N. J.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, North Hollywood, Calif. ADV. PG. 129.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. ADV. PG. 153.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Century Geophysical Corp., 1333 N. Utica, Tulsa 3,
Ovia

Commercial Research Laboratories, Inc., 20 Bartlett Ave.,

Detroit 3, Mich.
Computer Research Corp., 3348 W. El Segundo Blvd.,
Hawthorne, Callf.
Consolidated Engineering Corp., 300 N. Sierra Madre
Villa, Pasadena 8, Calif.
Control Engineering Corp., 863 Washington St., Canton,

Mass.

Electronic Englneering Associates, Ltd., 1048 Brittan
Ave., San Carlos, Calif.

Electronic Tube Corp., 1200 E. Mermaid Ave., Philadel-

phia 18, Pa.
Ellis Associates, Box 77, Pelham 65, N. Y.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield,

N. J. Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

HEILAND RESEARCH CORP., 150 E. 5th Ave., Denver PREJEAND RESEARCH CURP., 150 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.

INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.

Calif.
Millivac Instrument Corp., 444 Second St., Box 997,
Schenectady, N. Y.
Moulic Specialties Co., 1005-1007 W. Washington St.,
Bloomington, III.

Photron Instrument Co., 6516 Detroit Ave., Cleveland 2,

Ohio.
POLYPHASE INSTRUMENT CO., 705 Haverford Rd., Bryn Mawr, Pa. ADV. PG. 519.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, III. ADV. PG. 358.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.
Sierra Electronic Corp., San Carlos, Calif.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. 0. Box 13058, Houston 19, Texas.
Tektronix, Inc., P. 0. Box 831, Portland 7, Ore.

#### AMPLIFIERS-Sweep

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, Cossor (Canada) Ltd., 301-303 Windsor St., Halitax, N. S., Canada. Feller Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III. JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524. SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 351. TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

#### AMPLIFIERS—Television

Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio. Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y.

N. Y.
Blonder-Tongue Laboratories, Inc., 38 N. Second Ave.,
Mt. Vernon, N. Y.
Declmeter, Inc., 1430 Market St., Denver 2, Colo.
DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG.
485.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ADV. PG. 488. Federal Telecommunication Labs., Inc., 500 Washington

Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL PRECISION LABORATORY, INC., Pleasantville, N. Y. ADV. PG. 84.
JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34, POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219. RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Camden, N. J. ADV. Pg. 277, Covers.
Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, 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. 351.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 448.

ADV. PG. 448. TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.

ADV. PG. 311.

TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

TURNER CO., THE, 909 17th St. N. E., Cedar Rapids, Iowa. ADV. PG. 425.

VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213.

Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind.

dianapolis 4, Ind. Video Corp. of America, 229 W. 28th St., New York 1, N. Y.

#### AMPLIFIERS—Ultrasonic

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454. ford, Conn. ADV. PG. 454. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 22, N. Y. ADV. PG. 297.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

MCINTOSH ENGINEERING LABORATORY, INC., 320 Water St., Binghamton, N. Y. ADV. PG. 302.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.

London, W.C. 2, England.
Photocon Research Products, 421 N. Foothill Blvd.,
Pasadena, Calif. Pasadena, Calif. Resdel Engineering, 2309 Riverside Drive, Los Angeles

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif. Rich-Roth Laboratories, East Hartford, Conn. SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 351.

#### AMPLIFIERS—Vibration Pickup

Aircraft Electronics Associates, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, Ill. ADV. PG. 507.
Avion Instrument Corp., Paramus, N. J.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, North Hollywood, Calif. ADV. PG. 129.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Oklahoma.

land 14, Ohio. ADV. PG. 312, 313.
Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Oklahoma.
Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.
CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.
Electronic Control Corp., 1573 E. Forest St., Detrolt, Mich.

Electronic Control Corp., 1573 E. Forest St., Detrolt, Mich.
Electronic Engineering Associates, Ltd., 1048 Brittan Ave., San Carlos, Calif.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.
MCINTOSH ENGINEERING LABORATORY, INC., 320 Water St., Binghamton, N. Y. ADV. PG. 302.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.
Muirhead & Co., Ltd., Beckenham, Kent, England.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.

Photron Instrument Co., 6516 Detroit Ave., Cleveland 2,

Ohio.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

Schwestern Industrial Electronics Co., 2831 Post Oak d., P. O. Box 13058, Houston 19, Texas. SIRRY GYROSCOPE CO., Div. of The Sperry Corp., Peat Neck, N. Y. ADV. PG. 139, 140. Tronix, Inc., P. O. Box 831, Portland 7, Ore. Twiso Corp., 7466 W. Irving Park Road, Chicago 34,

PTOREEN INSTRUMENT CO., 5806 Hough Ave., leveland 3, Ohio. ADV. PG. 348, 349.
USTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, ittsburgh 30, Pa. ADV. PG. 109-115.

#### APLIFIERS—Wideband

No Products Corp., 2265 Westwood Blvd., Los Angeles Calif.
Ca 3, 87. Comercial Research Laboratories Inc., 20 Bartlett Ave., ≥troit 3, Mich.

etro (Canada) Ltd., 301-303 Windsor St., Halifax, S., Canada.

Etro-Mechanical Research, Inc., Ridgefield, Conn.

ECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ECTRONIC MEASUREMENTS CO., Red Bank, N. J. pV. PG. 488.
FL Electronics, 10 S. Jefferson St., Chicago 6, III.
GERAL ELECTRIC CO., Electronics Div., Electronics rk, Syracuse, N. Y. ADV. PG. 1-23.
GERAL RADIO CO., 275 Massachusetts Ave., Camidge 39, Mass. ADV. PG. 82, 83.
HELETT-PACKARD CO., 395 Page Mill Rd., Palo to, Calif. ADV. PG. 29-34.
HILAND ENGINEERING CO., Main St. & Urban Ave., estbury, N. Y. ADV. PG. 412.
Jeld Electronics Corp., 26th & Dickinson Sts., Philalphia 46, Pa.

ar Engineers, Inc., 1432 N. Carlisle St., Phila-

phia 21, Pa.

McTOSH ENGINEERING LABORATORY, INC., 320

iter St., Binghamton, N. Y. ADV. PG. 302.

MSUREMENTS CORP., Boonton, N. J. ADV. PG.

B, 159.

RAD ELECTRONICS CORP., 100 Metropolitan Ave., 20klyn 11, N. Y. ADV. PG. 218, 219.

stion Counter Laboratories, Inc., 5122 W. Grove St., 20kie, III.

El Engineering, 2309 Riverside Drive, Los Angeles Calif.

Talif.

31 EY CO., INC., Middletown, Conn. ADV. PG. 490.

12 CER-KENNEDY LABS, INC., 186 Massachusetts

2., Cambridge 39, Mass. ADV. PG. 351.

2. ard Electronics Corp., 285 Emmet St., Newark, Massachusetts

sard Electronics Research Corp., 2 East End Ave., w York 21, N. Y.

Biberg-Carlson Co., Rochester 13, N. Y.

Fical Materiel Corp., P.O., Box 142, 121 Spencer ce, Mamaroneck, N. Y.

ROLOGY INSTRUMENT CORP., 531 Main St., Acton, Mac. ADV. PG. 304, 395

iss. ADV. PG. 394, 395.

elonix Inc., P. O. Box 831, Portland 7, Ore.

TECHROME, INC., 88 Merrick Rd., Amityville, N. Y.

TELENROME, INC., 88 Merrick Rd., Amityville, N. Y. W. P.G. 331.

TELENSTRUMENT CO., 50 Paterson Ave., East Rutherid, N. J. ADV. P.G. 525.

TELEVISION CORP., 1001 First Ave., Asbury Park, J. ADV. P.G. 262.

Electronic Co., 262 Canner St., New Haven 11,

### LOGS

#### Machines, Electronic Computing

#### ALYZERS—Audio Amplifier

AUT NCE ELECTRONICS CO., 451 Highland Ave., saic, N. J. ADV. PG. 403.
All Lansing Corp., 9356 Santa Monica Blvd., Beverly to Calif.
BAIER & WILLIAMSON, 235 Fairfield Ave., Upper Cby, Pa. ADV. PG. 397.
Callt Engineering & Electronics Co., 828 N. Highland A., Hollywood 38, Calif.
ELERONIC MEASUREMENTS CO., Red Bank, N. J. 4, PG. 488.

A. PG. 488.
Fell Engineering & Mfg. Co., Dept. EBG, 8026 Monti-Ave., Skokie, III.
Had Electrical Instrument Co., 10514 Dupont Ave.,

Jacin Electrical Instrument Co., 16 S. Patterson Blvd.,

Ohio

Don 1, Ohio.

KAYLECTRIC CO., 25 Maple Ave., Pine Brook, N. J.

A'. PG. 324, 325.

May Electronics Co., 9810 Anza Ave., P. O. Box 338,

Jewood, Calif.

MEJUREMENTS CORP., Boonton, N. J. ADV. PG.

PANAMIC RADIO PRODUCTS, INC., 10 S. Second A. Mt. Vernon, N. Y. ADV. PG. 507. WESIN ELECTRICAL INSTRUMENTS CORP., 614 Finghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# ANY YZERS—Capacitor

Corn-Dubilier Electric Corp., South Plainfield, N. J. Feils Engineering & Mfg. Co., Dept. EBG, 8026 N. McLeello Ave., Skokie, III. Hiod Electrical Instrument Co., 10514 Dupont Ave., Geland 8, Ohio.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio. King Electric Equipment Co., 9123 Inman Ave., Cleve-

land 5, Ohio.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa. 44, Pa.
MEASURMENTS CORP., Boonton, N. J. ADV. PG. 158,

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

Sprague Electric Co., 125 Marshall St., North Adams, Mass

Mass.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

#### ANALYZERS-Circuit

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passalc, N. J. ADV. PG. 403 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold,

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,

Feiler Engineering & Mfg Co., Dept. EBG, 8026 Monticello Ave., Skokie, III. FLUKE ENGINEERING CO., JOHN, Box 755, Springdale,

Conn. ADV. PG. 268.
Instrument Laboratories, 315 W. Walton Place, Chicago

Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,

Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,
Dayton 1, Ohio.
Precision Apparatus Co., Inc., 92-27 Horace Harding
Blvd., Elmhurst, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.
Supreme, Inc., Greenwood, Missian Corp., 18 Const., 18 Const.,

Supreme, Inc., Greenwood, Miss.
WESTINGHOUSE ELECTRIC CORP., P .0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Freiinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

#### ANALYZERS—Coincidence

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.
MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.
Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III.

#### ANALYZERS—Frequency

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, 111.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
KAY ELECTRIC CO., 25 Maple Ave. Pine Brook, N. J. ADV. PG. 324, 325.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 41.
Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355. Offiner Electronics, Inc., 5320 N. Kedzie Ave., Chicago

25, III.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Short Wave Plastic Forming Co., 2921 W. Alameda

Forming Co., 2921 W. Alameda

Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif. Sierra Electronic Corp., San Carlos, Calif. WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J., ADV. PG. 256. Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

#### ANALYZERS-Gas

Applied Physics Corp., 362 W. Colorado St., Pasadena 1, Applied Physics Corp., 362 W. Colorado St., Pasadena I, Calif. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Consolidated Engineering Corp., 300 N. Slerra Madre Villa, Pasadena 8, Calif. Gow-Mac Instrument Co., 22 Lawrence St., Newark 5, N. J. N. J. Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. 44, Pa. LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180. Perkin-Elmer Corp., Main Ave., Norwalk, Conn. Process & Instruments, 60 Greenpoint Ave., Brooklyn Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Rubicon Co., Ridge Ave., at 35th St., Philadelphia 29,

VICTORY ENGINEERING CORP., Springfield Rd., Unlon, N. J. ADV. PG. 204.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Davies Laboratories, Inc., 4705 Queensbury Rd., River-

#### ANALYZERS-Harmonic

dale, Md.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ELECTRONIC MEASUREMENTS CO., R.S.
ADV. PG. 488.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61,
N. Y. ADV. PG. 503.
FREED TRANSFORMER CO., INC., 1736 Welrfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,
Calif. ADV. PG. 29-34. Calif. ADV. PG. 29-34. Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
LY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325.

Muirhead & Co., Ltd., Beckenham, Kent, England.

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

Sierra Electronic Corp., San Carlos, Calif.

#### ANALYZERS—Intermodulation

Altec Lansing Corp., 9356 Santa Monica Bivd., Beverly Hills, Calif.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

EMPIRE DEVICES, INC., 38-25 Bell Bivd., Bayside 61, N. Y. ADV. PG. 503.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEATH CO., Benton Harbor, Mich. ADV. PG. 492.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159. 158, 159.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

#### ANALYZERS-Magnetic

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

#### ANALYZERS-Microwave Radar

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y., ADV. PG. 355. York 4, N. Y. ADV. PG. 355.

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311. ADV. PG. 311.
VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

#### ANALYZERS-Noise

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.

ADV. PG. 324, 325. ADV. PG. 324, 325. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y., ADV. PG. 311.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34, 111.

#### ANALYZERS-Servo

Davies Laboratorles, Inc., 4705 Queensbury Rd., Riverdale, Md.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 41. KROHN-HITE INSTRUMENT CO., 580 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 41.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike,
New Hyde Park, N. Y. ADV. PG. 308, 309.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.

#### ANALYZERS-Spectrum

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.

Godfrey Mfg. Co., 2642 S. Michigan Ave., Chicago, III. Guiton Mfg. Corp., Metuchen, N. J. Hartley Co., Ltd., H. A., 152 Hammersmith Rd., London W. 6, England.

W. 6, England.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
Holl Audio Industries, 5014 N. Encinta Ave., Temple

City, Calif.

JOWIL ELECTRONICS INC., 7945 Germantown Are.,
Philadelphia 18, Pa. ADV. PG. 524.

Kalbfell Labs. Inc., 1076 Morena Blvd., San Diego 10,

Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
COX & CO., INC., 50 Broad St., New York 4, N. Y.
ADV. PG. 484.
du Pont de Nemours & Co., Inc. F. I. Wilmington 98. du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
Durez Plastics & Chemicals, Inc., 1921 Walck Rd.,
North Tonawanda, N. Y.
EMERSON & CUMING CO., 126 Massachusetts Ave.,
Boston 15, Mass. ADV. PG. 35.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn.
GENERAL CEMENT MFG. CO., 919 Taylor Ave, Rockford, GENERAL CEMENT MFG. CU., 919 Taylor Ave, Novasa, 111. ADV. PG. 120.
Goodyear Tire & Rubber Co., Chemical Div., 1144 E.
Market St., Akron 16, Ohio.
HARDMAN CO., INC., H. V., 571 Cortlandt St., Belleville, N. J. ADV. PG. 505.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Maas & Waldstein Co., 438 Riverside Ave., Newark 4, MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.

Monsanto Chemical Co., Plastics Div., Springfield, Mass.

NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J.

ADV. PG. 258. ADV. PG. 258. Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, III. Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.

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.

Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
Schott Co., Walter L., 3225 Exposition Pl., Los
Angeles 18, Calif.
Union Bay State Chemical Co., Cambridge, 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., 112-130 26th St., Brooklyn 32,
N. Y. ADV. PG, 517.

#### ADHESIVES—Waterproof & Corrosion Proof Compounds

New Orleans 18, La.
American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
Armstrong Cork Co., Lancaster, Pa.
Biggs Co., Carl H., 11616 W. Pico Blvd., Los Angeles,
Calif. American Products Mfg. Corp., 8127-33 Oleander St., Calif.
BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove,
N. J. ADV. PG. 273.
Borden Co., Chemical Div., 350 Madison Ave., New
York 17, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.

Durez Plastics & Chemicals Inc., 1921 Walck Road,
North Tonawanda, N. Y.

EMERSON & CUMING CO., 126 Massachusetts Ave.,
Boston 15, Mass. ADV. PG. 35.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford,
III ADV. PG. 120. General Comment and Co., 919 Taylor Ave., Rockford,
111. ADV. PG. 120.
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.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.
462. Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4,
N. J. ADV. PG. 258.
Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24
Sylvan Ave., Toledo 6, Ohio.
Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif. 18, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C.2., England.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.
Union Bay State Chemical Co., Cambridge, 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., 112-130 26th St., Brooklyln 32, N. Y. ADV. PG. 517.

#### AGING RACKS—Vacuum Tube

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

#### ALARMS—Intrusion

BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass ADV. PG. 46.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Industrial Electronics Co., Inc., Hanover, Mass.

Photobell Company, 116 Nassau St., New York 7, N. Y. Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass. Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J. Worner Electronic Devices, Rankin, III.

#### ALPHA RAY SOURCES See Isotopes

ALUMINUM OXIDE See Insulation Materials

## AMMETERS AMMETERS—RF

See Instruments—Electrical Measuring

Mass.

Dukane Corp., 135th & Indiana Sts., St. Charles, III.

Eldico of New York, Inc., 44-31 Douglaston Pkwy.,

Douglaston, N. Y.

Electronic Development Lab., 43-07 23rd Ave., Long Electronic Development Lab., 43-07 23rd Ave., Long Island City 5, N. Y. ELECTRONIC MEASUREMENT CO., Red Bank, N. J. ADV. PG. 488.

M Laboratories, 18 South Broadway, Dobbs Ferry, N. Y. Elm N. Y.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia
33, Pa. ADV. PG. 451.
Engineering Research Associates, Inc., 1902 W. Minnehaha
Ave., St. Paul, Minn.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21,
N. Y. N. Y.
Fairchild Recording Equipment Corp., 154th St. & 7th
Ave., Whitestone, N. Y.
Farmers Engineering & Mfg. Co., 549 Brushton Ave.,
Pittsburgh 21, Pa.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 Montlcello Ave., Skokie, III.
Ferrar Radio & Television Corp., 55 W. 26th St., New
York 10, N. Y.
Fidelity Amplifier Co., 703 Willow St., Chicago 14, III.
Francon Mfg. & Sales Corp., 161 Washington St., New
York, N. Y.
FREFD TRANSFORMER INC., 1736 Weirfield St.

Calif.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland
15, Ohio. ADV. PG. 44, 45.

LANGEVIN MANUFACTURING CORP., 37 W. 65th St.,
New York 23, N. Y. ADV. PG. 438.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn, N. Y. ADV. PG. 491.
Loge Sound Engineers, J. M., 2171 W. Washington
Blvd., Los Angeles 18, Calif.
MC INTOSH ENGINEERING LABORATORY, INC., 320
Water St., Binghamton, N. Y. ADV. PG. 302.
M. P. Concert Installations, Fairfield 10, Conn.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
Inglewood, Calif. AMPLIFIERS—Audio Frequency

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7,
III. ADV. PG. 507.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.
Amplifier Corp. of America, 398 Broadway, New York
13, N. Y.
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 Products Corp., 2265 Westwood Blvd., Los
Angeles 64, Calif.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New
York 19, N. Y. ADV. PG. 275.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York
1, N. Y. ADV. PG. 471.
Berkeley Custom Electronics, 2302 Roosevelt Ave., Berkeley 3, Calif.
Berlant Associates, 4917 W. Jefferson Blvd., Los
Angeles 16, Calif.
Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36,
Calif. AMPLIFIERS—Audio Frequency Inglewood, Calif.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
York 55, N. Y. ADV. PG. 361.

Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
Maurer Inc., J. A., 37-01 31st St., Long Island City,
N. Y. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, III.
Melody Master Mfg. Co., 2106 Berwyn Ave., Chlcago
25, III. 25, III. Minnesota Electronics Corp., 47 W. Water St., St. Paul Minnesota Electronics Corp., 7.

1, Minn.

Nonarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W.C. 2, England.
National Intercommunicating Systems, 1130 N. Michlgan Ave., Chicago 22, III.
Newcomb Audio Products Co., 6824 Lexington Ave.,
Hollywood 38, Calif. Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Newcomb Audio Products Co., 6824 Lexington Ave, Hollywood 38, Calif.

NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 50, 51.

Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

Oleson Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif. Bogen Co., Inc., David, 29 Ninth Ave., New York 14, British Industries Corp., 164 Duane St., New York 13, N. Y.
British Radio Electronics Ltd., 1 Thomas Circle, Wash-British Radio Electronics Lio., ington 5, D. C.
Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.
Brook Electronic, Inc., Box 491, Elizabeth, N. J.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.
Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif. PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Callf.
Pedersen Electronics Co., Mount Diablo Blvd., Lafayette. PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
Pickard & Burns, Inc., Needham, Mass.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave.,
Chicago 22, III. ADV. PG. 358.
PRESTO RECORDING CORP., Paramus, N. J. ADV.
PG. 75 CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 386. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back 86, 87.

Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Cook Laboratories, R-2, Stamford, Conn.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

Dilks Co., The, Seymour, Conn.

Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. Covers.
Radio Craftsman, Inc., 1341 S. Micigan Ave., Chlcago 5, III. Radio Music Corp., 84 S. Water St., Port Chester, Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. Scala Radio Co., 2814 19th St., San Francisco 10,

Calif.
Scott, Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
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.
Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
Special Products Co., Silver Spring, Md.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
Standard Electronics Corp., 285 Emmet St., Newark wood 38, Calif.
Standard Electronics Corp., 285 Emmet St., Newark N. J.
Standard Electronics Research Corp., 2 East End
Ave., New York 21, N. Y.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Standard Transformer Corp., Elston, Kedzie & Addisol.
Chicago 18, III.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City,
Calif.
Stephens Caylon Co. Pechertey 22 N. Y. Calif.

Stromberg-Carlson Co., Rochester 13, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1,
N. Y. ADV. PG. 499.
Taffet Radio & Television Co., 2530 Belmont Ave., New
York 58, N. Y.
Technical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
Telectro Industries Corp., 35-18 37th St., Long
Island City 1, N. Y.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34,
III. Francon Mfg. & Sale's Corp., 161 Washington St., New York, N. Y.
FREED TRANSFORMER, INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
Furst Electronics, 10 S. Jefferson St., Chicago, III.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambride 39, Mass. ADV. PG. 82, 83.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., Los Angeles 25, Calif. ADV. PG. 449.
Glenco Corp., Metuchen, N. J.

Calif.

elephonics Corp., Park Ave., Huntington, N. Y. mordarson-Meissner Mfg. Divs., Mt. Carmel, III. RAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. ransmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. RIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 302. Idaire Television Co., 576 W. Merrick Rd., Lynbrook, N. Y. Ideo Corp. of America, 229 W. 28th St., New York 1, N. Y. deo Corp. of America, 229 W. 28th St., New York 1, N. Y.

Alkirt Co., 145 W. Hazel, Inglewood, Calif.
ebster Electric Co., 1900 Clark St., Racine, Wis.
leingarten Electronic Labs., Inc., 7556 Melrose Ave.,
Los Angeles 46, Calif.
estern Sound & Electric Labs., Inc., 805 S. 5th St.,
Milwaukee 4, Wis.
ilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
urlitzer Co., Rudolph, North Tonawanda, N. Y.

tec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
DIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.
Il Sound Systems, Inc., 555 Marion Rd., Columbus 7,

rkeley Custom Electronics, 2302 Roosevelt Ave., Berke-

#### MPLIFIERS-Audio Input Systems

Aley 3, Calif.

NeMA Electronics Inc., Box 491, Elizabeth, N. J.

NEMA ENGINEERING Co., 1510 W. Verdugo Ave.,

Burbank, Calif. ADV. PG. 386.

LLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.
SSOr (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
ctronic Development Lab., 43-07 23rd Ave., Long Island City 5, N. Y.
ECTRONIC MEASUREMENTS CO., Red Bank, N. J. Island City 5, N. Y.
ECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.

gineering Research Associates, Inc., 1902 W. Minhehaha Ave., St. Paul, Minn.
irchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
Ier Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
irar Radio & Television Corp., 55 W. 26th St., New fork 10, N. Y.
es Radio Co., Quincy, III.
NERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
inco Corp., Metuchen, N. J.
inco Corp., Metuchen, N. J.
inco Mfg. Corp., Metuchen, N. J.
inco Mfg. Corp., Metuchen, N. J.
inco W. 6, England.
HLAND ENGINEERING CO., Main St. & Urban Ave., Vestbury, N. Y. ADV. PG. 412.
Audio Industries, 5014 N. Encinta Ave., Temple ity, Calif.
III. ELECTRONICS INC., 7945 Germantown Ave., hiladelphia 18, Pa. ADV. PG. 524.
briell Labs., Inc., 1076 Morena Bivd., San Diego D, Calif.
IJGEVIN MANUFACTURING CORP., 37 W. 65th St., EIGEVIN MANUFACTURING CORP., 37 W. 65th St., ew York 23, N. Y. ADV. PG. 438.
Electric Co., 132 Beckwith Ave., Paterson, N. J. Sound Engineers, J. M., 2171 W. Washington Sound Engineers, J. M., 2171 W. Washington [Ivd., Los Angeles 18, Calif. coni Wireless Telegraph Co., Ltd., 23-25 Beaver St., ew York 4, N. Y. sner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, A. March Radio & Television Corp., 61 Crescent St., ooklyn 8, N. Y. comb Audio Products Co., 6824 Lexington Ave., pollywood 38, Calif.
Ridge Products Mfg. Div., Video Television, Inc., f-01 Vernon Blvd., Long Island City 1, N. Y. D. n. Co., Otto K., 1534 Cahuenga, Hollywood 28, alif.

Persen Electronics Co., Mount Diablo Blvd., Lafayette, lif. Mif.
Pistiehl Chemical Co., Metallurgical Div., 104 Lake ew Ave., Waukegan, III.
PISERING & CO., 309 Woods Ave., Oceanside, L. I., Y. ADV. PG. 412.
RIO CORP. OF AMERICA, Engineering Products Dept., mden, N. J. ADV. PG. 295, Inside Back & Back yers. Reand-Borg Corp., 3515 W. Addison St., Chicago 18, Rer Co., Ltd., 2101 Bryant St., San Francisco 10, Silson Mfg. Co., Inc., Mark, 32-28 49th St., Long and City 3, N. Y.

Still-Hoffman Corp., 1016 N. Highland Ave., HollyTransmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

11, N. Y.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
Autel Electronics Co., 1946 Farmingdale Rd., Westfield,
N. J.

N. J.
Avion Instrument Corp., Paramus, N. J.
Beil Sound Systems, Inc., 555 Marion Rd., Columbus
7, Ohio.
BENDIX AVIATION CORP., PACIFIC DIV., 11600 Sherman Way, North Hollywood, Calif. ADV. PG. 129.
CREST LABORATORIES, INC., Whitehall Bidg., Far
Rockaway, N. Y. ADV. PG. 515.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488.

# AMPLIFIERS—Audio Subminiature AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396. Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y. Audio Instrument Co., Inc., 133 W. 14th St., New York 11. N. Y.

ElectroNic MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488.
Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Gulton Mfg. Corp., Metuchen, N. J.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.
LANGEVIN MANUFACTURING CORP., 37 W. 65th St.,
New York 23, N. Y. ADV. PG. 438.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
Loral Electronics Corp., 794 E. 140th St., New York
54, N. Y. 54, N. Y.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Plastics & Electronics Co., Inc., P. O. Box 38, Station J, Buffalo 8, N. Y.

PRECISION ELECTRONICS, INC., 643 Milwaukee Ave.,
Chicago 22, III. ADV. PG. 358.

RADIO CORP OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back Radio Music Corp., 84 S. Water St., Port Chester, N. Y. Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif. Calif.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
UNITED TRANSFORMER CO., 150 Varick St., New
York 13, N. Y. ADV. PG. Inside Front Cover.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,
Mo. AMPLIFIERS---d-c Applied Physics Corp., 362 W. Colorado St., Pasadena Audio Instrument Co., Inc., 133 W. 14th St., New York Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.

Avion Instrument Corp., Paramus, N. J.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.

BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 466.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.

Computer Corp. of America, 149 Church St., New York, N. Y. N. Y.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax,
N. S., Canada.
Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md.
Douglas Radio Labs., 176 Norfolk Ave., Boston 19, EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
Electronic Associates, Inc., Long Branch, N. J.
ELECTRONIC COMPUTER CORP., 160 Ave. of the Americas, New York 13, N. Y. ADV. PG. 298.
Electronic Control Corp., 1573 E. Forest St., Detroit,

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Furst Electronics, 10 S. Jefferson St., Chicago 6, III. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Guitton Mfg. Corp., Metuchen, N. J.
Hanover Developments, 401 E. 74th St., New York 21, N. Y.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.
Manning, Maxwell & Moore, Inc., Stratford, Conn. Manning, Maxwell & Moore, Inc., Stratford, Conn. MEASUREMENTS CORP., Boonton, N. J., ADV. PG. MEASUREMENTS CURP., Boonton, N. 27, 158, 159.

158, 159.

Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, III.

Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25. III. 25, III.
Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
Philbrick Researches, Inc., George A., 230 Congress St.,
Boston 10, Mass.
Photron Instrument Co., 6516 Detroit Ave., Cleveland
2, Ohio.
Plastics & Electronics Co., Inc., P. O. Box 38, Station J,
Ruffalo 8, N. Y. Buffalo 8, N. Y. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 473.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Tektronix, Inc., P. O. Box 831, Portland, Ore.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III,
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256. AMPLIFIERS-Decade

Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 124.
Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md. Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
FREED TRANSFORMER CO., INC., 1736 Welrfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Furst Electronics, 10 S. Jefferson St., Chicago 6, III.
Glenco Corp., Metuchen, N. J.
INDUSTRIAL CONTROL CO., Straight Path & Arlington
Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Standard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395. ton, Mass. ADV. PG. 394, 395.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.

#### AMPLIFIERS—Differential

Cubic Corp., 2841 Canon St., San Diego 6, Calif.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Furst Electronics, 10 S. Jefferson St., Chicago 6, III.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.
Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, Tektronix, Inc., P. O. Box 831, Portland 7, Ore.

#### AMPLIFIERS-f-m & a-m Antenna

Belling & Lee Ltd., 366 Madison Ave., New York 17, BENDIX AVIATION CORP., PACIFIC DIVISION, 11600 Sherman Way, North Hollywood, Callf. ADV. PG. 129.

Strard Electronics Corp., 285 Emmet St., Newark,

Stuard Telephones & Cables Ltd., Connaught House, dwych, London, W. C. 2, England. Stens Mfg. Corp., 8538 Warner Drive, Culver City,

G. ELECTRIC CORP., 31 W. 27th St., New York 1, Y. ADV. PG. 499. Y. ADV. PG. 499.
The arson-Meissner Mfg. Divs., Mt. Carmel, III.
TRI TELEVISION CORP., 1001 First Ave., Asbury Park,

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Monroe Coil Co., 2839 Narragansett Ave., Chicago 34,

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back

Schuttig & Co., Inc., Ninth & Kearney Sts., N. E., Wash-ington 17, D. C.

Schuttig & Co., Inc., Nilling & Reality, Schuttig & Co., Inc., Inc., Ington 17, D. C.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 351.

Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### AMPLIFIERS—Facsimile

Acme Telectronix Div., NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,

Mass. ADV. PG. 24.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park Syracuse, N. Y. ADV. PG. 1-23.
Hogan Laboratories, Inc., 155 Perry St., New York 14,

Hogan Laboratories, 1167, 250 Mar.
N.Y.
K-V Transformer Corp., 4414 Park Ave., New York 57,
N.Y.
McEiroy Mfg. Corp., Littleton, Mass.
TIMES FACSIMILE CORP., 540 W. 58th St., New
York 19, N. Y. ADV. PG. 526.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### AMPLIFIERS-i-f

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454. Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
Communications Co., Inc., 300 Greco Ave., Coral
Gables 34, Fla.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
General Communication Co., 530 Commonwealth Ave.,

General Communication Co., 530 Commonwealth Ave., Boston 15, Mass. Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, Ill. JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524. Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill. LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.

158, 159.
Melpar, Inc., 452 Swann Ave., Alexandria, Va.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,

Chicago 39, III. ADV. PG. 59.

TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525.

VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.

Video Corp. of America, 229 W. 28th St., New York 1,

#### AMPLIFIERS—Keying

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.
Eldico Of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y. N. Y.
Gates Radio Co., Quincy, III.
McElroy Mfg. Corp., Littleton, Mass.
Technical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,
Mn.

### AMPLIFIERS—Logarithmic

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y. Cubic Corp., 2841 Canon St., San Diego 6, Callf. Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10, Calif. THOMPSON PRODUCTS CO., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio. ADV. PG. 98.

#### AMPLIFIERS—Magnetic

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 496.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153. BOGUE ELECTRIC MFG. CO.,
3, N. J. ADV. PG. 153.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co.,
52 Iowa Ave., Paterson 3, N. J.
C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

Chicago Electronic Engineering Co., 3224 W. Armitage Ave., Chicago 47, III. Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif. Cycle Electronics Laboratories, 356 Glenwood Ave., East Orange, N. J.

Cycle Electronics Laboratories, 350 Giornosci East Orange, N. J.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Gaveco Labs., Inc., Sub. of General Aviation Equipment
Co., Inc., 2 East End Ave., New York 21, N. Y.
GENERAL ELECTRIC CO., Apapratus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield N. J.

HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 172.
Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, III.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.
K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 415.

LANGÉVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.

MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind

Ind.
MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 361.
Magnetics, Inc., Box 230-A, Butler, Pa.
Meissner Mfg. Div., Maguire Industries, Inc., Mt.

Meissner Mrg. DIV., Maguire Industries, Inc., Mc. Carmel, III.
Pentron Corp., 221 E. Cullerton St., Chicago 16, III.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.

39, Calif.
Rollins Corp., P. O. Box 213, Lewes, Del.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV. PG. 379. ckers, Inc., 18

ADV. PG. 379.
Vickers, Inc., 1815 Locust St., St. Louis 3, Mo.
Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### AMPLIFIERS—Medical Instrument

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass. EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.

PG. 441.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
Electrodyne Co., 32 Oliver St., Boston, Mass.
Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.
Fidelity Amplifier Co., 703 Willow St., Chicago 14, Ill.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG.

LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180. Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,

Magna Electronics Co., 9810 Anza Ave., F. O. Box 250, Inglewood, Calif.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25,

Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago

25, III.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
Photocon Research Products, 421 N. Foothill Blvd., Pasa-

dena, Calif. Photron Instrument Co., 6516 Detroit Ave., Cleveland

Ohio. Radiation Counter Laboratories, Inc., 5122 W. Grove St.,

Radiation Counter Lausiatories, Alley, Skokie, III.
RAHM INSTRUMENTS, INC., 12 West Broadway, New York 7, N. Y. ADV. PG. 522.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass.

ADV. PG. 474.

Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.

Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.

#### AMPLIFIERS-Microwave

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

K-V Transformer Corp., 4414 Park Ave., New York 57, LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,

Brooklyn, N. Y. ADV. PG. 491.

Plarad Electronics Corp., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.

RADIO CORP. OF AMERICA, Engineering Products Dept., Carrden, N. J. ADV. PG. 295, Inside Back & Back

Covers.

dio Engineering Labs., Inc., 36-40 37th St., Long
Island City 1, N. Y.

Radio Engineering Labs., Inc., So-to Scient St., Lung Island City 1, N. Y.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.
SPERRY GYROSCOPE CO. DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 139, 140.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif.

ADV. PG. 213. Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind. Waveline, Inc., North Caldwell, N. J.

#### AMPLIFIERS—Microwave Radar

AMERICAN ELECTRONEERING CO., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Cubic Corp., 2841 Canon St., San Diego 6, Calif. GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

N. Y. POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219. Resdel Engineering, 2309 Riverside Drive, Los Angeles

Resdel Engineering, 2309 Riverside Drive, Los Angels 39, Callif.

SPERRY GYROSCOPE CO. DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 139, 140.

VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213.

Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind.

Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo. Waveline, Inc., North Caldwell, N. J.

#### AMPLIFIERS—Musical Instrument

Alamo Electronic Corp., 105 Romana St., San Antonio 1, Texas.

ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, III. ADV. PG. 507.

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.
Electronic Development Lab., 43-07 23rd Ave., Long Island City 5, N. Y.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, III.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, III. ADV. PG. 358.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Alamo Electronic Corp., 105 Romana St., San Antonio 1,

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers. Radio Labs., Inc., 4451 N. Ravenswood Ave.,

Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chicago 40, III. Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,

N. J. ADV. PG. 262.
Valco Mfg. Co., 4700 W. Walton St., Chicago 51, Ill.
Western Sound & Electric Labs., Inc., 805 S. 5th St.,
Milwaukee 4, Wis.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### AMPLIFIERS-Null

AMPLIFIERS—Null

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Ore.

CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.

Cubic Corp., 2841 Canon St., San Diego 6, Callf. FREED TRANSFORMER CO., INC., 1736 Welrfield St., Brooklyn 27, N. Y. ADV. PG. 297.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

MACDONALD CO., INC., W. S. 33 University Rd., Cam-

44, Pa.
MACDONALD CO., INC., W. S. 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.
Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.

INNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
ENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
Albrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.

# MPLIFIERS—Peak Limiting

tec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Hills, Calif.
MLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.
86, 87.
L-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
co Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
tes Radio Co., Quincy, III.
huttig & Co., Inc., 9th & Kearney Sts., N. E.,
Washington 17, D. C.
ancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
andard Electronics Corp., 285 Emmet St., Newark,
M. J.
indard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y.
L. G. ELECTRIC CORP., 31 W. 27th St., New York
1, N. Y. ADV. PG. 499.
chnical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
ordarson-Meissner Mfg. Divs., Mt. Carmel, III.
ansmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14, N. Y.

# APLIFIERS—Photocell

me Telectronix Div., NEA Service, Inc., W. Third & nakeside, Cleveland 13, Ohio.
ec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
GUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.
Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill., actro-Mechanical Research, Inc., Ridgefield, Conn. ctrodyne Co., 32 Oliver St., Boston, Mass. Ctronic Control Corp., 1573 E. Forest St., Detroit, Mich. Ctronic Development Lab., 43-07 23rd St., Long Island City 5, N. Y.
Blity Amplifier Co., 703 Willow St., Chicago 14, Ill. MERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
an Laboratories, Inc., 155 Perry St., New York 14, I. Y.
Istrial Electronics Co., Inc., Hanover, Mass. Is a Northrup Co., 4970 Stenton Ave., Philadelphia 4, Pa.
Inenite Electric Co., 407 S. Dearborn St., Chicago 5, I.
Elroy Mfg. Corp., Littleton, Mass.
Inarch Radio & Television Corp., 61 Crescent St., 100mington, Ill.
Company, 116 Nassau St., New York 7, N. Y.
Itic Specialties Co., 1005-1007 W. Washington St., Ill.
CISION ELECTRONICS, INC., 643 Milwaukee Ave., 11.
CISION ELECTRONICS, INC., 640 A. Milwaukee Ave., 11.
CISION ELECTRONICS, INC., 641 A. Milwaukee Ave., 11.
CISION ELECTRONICS, INC., 642 A. Milwaukee Ave., 11.
CISION ELECTRONICS, INC., 643 A. Milwaukee Ave., 11.
CISION ELECT

# PLIFIERS-Power

\*\*ED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, 1. ADV. PG. 507.

At: Lansing Corp., 9356 Santa Monica Blvd., verly Hills, Calif.

Sifier Corp. of America, 398 Broadway, New York 1, N. Y.

A voed Electronic Instrument Corp., 928 Broadway, W York 10, N. Y.

A VOED ELECTRONIC INSTRUMENT CORP., 928 Broadway, W York 10, N. Y.

A VOED ELECTRONIC INSTRUMENT CORP., 928 Broadway, W YORK 10, N. Y.

A VIDEO PRODUCTS CO., 730 Fifth Ave., New rk 19, N. Y. ADV. PG. 275.

B VER-WILLIAMSON, 235 Fairfield Ave., Upper lirby, Pa. ADV. PG. 397.

Cent Associates, 4917 W. Jefferson Blvd., Los Angeles Calif.

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y. Industries Corp., 164 Duane St., New York Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.
Calbest Engineering & Electronics Co., 828 N. High-land Ave., Hollywood 38, Calif.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax,
Doelcam Inc., 56 Elmwood St., Newton 58, Mass. Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
Dukane Corp., 135th & Indiana Sts., St. Charles, III.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.
Electronic Development Lab., 43-07 23rd Ave., Long
Island City 5, N. Y.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
Farmers Engineering & Mfg. Co., 549 Brushton Ave.,
Pittsburgh 21, Pa.
Ferrar Radio & Television Corp., 55 W. 26th St.,
New York 10, N. Y.
FIGEITY Amplifier Co., 703 Willow St., Chicago 14, III.
Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
FREED TRANSFORMER CO., INC., 1763 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.
GENERAL RADIO CO., 275 Massachusetts Ave., Camfield, N. J.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
Holl Audio Industries, 5014 N. Encinta Ave., Temple
City Calif Holf Audio Industries, 5014 N. Encinta Ave., Jemple City, Calif.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.

Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.

Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. MCINTOSH ENGINEERING LABORATORY, INC., 320
Water St., Binghamton, N. Y. ADV. PG. 302.
M B MFG. CO., 1060 State St., New Haven 11, Conn.
ADV. PG. 459.
Maguire Industries, Inc., Mt. M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 459.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, III.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.

Oleson Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif. Oleson Calif.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, III. ADV. PG. 358.
RABIO 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. Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, III.
Sargent-Rayment Co., 212 Ninth St., Oakland, Calif. Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Scott Radio Labs, Inc., 4451 N. Ravenswood Ave., Chicago 40, III.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
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.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif. 18. 111 Calif. T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 499.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. N. A.D. P. 2622. N. J. ADV. PG. 262. Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. Transmitter Equipment Mig. Co., Inc., 349 Hudson St., New York 14, N. Y. Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind. Walkirt Co., 145 W. Hazel, Inglewood, Calif. Webster Electric Co., 1900 Clark St., Racine, Wis. Western Electro-Acoustic Labs., 204 S. Beverly Drive, Pavarly Hills Calif.

AMPLIFIERS—Printed Circuit

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

Beverly Hills, Calif.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.
DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
Maico Co., Inc., 21 N. Third St., Minneapolis, Minn. PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. Plastics & Electronics Co., Inc., P. O. Box 38, Station J., Buffalo 8, N. Y.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 39.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

# AMPLIFIERS—Recording

ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, III. ADV. PG. 507.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Amplifier Corp. of America, 398 Broadway, New York-13, N. Y.
Audio Instrument Co., Inc., 133 W. 14th St., New
York 11, N. Y.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New
York 19, N. Y. ADV. PG. 275.
Berlant Associates, 4917 W. Jefferson Blvd., Los
Angeles 16, Calif.
Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36,
Calif. Calif.
Califone Corp., 1041 N. Sycamore Ave., Hellywood 38, Calif. Century Geophysical Corp., 1333 N. Utica, Tulsa 3, COLLINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 386. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Electronic Development Lab., 43-07 23rd Ave., Long Island City 5, N. Y.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 Monticello Aug. Schol Feiler Engineering & Mfg. Co., Dept. EBG, 8026 Monticello Ave., Skokie, III.

Gates Radio Co., Quincy, III.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.

Holl Audio Industries, 5014 N. Encinta Ave., Temple City, Calif.

JERSEY CITY TECHNICAL LABORATORY 880 Bergen Ave., Jersey City 6. N. J. ADV. PG. 424. Ave., Jersey City 6, N. J. ADV., PG. 424.

LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.

MAGNECORD, INC., 360 N. Michigan Ave., Chicago 1, III. ADV. PG. 374. MAGNECORD, INC., 200 N. MININGS CO., 200 N. MI Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill. PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, Ill. ADV. PG. 358.
PRESTO RECORDING CORP., Paramus, N. J., ADV. PG. 75. PG. 75.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back Cameen, W. J. MDV. 1G. 279, Secretary N. Y. Radio Music Corp., 84 S. Water St., Port Chester, N. Y. RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. ADV. PG. 522.

Rek-0-Kut Co., 38-03A Queens Blvd., Long Island City, N. Y. SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Telectro Industries Corp., 35-18 37th St., Long Island City 1 N. Y. Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Video Corp. of America, 229 W. 28th St., New York 1. N. T. Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

# AMPLIFIERS-r-f

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.

Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34,

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.

N. Y.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill. Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadel-

phia 21, Pa.
McINTOSH ENGINEERING LABORATORY, INC., 320
Water St., Binghamton, N. Y. ADV. PG. 302.
Millen Mfg. Co., James, 150 Exchange St., Malden,

Mass.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
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. Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chi-

cago 40, III.

Slerra Electronic Corp., San Carlos, Calif.

Standard Electronics Corp., 285 Emmet St., Newark,

N. J. TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

PG. 448.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

Wilcox Electric Co., 1400 Chestnut St., Kansas City,

#### AMPLIFIERS-Servo

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

Arma Corp., 254 36th St., Brooklyn 32, N. Y. Askania Regulator Co., 240 E. Ontario St., Chicago 11,

Audio Instrument Co., Inc., 133 W. 14th St., New

Avion Instrument Corp., Paramus, N. J.

Belock Instrument Corp., 13-11 111th St., College

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,

N. J. ADV. PG. 153.

Bristol Co., The, Waterbury 20, Conn.

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. C. Canada

Conn. ADV. PG. 337.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

Cubic Corp., 2841 Canon St., San Diego 6, Calif.

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.

Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7,

ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 127, 128 Flader, Inc., Frederic, 1330 Laskey Rd., Toledo 12, Ohio.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1
River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield,
N. J.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
Hillyer Instrument Co., Inc., 54 Lafayette St., New York 13, N. Y.

York 13, N. Y.
INDUSTRIAL CONTROL CO., Straight, Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
Kearfott Co., Inc., 1150 McBride Ave., Little Falls,

Loral Electronics Corp., 794 E. 140th St., New York 54,

N. Y.

MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New
York 55, N. Y. ADV. PG. 361.

MCINTOSH ENGINEERING LABORATORY, INC., 320
Water St., Binghamton, N. Y. ADV. PG. 302.

Midwestern Geophysical Laboratory, 3400 S. Harvard,
Tulsa, Okla.

Tulsa, Okla.

Tulsa, Okla.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Plastics & Electronics Co., Inc., P. O. Box 38, Station J, Buffalo 8, N. Y.

REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 473.

ROBINETTE CO., W. C. 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

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. 308, 309.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 499. Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
TRANSICOIL CORP., 107 Grand St., New York 13, N. Y. ADV. PG. 37.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.

#### AMPLIFIERS—Strain Gage

Avion Instrument Corp., Paramus, N. J.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, North Hollywood, Calif. ADV. PG. 129.
BOGUE ELECTRIC MFG. CO., 52 lowa Ave., Paterson 3,

N. J. ADV. PG. 153.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Century Geophysical Corp., 1333 N. Utica, Tulsa 3,

Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich. Computer Research Corp., 3348 W. El Segundo Blvd.,

Computer Research Corp., 3348 W. El Segundo Bivd., Hawthorne, Calif. Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif. Control Engineering Corp., 863 Washington St., Canton,

Mass.

Electronic Engineering Associates, Ltd., 1048 Brittan Ave., San Carlos, Calif.

Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.

Ellis Associates, Box 77, Pelham 65, N. Y.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

HEILAND RESEARCH CORP., 150 E. 5th Ave., Denver 9, Colo. ADV. PG. 480. INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.

Detroit 10, Mich. ADV. PG. 122, 123.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif. Calif

Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.
Moulic Specialties Co., 1005-1007 W. Washington St.,

Bloomington, III.
Photron Instrument Co., 6516 Detroit Ave., Cleveland 2,

Ohio.
POLYPHASE INSTRUMENT CO., 705 Haverford Rd., Bryn Mawr, Pa. ADV. PG. 519.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, Ill. ADV. PG. 358.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.
Sierra Electronic Corp., San Carlos, Calif. Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.

# AMPLIFIERS-Sweep

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Felier Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 351.

TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

# AMPLIFIERS—Television

Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio. Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y.

N. Y.
Blonder-Tongue Laboratories, Inc., 38 N. Second Ave.,

Mt. Vernon, N. Y.
Decimeter, Inc., 1430 Market St., Denver 2, Colo.
DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488. Federal Telecommunication Labs., Inc., 500 Washington

Ave., Nutley, N. J.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GENERAL PRECISION LABORATORY, INC., Pleasantville,

GENERAL PRECISION LABORATORY, INC., Pleasantville, N. Y. ADV. PG. 84.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491.

Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Radio Machanal Covers.
Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, 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. 351.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 448.

ADV. PG. 448. TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.

ADV. PG. 311.

TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

TURNER CO., THE, 909 17th St. N. E., Cedar Rapids, Iowa. ADV. PG. 425.

VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213.

Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind.

Video Corp. of America, 229 W. 28th St., New York 1, N. Y.

#### AMPLIFIERS-Ultrasonic

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ELECTRONIC MEASUREMENTS CO., ADV. PG. 488.
FREED TRANSFORMER CO., INC., 1736 Welrfield St.,
Brooklyn 22, N. Y. ADV. PG. 297.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St.,
New York 10, N. Y. ADV. PG. 525.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
MC INTOSH ENGINEERING LABORATORY, INC., 320
Water St., Binghamton, N. Y. ADV. PG. 302.

Water St., Binghamton, N. Y. ADV. PG. 302.

Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W.C. 2, England.

Photocon Research Products, 421 N. Foothill Blvd.,
Pasadena, Calif.

Resdel Engineering, 2309 Riverside Drive, Los Angeles

39, Calif.
Rich-Roth Laboratories, East Hartford, Conn.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 351.

# AMPLIFIERS—Vibration Pickup

AMPLIFIERS—Vibration Pickup

Aircraft Electronics Associates, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, III. ADV. PG. 507.

Avion Instrument Corp., Paramus, N. J.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600 Sherman Way, North Hollywood, Calif. ADV. PG. 129.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Oklahoma.

Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.

CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

Electronic Engineering Associates, Ltd., 1048 Brittan
Ave., San Carlos, Calif.

Mich.

Electronic Engineering Associates, Ltd., 1048 Brittan Ave., San Carlos, Calif.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.

HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.

INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.

MCINTOSH ENGINEERING LABORATORY, INC., 320 Water St., Binghamton, N. Y. ADV. PG. 302.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.

Muirhead & Co., Ltd., Beckenham, Kent, England.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.

RADIO CORP. OF AMERICA, Engineering Products Dept.,

Ohio.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back

Covers.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

withwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. ERRY GYROSCOPE Co., Div. of The Sperry Corp., Sreat Neck, N. Y. ADV. PG. 139, 140. ttronix, Inc., P. O. Box 831, Portland 7, Ore. eviso Corp., 7466 W. Irving Park Road, Chicago 34, 11 TOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
ESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# APLIFIERS—Wideband

Hio Products Corp., 2265 Westwood Blvd., Los Angeles A, Calif.

CLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 66, 87. Inmercial Research Laboratories Inc., 20 Bartlett Ave., Sor (Canada) Ltd., 301-303 Windsor St., Halifax, d.S., Canada. Estro-Mechanical Research, Inc., Ridgefield, Conn. IECTRONIC MEASUREMENTS CO., Red Bank, N. J. IECTRONIC MEASUREMENTS CO., Red Bank, N. J.
10V. PG. 488.
1st Electronics, 10 S. Jefferson St., Chicago 6, Ill.
1ERAL ELECTRIC CO., Electronics Div., Electronics
1ark, Syracuse, N. Y. ADV. PG. 1-23.
1VERAL RADIO CO., 275 Massachusetts Ave., Camridge 39, Mass. ADV. PG. 82, 83.
1VLETT-PACKARD CO., 395 Page Mill Rd., Palo
1to, Calif. ADV. PG. 29-34.
1MLETT-PACKARD CO., Main St. & Urban Ave.,
1vestbury, N. Y. ADV. PG. 412.
1vold Electronics Corp., 26th & Dickinson Sts., Phila1elphia 46, Pa. elphia 46, Pa. Lmar Engineers, Inc., 1432 N. Carlisle St., Phila-

Lar Engineers, 100., 1802 N. J. Parish Phila 21, Pa. Phila 21, 58, 159.

ARAD ELECTRONICS CORP., 100 Metropolitan Ave., Pooklyn 11, N. Y. ADV. PG. 218, 219.

ation Counter Laboratories, Inc., 5122 W. Grove St.,

station Counter Laboratories, Inc., 5122 V. Grove St., Stokie, III.

lel Engineering, 2309 Riverside Drive, Los Angeles P. ETY CO., INC., Middletown, Conn. ADV. PG. 490.

NCER-KENNEDY LABS, INC., 186 Massachusetts Pe., Cambridge 39, Mass. ADV. PG. 351.

dard Electronics Corp., 285 Emmet St., Newark,

J.
dard Electronics Research Corp., 2 East End Ave.,
www.York.21, N. Y.
mberg-Carlson Co., Rochester 13, N. Y.
mical Materiel Corp., P.O., Box 142, 121 Spencer
ace, Mamaroneck, N. Y.
HNOLOGY INSTRUMENT CORP., 531 Main St., Acton,
ADV. PG. 394, 395. DANOLOGY INSTRUMENT COMMISS.

ass. ADV. PG. 394, 395.

tronix Inc., P. O. Box 831, Portland 7, Ore.

ECHROME, INC., 88 Merrick Rd., Amityville, N. Y.

DV. PG. 311.

INSTRUMENT CO., 50 Paterson Ave., East Rutherdo, N. J. ADV. PG. 525.

Berlab, Inc., 130 High St., Boston, 10, Mass.

TD TELEVISION CORP., 1001 First Ave., Asbury Park, J. ADV. PG. 262.

Electronic Co., 262 Canner St., New Haven 11,

# **ALOGS**

# e Machines, Electronic Computing

ALYZERS—Audio Amplifier

TNCE ELECTRONICS CO., 451 Highland Ave., ssaic, N. J. ADV. PG. 403.
Lansing Corp., 9356 Santa Monica Blvd., Beverly Ils, Calif. BACER & WILLIAMSON, 235 Fairfield Ave., Upper by, Pa. ADV. PG. 397.

Cast Engineering & Electronics Co., 828 N. Highland a., Hollywood 38, Calif.

ELTRONIC MEASUREIMENTS CO., Red Bank, N. J.

V. PG. 488.

See Engineering & Mfg. Co., Dept. EBG, 8026 Montiilo Ave., Skokie, III.

Hisk Electrical Instrument Co., 10514 Dupont Ave., veland 8, Ohio.

Jaton Electrical Instrument Co., 16 S. Patterson Bivd.,

Jaton Electrical Instrument Co., avion 1, Ohio.

KE ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. V. PG. 324, 325.

Maa Electronics Co., 9810 Anza Ave., P. O. Box 338, lewood, Calif.
MEUREMENTS CORP., Boonton, N. J. ADV. PG.

PA RAMIC RADIO PRODUCTS, INC., 10 S. Second ..., Mt. Vernon, N. Y. ADV. PG. 507.
WE'ON ELECTRICAL INSTRUMENTS CORP., 614 linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# ANLYZERS—Capacitor

Cor I-Dubilier Electric Corp., South Plainfield, N. J. Fell Engineering & Mfg. Co., Dept. EBG, 8026 N. hticello Ave., Skokie, III. Electrical Instrument Co., 10514 Dupont Ave., Cycland 8, Ohio.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

King Electric Equipment Co., 9123 Imman Ave., Cleveland 5, Ohio.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

MEASURMENTS CORP., Boonton, N. J. ADV. PG. 158,

159.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 320.
Sprague Electric Co., 125 Marshall St., North Adams,

WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

#### ANALYZERS-Circuit

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passalc, N. J. ADV. PG. 403

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,

Feiler Engineering & Mfg Co., Dept. EBG, 8026 Monti-

relier Engineering & mrg Co., Dept. Ebg., 0929 invited cello Ave., Skokie, Ill.

FLUKE ENGINEERING CO., JOHN, Box 755, Springdale, Conn. ADV. PG. 268.

Instrument Laboratories, 315 W. Walton Place, Chicago

Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,

Jackson Electrical Instrument Co., 16 S. Patterson Blvu.,
Dayton 1, Ohio.
Precision Apparatus Co., Inc., 92-27 Horace Harding
Blvd., Elmhurst, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.
Supreme, Inc., Greenwood, Miss.

Supreme, Inc., Greenwood, Miss.
WESTINGHOUSE ELECTRIC CORP., P .O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Freiinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

#### ANALYZERS-Coincidence

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.
MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.
Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III.

#### ANALYZERS-Frequency

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St.,
New York 10, N. Y. ADV. PG. 525.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
ADV. PG. 324, 325.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave.,
Cambridge 39, Mass. ADV. PG. 41.
Loral Electronics Corp., 794 E. 140th St., New York
54, N. Y.

54, N. Y.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Officer Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, III. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.
Sierra Electronic Corp., San Carlos, Calif.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J., ADV. PG. 256.
Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

Applied Physics Corp., 362 W. Colorado St., Pasadena 1,

# ANALYZERS-Gas

Applied Physics Corp., 302 M. Scales Calif.
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Consolidated Engineering Corp., 300 N. Slerra Madre Villa, Pasadena 8, Calif.
Gow-Mac Instrument Co., 22 Lawrence St., Newark 5, N. J. N. J. Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. 44, Pa. LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180. Perkin-Elmer Corp., Main Ave., Norwalk, Conn. Process & Instruments, 60 Greenpoint Ave., Brooklyn Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Rubicon Co., Ridge Ave., at 35th St., Philadelphia 29, PPa. VICTORY ENGINEERING CORP., Springfield Rd., Unlon, N. J. ADV. PG. 204.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Davies Laboratories, Inc., 4705 Queensbury Rd., River-

#### ANALYZERS-Harmonic

dale, Md.

Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488. EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.
FREED TRANSFORMER CO., INC., 1736 Welrfield St., Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1. Ohio. Dayton 1, Ohio. AY ELECTRIC CO., 25 Maple Ave., Pine Brook, N, J. ADV. PG. 324, 325.

Muirhead & Co., Ltd., Beckenham, Kent, England.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second
Ave., Mt. Vernon, N. Y. ADV. PG. 507.

Sierra Electronic Corp., San Carlos, Calif.

#### ANALYZERS-Intermodulation

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEATH CO., Benton Harbor, Mich. ADV. PG. 492.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

#### ANALYZERS-Magnetic

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

#### ANALYZERS-Microwave Rodar

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

TELECHROME, INC., BB Merrick Rd., Amityville, N. Y. ADV. PG. 311. ADV. PG. 311.
VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# ANALYZERS-Noise

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.

ADV. PG. 324, 325. ADV. PG. 324, 325.
MEASUREMENTS CORP., Boomton, N. J. ADV. PG. 158, 159.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y., ADV. PG. 311.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34, 111.

# ANALYZERS-Serve

Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md.

Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 41.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnplia, New Hyde Park, N. Y. ADV. PG. 308, 309.

SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392. dale, Md. Doelcam Inc

# ANALYZERS-Spectrum

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.

Bausch Lomb Optical Co., 635 St. Paul St., Rochester Beckman Instruments, Inc., 820 Mission St., South Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif. C. G. S. LABORATORIES, INC., 391 Ludlow St., Stam-ford, Conn. ADV. PG. 454. Computing Devices of Canada, Ltd., 338 Queen St., Ot-tawa 4, Ontario. GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525. KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325. Leru Laboratories, Inc., Black Oak Ridge Rd., Wayne, N. J. MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

Northeastern Engineering, Inc., Manchester, N. H. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.

SPERRY GYRÓSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.

WESTINGHOUSE ELECTRIC CORP. P. 0. Rev. 5578.

# PG. 384. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. ANALYZERS—Surface Analyzers & Comparators

Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.
Menlo Research Laboratory, Menlo Park, Calif.
Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio. Ohio.
Scherr Co., Inc., George, 200 Lafayette St., New York
12, N. Y.

#### ANALYZERS—Ultrasonic

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleve-BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
ADV. PG. 324, 325.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# ANALYZERS—Vibration

Aircraft Electronics Associates, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
CALIDYNE CO., THE, 751 Main St., Winchester, Mass. ADV. PG. 210.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.

Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdala Md. dale Md.

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. ADV. PG. 413.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10. Colo. 10, Colo.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 41.

Muirhead & Co., Ltd., Beckenham, Kent, England. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

Walkirt Co., 145 W. Hazel, Inglewood, Calif. WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# ANALYZERS-Video

Back Video Corp., F. G., 500 Fifth Ave., New York, N. Y. Feiler Engineering & Mfg. Co., Dept EBG, 8026 N. Monticello Ave., Skokie, III.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Superior Instruments Co., 227 Fulton St., New York, TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.

#### ANALYZERS-Wave

dale, Md.

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.

GENERAL RADIO CORP., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

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. 324, 325.

Muirhead & Co., Ltd., Beckenham, Kent, England. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

Sierra Electronic Corp., San Carlos, Calif.

Davies Laboratories, Inc., 4705 Queensbury Rd., River-

# ANTENNA FAIRLEADS

Molded Insulation Co., 335 E. Price St., Philadelphia

Telephonics Corp., Park Ave., Huntington, N. Y. ANTENNA FEED SYSTEMS AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave.,
Chicago 50, Ill. ADV. PG. 212.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.
BART LABS., CO., INC., 227 Main St., Belleville 9,
N. J. ADV. PG. 406. Belling & Lee Ltd., 366 Madison Ave., New York 17, N Y. N. Y.
Channel Master Co., Ellenville, N. Y.
Dielectric Products Co., Inc., 125 Virginia Ave., Jersey
City 5, N. J.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., City 5, N. J.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St.,
New York 10, N. Y. ADV. PG. 525.

Javex, 921 State, Garland, Texas.

Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa. Jerrold Electronics Corp., 20th & Standard Glephia 46, Pa.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
N. R. K. MFG. & ENGINEERING CO., 4601 W. Addison St. Chicago 41, Ill. ADV. PG. 522. St., Chicago 41, III. ADV. PG. 522.

PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave.,
Kearny, N. J. ADV. PG. 515.

RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Radio Merchandise Sales, Inc., 1165 Southern Blvd.,
New York 59, N. Y.

Stationics Corn., 285 Emmet St., Newark, Standard Electronics Corp., 285 Emmet St., Newark, TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Technicratt Laboraturies, Allow,
Thomaston, Conn.
Telegraph Construction & Maintenance Co., Ltd., Telcon
Works, Greenwich, London, S.E. 10, England.
TITEFLEX, INC., 500 Frelinhuysen Ave., Newark 5, N. J.
ADV. PG. 399.
Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,
Mass. Mass.

Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.

Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.

Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.

# ANTENNA PEDESTALS—Gear Driven Radar

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464.
Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, III.
Northeastern Engineering, Inc., Manchester, N. H.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Postan Corp. 383 Kent Ave. Brooklyn 11, N. Y. 13, N. Y.
Rostan Corp., 383 Kent Ave., Brooklyn 11, N. Y.
Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,
Mass.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115. Pittsburgh 30, Pa. ADV. PG. 109-115.
Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd. Needham Heights 94, Mass.

# ANTENNA REFLECTORS—Radar Parabolic

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464. Andrew Corp., 363 E. 75th St., Chicago 19, III. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
Keller Products Co., 41 Union St., Manchester, N. H. Kennedy & Co., D. S., Cohasset, Mass.
Lerner Instrument & Electronic Mfg. Corp., 47-49 Bergen St. Brooklyn 2 M. Y. St., Brooklyn 2, N. Y.
METAL TEXTILE CORP., 647 E. First Ave., Roselle,
N. J. ADV. PG. 180.

PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave., Kearney, N. J. ADV. PG. 515. Kearney, N. J. ADV. PG. 515. Racon Electric Co., 52 E. 19th St., New York 3, N. Y. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, N. Y.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Waveline, Inc., North Caldwell, N. J.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Weymouth Instrument Co., 1440 Commercial St., East Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. Workshop Associates, Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.

ANTENNA ROTATORS Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 212.
BREEZE CORPS., INC., 41 S. Sixth St., Newark 7,
N. J. ADV. PG. 259.
Cornell-Dubliler Electric Corp., South Plainfield, N. J.
Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.
Premax Products Div., Chisholm-Ryder Co., Inc., Niagara
Falls 2, N. Y. Premax Flowers Falls 2, N. Y. Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Univ. Radiomarine Corp. of America, 75 Varick St., New York Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509. ANTENNA TOWERS & SUPPORTS AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464.
Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y. N. Y.
Blaw-Knox Div. of Blaw-Knox Co., Farmers Bank Bldg.,
Pittsburgh 22, Pa.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Channel Master Co., Ellenville, N. Y.
Dresser-Stacey Co., Ideco Div., 875 Michigan Ave.,
Columbus 8, Ohio.
Easy-Up Tower Co., 427 Romayne Ave., Racine, Wis.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
LA POINTE-PLASCOMOLD CORP., Windsor Locks, Conn.
ADV. PG. 99. ADV. PG. 99.

Lapp Insulator Corp., Radio Specialties Div., 31 Gilbert St., Le Roy, N. Y. Lehigh Structural Steel Co., 17 Battery Pl., New York 4, N. Y. Lingo & Son, Inc., John E., 28th St. & Buren, Camden, N. J.
PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave.,
Kearny, N. J. ADV. PG. 515.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.

Covers. Rostan Corp., 383 Kent Ave., Brooklyn 11, N. Y. South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J. STAINLESS, INC., Third St., North Wales, Pa. ADV.

PG. 380. Truscon Steel Co., Youngstown, Ohio. Wincharger Corp., E. 7th & Division Sts., Sioux City,

Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.
Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.

# ANTENNA TUNING UNITS

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla. Andrew Corp., 363 E. 75th St., Chicago 19, III. Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. Coil Winders, Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87. 86, 87. Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn. Erco Radio Labs., Inc., East Stewart Ave., Garden City, Gates Radio Co., Quincy, III., Lord States Radio Co., Quincy, III.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chloroca 20, III. cago 39, III.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-

251.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
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

Covers.
Standard Electronics Corp., 285 Emmet St., Newark, Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

ansco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.
ESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
floox Electric Co., 1400 Chestnut St., Kansas City,

#### NTENNAS—Airborne Radar Spinner

NSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464. Ave., Quincy 69, Mass. ADV. PG. 464.

rborne Instruments Lab., Inc., 160 Old Country Rd., Mineola

Mineola, N. Y.
In Instrument Corp., Paramus, N. J.
Ssor (Canada), Ltd., 301-303 Windsor St., Halifax,
N. S., Canada.
Ectro Craft Inc., 68 Jackson St., Stamford, Conn.
Intheastern Engineering, Inc., Manchester, N. H.
Ingren Co., Inc., C. W., 236 Pearl St., Somerville 45,
Mass.

Mass.
SSTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Krshop Associates, Div. of the Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.

# NTENNAS-Aircraft Type

R ASSOCIATES, INC., Teterboro, N. J. ADV. PG. borne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.

RCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 377. Jio Products Corp., 2265 Westwood Blvd., Los An-

aeles 64, Calif.

on Instrument Corp., Paramus, N. J.

iling & Lee Ltd., 366 Madison Ave., New York 17,

il. Y.

Indix Radio Division, Bendix Aviation Corp., Baltimore Md.

RD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 4, Ohio. ADV. PG. 433.

LLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

66, 87.

ttro Craft Inc., 68 Jackson St., Stamford, Conn.
ECTRO PRECISION PRODUCTS INC., 119-01 22nd
ave., College Point, N. Y. ADV. PG. 431.
Her, Inc., Frederic, 1330 Laskey Rd., Toledo 12, Ohio.
MERAL R-F FITTINGS CO., 702 Beacon St., Boston
5, Mass. ADV. PG. 160.

vis Electronics Corp., 6058 W. Fullerton Ave., Chicago
9. III.

GS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
Y. ADV. PG. 144, 145.

Jagna Mfg. Co., Inc., East Rutherford, N. J.

Coni Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
ew York 4, N. Y.

Jional Aeronautical Corp., 180 S. Main St., Ambler,
a.

da.

Mork Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. itheastern Engineering, Inc., Manchester, N. H. AOSTRON CO., 151 Pasadena Ave., South Pasadena, lalif. ADV. PG. 118, 119.

Pan Co., Everett, Mass. Jer Mfg. Co., Philadelphia 40, Pa. LRRY GYROSCOPE CO., Div. of The Sperry Corp., reat Neck, N. Y. ADV. PG. 139, 140.

HNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. G. 448.

Ictro Industries Corp., 35-18 37th St., Long Island

ty 1, N. Y.

TMPSON PRODUCTS CO., Electronics Div., 2196
Harkwood Ave., Cleveland 3, Ohio. ADV. PG. 98.
Tagren Co., Inc., C. W., 236 Pearl St., Somerville

5, Mass. 15, Mass. 16, Mass. 17, Mass. 17, Mass. 17, Mass. 18, Mass. 1

Wid Products Corp., Div. of the Gabriel Co., 1523 E. 5th St., Cleveland 3, Ohio.

Wood Electric Co., 1400 Chestnut St., Kansas City,

Wishop Associates, Div. of The Gabriel Co., 135 rescent Rd., Needham Heights 94, Mass.

W. W. Machine Products, Inc., Electronics Div., 5100-16 rescription. Clair Ave., Cleveland 3, Ohio.

# ATENNAS—All Wave Receiving

An Aceves & King, Inc., 11 W. 42nd St., New York Beng & Lee Ltd., 366 Madison Ave., New York 17, BYBACH RADIO CO., INC., 145 Hudson St., New brk 13, N. Y. ADV. PG. 342.
Coplidated Wire & Associated Companies, 1635 S. inton St., Chicago 16, III.
INJLINE CORP. OF AMERICA, 36-02 35th Ave., Long and City, N. Y. ADV. PG. 477.
M. oni Wireless Telegraph Co., Ltd., 23-25 Beaver St., w York 4 N. Y.

W York 4, N. Y.

W York 4, N. Y.

W York 59, N. Y.

Raph Corp., 1130 Wisconsin Ave., Chicago 14, III.

Raph Electric Co., 8020 S. Park Ave., Chicago 19,

Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chicago 40, III.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 448.
Teirex, Inc., Rutherford & Neptune Highway, Asbury Park, N. J.
Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, III.
U. H. F. Resonator Co., 224 Seventh St., Racine, Wis. Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio.
Warren Mfg. Co., Inc., 250 East St., New Haven, Conn. Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.
Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass. Scott Radio Labs., Inc., 4451 N. Ravenswood Ave.,

# ANTENNAS-Auto

Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y. N. Y. Buggie & Co., H. H., 726 Stanton St., Toledo, Ohio. 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. ADV. PG. 120.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn N. Y. ADV. PG. 402, 403.
National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City, N. Y. Philos Corp. 100, N. Y. Philos Phi

Long Island City, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31,
N. Y.

Premax Products Div., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y.

Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.

Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.

Ohio.
Snyder Mfg. Co., Philadelphia 40, Pa.
Ward Products Corp., Div. of The Gabriel Co., 1523 E.
45th St., Cleveland 3, Ohio.
West Coast Electronics Co., 1601 S. Burlington St., Los
Angeles 6, Calif.

#### ANTENNAS—Broadcast Station Radiators

BUSSMAN MFG. CO., St. Louis 7, Mo. ADV. PG. 370. Gates Radio Co., Quincy, III. GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23. Lehigh Structural Steel Co., 17 Battery Pl., N. Y. 4, N. Y.

Lingo & Son, Inc., John E., 28th St., & Buren, Camden,

Lingo & Son, File., Solin E., Lid., 23-25 Beaver St., 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

Covers.
STAINLESS, INC., Third St., North Wales, Pa. ADV. Co., Inc., C. W., 236 Pearl St., Somerville

45, Mass. Truscon Steel Co., Youngstown, Ohio. Wincharger Corp., E. 7th & Division Sts., Sioux City,

Vincharger Corp., E. / In & Division Sts., Sloux City, Iowa.

Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa. Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.

# ANTENNAS—Directional Antenna Coupling & Phasing Units

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Camburn, Inc., 32-40 57th St., Woodside, N. Y. Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
ELECTRO PRECISION PRODUCTS, INC., 119-01 22nd Ave., College Point, N. Y. ADV. PG. 431. FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193. Gates Radio Co., Quincy, Ill. GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL E. FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.

251.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
Melpar, Inc., 452 Swann Ave., Alexandria, Va.
N. R. K. MFG. & ENGINEERING CO., 4601 W. Addison
St., Chicago 41, III. ADV. PG. 522.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
RADIO CORP. OF AMERICA, RCA Victor Div., General
Offices, Camden, N. J. ADV. PG. 295, Inside Back &

Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, N. Y.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 164.

Technical Materiel Corp., P. O. Box 142, 121 Spencer Place, Mamaroneck, N. Y.

Telrex, Inc., Rutherford & Neptune Highway, Asbury Park, N. J. Park, N. J.
Ward Products Corp., Div. of The Gabriel Co., 1523 E.
45th St., Cleveland 3, Ohlo.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wind Turbine Co., Tower & Antenna Div., E. Market St.,
& Penna. R. R., West Chester, Pa.
Workshop Associates Div. of The Gabriel Co., 135
Crescent Rd., Needham Heights 94, Mass.

#### ANTENNAS-Dummy Loads

Aeronautical Communications Equipment, Inc., 3090
Douglas Rd., Miami 33, Fla.
AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy
Ave., Quincy 69, Mass. ADV. PG. 464.
AIRTRON, INC., 25 E. Elizabeth Ave., Linden, N. J.
ADV. PG. 360.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397. Darby, Pa. ADV. PG. 397.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 433.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, 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. 214.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 266.
ELECTRO PRECISION PRODUCTS, INC., 119-01 22nd Ave., College Point, N. Y. ADV. PG. 431.
Federal Telecommunications Labs., Inc., 500 Washington Ave., Nutley, N. J. Ave., College Point, N. Y. ADV. PG. 431.

Federal Telecommunications Labs., Inc., 500 Washington Ave., Nutley, N. J.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160.

JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 242.

KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.

KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.

Lapp Insulator Corp., Radio Specialties Div., 31 Gilbert St., Le Roy, N. Y.

Lynmar 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.

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.

OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, III. ADV. PG. 79.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347.

States Co., 19 New Park Ave., Hartford 6, Conn. THOMPSON PRODUCTS CO., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio. ADV. PG. 98.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.

U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.

Waveline, Inc., North Caldwell, N. J.

# ANTENNAS-f-m Receiver

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Camburn, Inc., 32-40 57th St., Woodside, N. Y. Communications Co., Inc., 300 Greco Ave., Coral Gables 34 Fig.

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. 477.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
LaPOINTE-PLASCOMOLD CORP., Windsor Locks, Conn.

Laruin [E-PLASCOMOLD CORP., Windsor Locks, Conn. ADV. PG. 99.
Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
National Electronic Mfg. Corp., 42-08 Vernon Blvd.,
Long Island City, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31,
N. Y.
Radelco Mfg. Co.

Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25,

Radelco Mfg. Co., 7580 Garnero Chia, Chicago Noio.

Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, N. Y.
Radion Corp., 1130 Wisconsin Ave., Chicago 14, III.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.

SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347. TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

PG. 448.
Telrex, Inc., Rutherford & Neptune Highway, Asbury Park, N. J.
Tricraft Products Co., 1535 N. Ashland Ave., Chicago

Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, III.
U.H.F. Resonator Co., 224 Seventh St., Racine, Wis.
Ward Products Corp., Div. of The Gabriel Co., 1523 E.
45th St., Cleveland 3, Ohio.
West Coast Electronics Co., 1601 S. Burlington St.,
Los Angeles 6, Calif.
Wind Turbine Co., Tower & Antenna Div., E. Market St.
& Penna. R. R., West Chester, Pa.
Workshop Associates Div. of The Gabriel Co., 135
Crescent Rd., Needham Heights 94, Mass.

#### ANTENNAS--f-m Transmitter

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-

cago 50, III. ADV. PG. 212.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
COLLINS RADIO CO., Cedar Rapids, Iowa.—ADV. PG.

Communications Co., Inc., 300 Greco Ave., Coral Gables

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Electrotechnic Corp., ,15601 Arrow Hwy., Azusa, Callf. FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Lingo & Son Inc., John E., 28th St. & Buren Ave., Camden, N. J.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4. N. Y.

New York 4, N. Y.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.

RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back

Covers.
Ward Products Corp., Div. of The Gabriel Co., 1523 E.
45th St., Cleveland 3, Ohio.
West Coast Electronics Co., 1601 S. Burlington St.,
Los Angeles 6, Calif.
Workshop Associates Div. of The Gabriel Co., 135 Cres-

cent Rd., Needham Heights 94, Mass.

# ANTENNAS—Fixed Station Antenna Systems

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, North Hollywood, Calif. ADV. PG. 129.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34. Fla.

Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Doug-

laston, N. Y.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada

Adda Amotorola, Inc., 4545 Augusta Blvd., Chicago 51, III.

Northeastern Engineering, Inc., Manchester, N. H.

PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave.,

Kearny, N. J. ADV. PG. 515.

RADIO CORP. OF AMERICA, Engineering Products Dept.,

Camden, N. J. ADV. PG. 295, Inside Back & Back

Covers.

Covers.

Covers.

U. H. F. Resonator Co., 224 Seventh St., Racine, Wis.

Ward Products Corp., Div. of The Gabriel Corp., 1523

E. 45th St., Cleveland 3, Ohio.

West Coast Electronics Co., 1601 S. Burlington St.,

West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif. Wilcox Electric Co., 1400 Chestnut St., Kansas City,

Mo. Wind Turbine Co., Tower & Antenna Div., E. Market St., & Penna. R. R., West Chester, Pa. Workshop Associates, Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.

# ANTENNAS—Ground Plane

APPRIORAS—Ground Plane

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

Andrew Corp., 363 E. 75th St., Chicago 19, III.

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.

Eldico of New York, Inc., 44-31 Douglaston Plane, Douglaston

more 4, Md.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. Kennedy & Co., D. S., Cohasset, Mass. Measurement Engineering, Ltd., Arnprior, Ontario, Can-

ada.

METAL TEXTILE CORP., 647 E. First Ave., Roselle,
N. J. ADV. PG. 180.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
Premax Products Div., Chisholm-Ryder Co., Inc., Niagara
Falls 2, N. Y.
Snyder Mfg. Co., Philadelphia 40, Pa.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

PG. 448.
Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif. Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22,

III.

U.H.F. Resonator Corp., 224 Seventh St., Racine, Wis.
Ward Products Corp., Div. of The Gabriel Co., 1523
E. 45th St., Cleveland 3, Ohio.
West Coast Electronics Co., 1601 S. Burlington St., Los

Angeles 6, Calif.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Wind Turbine Co., Tower & Antenna Div., E. Market St.,
& Penna. R. R. West Chester, Pa.

# ANTENNAS-Indoor

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

Belling & Lee Ltd., 366 Madison Ave., New York 17,

Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J. Camburn, Inc., 32-40 57th St., Woodside, N. Y.

Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.
Consolidated Wire & Associated Companies, 1635 S.

Clinton St., Chicago 16, III.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Lansky Die Cutting Co., 192½ Greene St., New York 12, N. Y.

National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City, N. Y.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.

Polytron Corp., 47 Martine Ave., White Plains, N. Y.

N. Y.
Polytron Corp., 47 Martine Ave., White Plains, N. Y.
Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.
Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
Radio Merchandise Sales, Inc., 1165 Southern Blvd., New
York 59, N. Y.

Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, N. Y. Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill. Snyder Mfg. Co., Philadelphia 40, Pa. SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347. Telrex, Inc., Rutherford & Neptune Highway, Asbury Park, N. J. Tricraft Products Co., 1535 N. Ashland Ave., Chicago

Tricraft Products Corp., 1535 N. Calland Corp., 1523 E. 45th St., Cleveland 3, Ohio.
Warren Mfg. Co., Inc., 250 East St., New Haven, Conn.

# ANTENNAS-Loop

Bendix Radio Division, Bendix Aviation Corp., Balti-

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.

Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.

BORG EQUIPMENT DIVISION, The George W. Borg Corp., Delavan, Wis. ADV. PG. 492, 493

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. CENTRONICS CO., 41-05 Lawrence St., Flushing 55, N. Y. ADV. PG. 525.

COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III. ADV. PG. 506

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Franklin Airloop Corp., 43-20 34th St., Long Island City

Franklin Airloop Corp., 43-20 34th St., Long Island City,

N. Y.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Guthman Inc., Edwin 1., 155 Throop St., Chicago, III.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Philmore Mfg. Co., Inc., 113 University Place, New
York 3, N. Y.
Polytron Corp.. 47 Martine Ave.. White Plains, N. Y.

York 3, N. Y.
Polytron Corp., 47 Martine Ave., White Plains, N. Y.
Radiomarine Corp., of America, 75 Varick St., New York

13, N. Y.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19,

South River Metal Products Co., Inc., 377-379 Turnpike,

South River Metal Products Co., Inc., South River, N. J.
SOUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, III. ADV. PG. 59.
Standard Winding Corp., 44-62 Johnes St., Newburgh,

Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.

Super Electric Products Corp., 46 Oliver St., Newark, N. J. ADV. PG. 413.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 399.
The part of the control of N. J. ADV. PG. 399.

Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, III.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.

Ward Products Corp., Div. of The Gabriel Co., 1523 W. 45th St., Cleveland 3, Ohio.

# ANTENNAS---Marine

Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
Communications Co., Inc., 300 Greco Ave., Coral Gables

Communications Co., Mis., Society of St., Electronics 24, Fla.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Jefferson Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y. Measurement Engineering Ltd., Arnprior, Ontario, Can-

ada.
Northeastern Engineering, Inc., Manchester, N. H.
Premax Products Div., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y.
Radiomarine Corp., of America, 75 Varick St., New
York 13, N. Y.
Snyder Mfg. Co., Philadelphia 40, Pa.
South River Metal Products Co., Inc., 377-379 Turnpike,

South River, N. J. Standard Electronics Corp., 285 Emmet St., Newark,

Tricraft Products Co., 1535 N. Ashland Ave., Chicago

Variable Var

#### ANTENNAS-Microwave

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464. Airborne Instruments Lab., Inc., 160 Old Country Rdl,

Mineola, N. Y.

Andrew Corp., 363 E. 75th St., Chicago 19, III.

Autel Electronics Co., 1946 Farmingdale Rd., Westfield,

N. J.

BART LABS. CO., INC., 227, Main St., Belleville 9,
N. J. ADV. PG. 406 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City

1, N. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

N. S., Canada.

ELECTRO PRECISION PRODUCTS, INC., 119-01 22nd
Ave., College Point, N. Y. ADV. PG. 431.

EMERSON & CUMING CO., 126 Massachusetts Ave.,
Boston 15, Mass. ADV. PG. 35.

Federal Telecommunication Labs., Inc., 500 Washington

Boston 15, Mass. ADV. PG. 35.
Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160.
Kennedy & Co., D. S., Cohasset, Mass.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.
LaMagna Mfg. Co., Inc., East Rutherford, N. J.
N.R.K. MFG. & ENGINEERING CO., 4601 W. Addison St., Chicago 41, Ill. ADV. PG. 522.
Northeastern Engineering, Inc., Manchester, N. H.
PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 515.
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., 1165 Southern Blvd., New

York 59, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp. Great Neck, N. Y. ADV. PG. 139, 140.
Terpening Co., L. H., 16 W. 61st St., New York 23,

Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,

Mass. Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif. Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22,

Waveline, Inc., North Caldwell, N. J.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.
Wheeler Laboratories, Inc., Great Neck, N. Y.
Workshop Associates, Div. of The Gabriel Co., 135
Crescent Rd., Needham Heights 94, Mass.

# ANTENNAS—Radar Receiving & Transmitting

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy
Ave., Quincy 69, Mass. ADV. PG. 464.
Airborne Instruments Lab., Inc., 160 Old Country Rd.,
Mineals N. Mineola, N. Y.

vion Instrument Corp., Paramus, N. J.
udd-Stanley Co., Inc., 43-01 22nd St., Long Island
City 1, N. Y.
ssor (Canada) Ltd., 301-303 Windsor St., Halifax,
N. S., Canada.
LECTRO PRECISION PRODUCTS, INC., 119-01 22nd
Ave., College Point, N. Y. ADV. PG. 431.
dgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
FNERAL ELECTROSONICS, INC., 32 W. 22nd St.,
New York 10, N. Y. ADV. PG. 525.
nnedy & Co., D. S., Cohasset, Mass.
NGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
NGS MICROWAVE CO., INC., 719 Main St., New
Rochelle, N. Y. ADV. PG. 142, 143.
Magna Mfg. Co., Inc., East Rutherford, N. J.
rrtheastern Engineering, Inc., Manchester, N. H.
tODUCT DEVELOPMENT CO., INC., 307 Bergen Ave.,
Kearny, N. J. ADV. PG. 515.
diomarine Corp. of America, 75 Varick St., New
York 13, N. Y.
dio Merchandise Sales, Inc., 1165 Southern Blvd.,
New York 59, N. Y.
EERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
rpening Co., L. H., 16 W. 61st St., New York 23,
N. Y.
eeler Laboratories, Inc., Great Neck, N. Y. N. Y.

eeler Laboratories, Inc., Great Neck, N. Y.
icox Electric Co., 1400 Chestnut St., Kansas City, Mo.
rkshop Associates, Div. of The Gabriel Co., 135
Crescent Rd., Needham Heights 94, Mass.

#### MITENNAS—Railroad

MERICAN PHENOLIC CORP., 1830 S. 54th Ave., Schicago 50, III. ADV. PG. 212.
Sectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
SULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
torola, Inc., 4545 Augusta Blvd., Chicago 51, III.
craft Products Co., 1535 N. Ashland Ave., Chicago 22, III.
22, III.
32, III.
32, III.
33, Ohio.
34, Coast Electronics Co., 1601 S. Burlington St.,
34, Los Angeles 6, Calif.
35, Cast Electronics Co., 1601 S. Burlington St.,
36, Los Angeles 6, Calif.
37, Crescent Rd., Needham Heights 94, Mass.

# TENNAS—Rotary Beam

ERICAN PHENOLIC CORP., 1830 S. 54th Ave., hicago 50, III. ADV. PG. 212. on Instrument Corp., Paramus, N. J. Lite Antennae, Inc., 242 E. 137th St., New York \*\*NSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.

\*\*max Products Div., Chisholm-Ryder Co., Inc., Niagara
falls 2, N. Y.

\*\*ex, Inc., Rutherford & Neptune Highway, Asbury
\*\*ark, N. J. ingren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

Ad Turbine Co., Tower & Antenna Div., E. Market

t. & Penna., R.R., West Chester, Pa.

kshop Associates, Div. of The Gabriel Co., 135

rescent Rd., Needham Heights 94, Mass.

# TENNAS—Telescopic

Lite Antennae, Inc., 242 E. 137th St., New York Litte Antennae, Hie., 272
L. N. Y.
L. L. Y.
L.
L. Y.
L. Y lass.
Shax Products Div., Chisholm-Ryder Co., Inc., Niagara alls 2, N. Y.
Relco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Raico Mfg. Co., 7580 Garneig Bivu., Circumbio.
hio.
hio.
fivo Merchandise Sales, Inc., 1165 Southern Blvd.,
ew York 59, N. Y.
Rion Corp., 1130 Wisconsin Ave., Chicago 14, III.
Siler Mfg. Co., Philadelphia 40, Pa.
U.F. Resonator Corp., 224 Seventh St., Racine, Wis.
Vid Products Corp., Div. of The Gabriel Co., 1523
45th St., Cleveland 3, Ohio.
Ween Mfg. Co., Inc., 250 East St., New Haven,
nn.

# AFENNAS—Television

A RICAN PHENOLIC CORP., 1830 S. 54th Ave., 162go 50, III. ADV. PG. 212.

Ing & Lee Ltd., 366 Madison Ave., New York 17, Y. Y.

By Mg. Corp., 200 Central Ave., Newark 4, N. J.

Capurn, Inc., 32-40 57th St., Woodside, N. Y.

Clinel Master Co., Ellenville, N. Y.

Beam Television Antenna Co., 100 Prospect Ave.,

Jrbank, Calif. Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Federal Telecommunication Labs., Inc., 500 Washington
Ave., Nutley, N. J.
Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
Gonset Co., 801 S. Main St., Burbank, Calif.
Grayburne Corp., 103 Lafayette St., New York 13,
N. Y.

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. 477.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
LA POINTE-PLASCOMOLD CORP., Windsor Locks, Conn.

LA POINTE-PLASCOMOLD CURP., Windsor Lucks, Collin.
ADV. PG. 99.
Lingo & Son, Inc., John E., 28th & Buren, Camden,
N. J.
Louis Bros., 3543 E. 16th St., Los Angeles 23, Calif.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.
Modelectric Products Corp., 1500 Bangs Ave., Asbury
Park, N. J.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
National Electronic Mfg. Corp., 42-08 Vernon Blvd.,
Long Island City, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn
31, N. Y.

Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.
Phoenix Electronics Inc., 50 Island St., Lawrence, Mass. Polytron Corp., 47 Martine Ave., White Plains, N. Y. Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio

RADIO 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., 1165 Southern Blvd.,
New York 59, N. Y.

Radion Corp., 1130 Wisconsin Ave., Chicago 14, III.

Scala Radio Co., 2814 19th St., San Francisco 10,

Calif.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Snyder Mfg. Co., Philadelphia 40, Pa.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.
PG. 448.

PG. 448.
Telrex, Inc., Rutherford & Neptune Highway, Asbury
Park, N. J.
Telvision Laboratories, Inc., 5045 W. Lake St., Chicago
44, III.
Tricraft Products Co., 1535 N. Ashland Ave. Chicago Products Co., 1535 N. Ashland Ave., Chicago

Tricraft Products Co., 1535 N. ASUIGING AVE., 22, III.
U. H. F. Resonator Co., 224 Seventh St., Racine, Wis.
Ward Products Corp., Div. of The Gabriel Co., 1523 E.
45th St., Cleveland 3, Ohio.
Warren Mfg. Co., Inc., 250 East St., New Haven, Conn.
Workshop Associates, Div. of The Gabriel Co., 135
Crescent Rd., Needham Heights 94, Mass.

# ANTENNAS-Television Built-in

National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
Philoc Corp., Tioga & C Sts., Philadelphia 34, Pa.
Polytron Corp., 47 Martine Ave., White Plains, N. Y.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
Telrex, Inc., Rutherford & Neptune Highway, Asbury
Park, N. J. Telvision Laboratories, Inc., 5045 W. Lake St., Chicago 44, III. Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, III.

# ANTENNAS—Television Multiple Set

AMTENNAS—Television Multiple Set

Amy, Aceves & King, Inc., 11 W. 42nd St., New York
18, N. Y.
Blonder-Tongue Laboratories, Inc., 38 N. Second Ave.,
Mt. Vernon, N. Y.
Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
Channel Master Co., Ellenville, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.

Covers.
Radio Merchandise Sales, Inc., 1165 Southern Blvd.,
New York 59, N. Y.
Scala Radio Co., 2814 19th St., San Francisco 10,
Calif.

TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

Transvision, Inc., 460 North Ave., New Rochelle, N. Y. Ward Products Corp., Div. of The Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio.
Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.

# ANTENNAS—uhf & vhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
AMERICAN ELECTRONEERING CORP., 5025-29 W.
Jefferson Blvd., Lcs Angeles 16, Calif. ADV. PG. 396.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave.,
Chicago 50, III. ADV. PG. 212.
Andrew Corp., 363 E. 75th St., Chicago 19, III.

Andrew Corp., 363 E. 75th St., Chicago 19, III.
Avion Instrument Corp., Paramus, N. J.,
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 433.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Channel Master Co., Ellenvile, N. Y.
Clear Beam Television Antenna Co., 100 Prospect Ave.,
Burbank Calif

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86,

Communications Co., Inc., 300 Greco Ave., Coral Gables

34, Fla.
Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.

Electro Craft Inc., 68 Jackson St., Stamford, Conn.
ELECTRO PRECISION PRODUCTS, INC., 119-01 22nd
Ave., College Point, N. Y. ADV. PG. 431.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Erco Radio Labs., Inc., East Stewart Ave., Garden City,
N. Y.

N. Y.
GENERAL CEMENT MFG. CO., 91') Taylor Ave.,
Rockford, III. ADV. PG. 120.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Hy-Lite Antennae, Inc., 242 E. 137th St., New York

Hy-Lite Antennae, Inc., 242 E. 19761 36, Nov. 151, N. Y.

1N. Y.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.

La Magna Mfg. Co., Inc., East Rutherford, N. J.

Lingo & Son, Inc., John E., 28th & Buren, Camden, N. J.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada. National Aeronautical Corp., 180 S. Main St., Ambler, Pa.

Pa.

National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.

Northeastern Engineering, Inc., Manchester, N. H.
Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave.,
Kearny, N. J. ADV. PG. 515.

Radio Engineering Labs., Inc., 36-40 37th St., Long
Island City 1, N. Y.

Radio Merchandise Sales, Inc., 1165 Southern Blvd.,
New York 59, N. Y.
Radio Specialty Mfg. Co., 2023 SE Sixth Ave., Portland 14, Ore.
Radion Corp., 1130 Wisconsin Ave., Chicago 14, III.
Scala Radio Co., 2814 19th St., San Francisco 10,
Calif.

Calif.
Snyder Mfg. Co., Philadelphia 40, Pa.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Standard Electronics Corp., 285 Emmet St., Newark,

N. J.
Super Electric Products Corp., 46 Oliver St., Newark, TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

PG. 448.
Telrex, Inc., Rutherford & Neptune Highway, Asbury Park, N. J.
Transco Products, Inc., 12210 Nebraska Ave. Los

Park, N. J.

Transco Products, Inc., 12210 Nebraska Ave., Los
Angeles 25, Calif.

Tricraft Products Co., 1535 N. Ashland Ave., Chicago
22, III.

U. H. F. Resonator Co., 224 Seventh St., Racine, WIs.
Ward Products Corp., Div. of The Gabriel Co., 1523 E.
45th St., Cleveland 3, Ohio.
West Coast Electronics Co., 1601 S. Burlington St.,
Los Angeles 6, Calif.
Wilcox Electric Co., 1400 Chestnut St., Kansas City Mo.
Wind Turbine Co., Tower & Antenna Div., E. Market St.
& Penna. R. R., West Chester, Pa.
Workshop Associates Div. of The Gabriel Co., 135
Crescent Rd., Needham Heights 94, Mass.

# **ATTENUATORS**

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y. Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y. N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E.
Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
Cinema-Television Ltd., Worsley Bridge Rd., London,
S.E. 26, England.
Clarke Instrument Div. National Electrical Machine Shops,
Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG.
162. 163.

162, 163.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

86, 87.
Corning Glass Works, Corning, N. Y.
CROWLEY & CO., INC., Henry L., 1 Central Ave., West
Orange, N. J. ADV. PG. 214.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. DAVEN CU., 191 Central Ave., Including PG. 121.

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, R.

R. I.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood,
Calif. ADV. PG. 172.
Javex, 921 State, Garland, Texas.
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, III.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
ADV. PG. 324, 325.

KAY ELECTRIC CU., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Engineers, Inc., 1432 N. Carlisle St., Phila-Lymnar Engineers, 10c., 1732 delphia 21, Pa. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

MEASUREMENTS CURP., Bootton, 1.1.
158, 159.
Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
Muirhead & Co., Ltd., Beckenham, Kent, England.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago
44, III. ADV. PG. 79.
Painton & Co., Ltd., 366 Madison Ave., New York 17,
N. Y.

N. Y.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingsdale, Pa. ADV. PG. 320.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 351.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.

Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.

Stoddart Aircraft Radio Corp., 6644 Santa Monica
Blvd., Hellywood 38, Calif.

Tech Laboratories, Inc., Bergen & Edsall Blvd., Palisades Park, N. J.

TECHNICOL APPLIANCE CORP., Sherburne, N. Y. ADV.
PG. 448.

448. craft Laboratories, Inc., Thomaston-Waterbury

PG. 448.
Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ABV. PG. 262.

#### ATTENUATORS-Microwave, Adjusted & Calibrated

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.
Cubic Corp., 2841 Canon St., San Diego 6, Calif. De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.

GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

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, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.

KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.

Lerner Instrument & Electronic Mfg. Corp., 47-49

Bergen St., Brooklyn 2, N. Y.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

Microlab, 301 S. Ridgewood Rd., South Orange, N. J. MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.

N. R. K. MFG. & ENGINEERING CO., 4601 W. Addison

Boston, Mass. ADV. PG. 447.

N. R. K. MFG. & ENGINEERING CO., 4601 W. Addison St., Chicago 41, III. ADV. PG. 522.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 232,

233.
Radiation, Inc., Melbourne, Fla.
Technicraft Laboratories, Inc., Thomaston-Waterbury
Rd., Thomaston, Conn.
Telewave Laboratories, Inc., 100 Metropolitan Ave.,
Brooklyn 11, N. Y.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5,
N. J. ADV. PG. 399.
Waveline, Inc., North Caldwell, N. J.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.
Wheeler Laboratories, Inc., Great Neck, N. Y.

# ATTENUATORS—Microwave Coaxial Fixed

AIRTRON, INC., 25 E. Elizabeth Ave., Linden, N. J. ADV. PG. 360.

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.

Clarke Instrument Dlv., National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.

Corning Glass Works, Corning, N. Y.
CROWLEY & CO., INC., HENRY L., 1 Central Ave.,
West Orange, N. J. ADV. PG. 214.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
De Moray-Bonardi, Inc., 3223 Burton Ave., Burbank,

Calif.
ELECTRO PRECISION PRODUCTS, INC., 119-01 22nd
Ave., College Point, N. Y. ADV. PG. 431.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61,

N. Y. ADV. PG. 503. GENERAL R-F FITTINGS CO., 702 Beacon St., Boston

N. Y. ADV. PG. 503.

GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.

KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.

Lerner Instrument & Electronic Mfg. Corp., 47-49 Bergen St., Brooklyn 2, N. Y.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.

N.R.K. MFG. & ENGINEERING CO., 4601 W. Addison St., Chicago 41, III. ADV. PG. 522.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., 1NC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 232, 233.

Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.

Telewave Laboratories, Inc., 100 Metropolitan Ave.,

hurst, N. Telewave L

hurst, N. Y.
Telewave Laboratories, Inc., 100 Metropolitan Ave.,
Brooklyn 11, N. Y.
Waveline, Inc., North Caldwell, N. J.
Weinschel Engineering Co., 919 Jesup Blair Drive, Silver
Spring, Md.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89. Mass.

Weymouth 89, Mass.

#### ATTENUATORS—Microwave Step

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.
Cubic Corp., 2841 Canon St., San Diego 6, Calif. DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.

Ave., College Point, N. Y. ADV. PG. 431.

Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8,

Calif.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
MICROWAVE ASSOCIATES, INC., 22 Cummington St.,
Boston, Mass. ADV. PG. 447.

MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.

N.R.K. MFG. & ENGINEERING CO., 4601 W. Addison St., Chicago 41, III. ADV. PG. 522.

Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. 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. 139, 140.

Terpening Co., L. H., 16 W. 61st St., New York 23, N. Y.

Waveline Inc. North Caldwell N. I.

N. Y.
Waveline, Inc., North Caldwell, N. J.
Weinschel Engineering Co., 919 Jesup Blair Drive, Silver
Spring, Md.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.

# AUDIOMETERS

# See Instruments-Electrical Measuring

# BAFFLES--Speaker

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y. AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.

Board Products Co., 4206 W. Lake St., Chicago 24, Ill. Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

Butler Mfg. Co., Inc., B. B., 3150 Randolph St., Bellwood, Ill.

Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.

Calif.

Davis & Co., J. W., 9212 Denton Drive, Dallas, Texas. ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485. Flock Process Co., Inc., 26 Fahey St., Springdale, Conn. Grayburne Corp., 103 Lafayette St., New York 13, N. Y. Hartley Co., Ltd., H. A., 152 Hammersmith Rd., London W. 6, England.

Hawley Products Co., St. Charles, III.
Holl Audio Industries, 5014 N. Encinta Ave., Temple City, Calif.

Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, III.
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, III.
Lansky Die Cutting Co., 1921/2 Greene St., New York 12, N. Y.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Moore Co., Howard J., 266 William St., New York, N. Y.

N. Y.
Pentron Corp., 221 E. Cullerton St., Chicago 16, III.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
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.
Rayland-Roya Corp. 2015 11.

Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Calif.
Triad Portable Case Corp., 310-314 W. Lincoln Ave.,
Mount Vernon, N. Y.

Mount Vernon, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico
Ave., White Plains, N. Y. ADV. PG. 338.
Utah Radio Products Co., Inc., 1123 E. Franklin St.,
Huntington, Ind.

Vibraloc Corporation, 425 Bush St., San Francisco 8, Calif. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### BARRETTERS

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

158, 159.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

BASES—Relay

# See also Mountings

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
GENERAL CERAMICS & STEATITE CORP., Keasbey,

GENERAL CERAMICS & SIEATHE CURP., Reason, N. J. ADV. PG. 195. 197.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 77.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton N. J.

Trenton, N. J.
Ther Electric & Machine Works, 15 S. Jefferson St., Chicago, III.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 483.

# BATTERIES-Dry

Acme Battery Co., 59 Pearl St., Brooklyn 1, N. Y. Bright Star Battery Co., 200 Crooks Ave., Clifton, N. J. BURGESS BATTERY CO., Battery Div., Freeport, III.

ADV. PG. 428.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.

Manufacturers Battery Co., Div. of Ray-0-Vac Co., Madiana

Manufacturers Battery Co., Div. of Ray-O-tab Say, Marathon Battery Co., Wasau, Wis.

Marathon Battery Co., Wasau, Wis.

NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 264.

Olin Industries, Inc., Electrical Div., New Haven 4, Conp.

Conn.

Conn.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
ADV. PG. 295, Inside Back & Back Covers.
Ray-O-Vac Co., Madison, Wisconsin.
SPECIALTY BATTERY CO., Madison 4, Wisconsin. ADV.

PG. 422. Willard Storage Battery Co., 200 Carnegie Hall, Cleve-

land 15, Ohio.

Winchester Repeating Arms Co., Div. of Olin Industries,
Inc., New Haven, Conn.

# BATTERIES-Mercury

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. Manufacturers Battery Co., Div. of Ray-0-Vac Co., Madison, Wis. Ray-0-Vac Co., Madison, Wisconsin.

# BATTERIES—Standard Cell

Acme Battery Co., 59 Pearl St., Brooklyn 1, N. Y. BURGESS BATTERY CO., Battery Div., Freeport, ADV. PG. 428. Glin Industries, Inc., Electrical Div., New Haven 4, Conn.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt.
Vernon, N. Y.

# BATTERIES—Storage

Bowers Battery & Spark Plug Co., Reading, Pa. Electric Storage Battery Co., 42 S. 15th St., Philadelphia 2, Pa.
Gould-National Batteries, Inc., 35 Neoga St., Depew,

KELLOGG SWITCHBOARD & SUPPLY CO., 665 Cicero Ave., Chicago 38, III. ADV. PG. 274. Nickel Cadmium Battery Corp., Easthampton, Mass. 6650 S. tamite Co., The, 227 W. 64th St., New York 23, N. Y. Ilard Storage Battery Co., 200 Carnegie Hall, Cleve-land 15, Ohio.

# ATTERIES—Storage Nonspill

wers Battery & Spark Plug Co., Reading, Pa. ectric Storage Battery Co., 42 S. 15th St., Philadel-phia 2, Pa. ectronic Batteries Inc., Bush Terminal Bldg., No. 4, 28-34 Thirty Fifth St., Brooklyn 32, N. Y. Guld-National Batteries, Inc., 35 Neoga St., Depew, N. Y. Ckel Cadmium Battery Corp., Easthampton, Mass. Lamite Co., The, 227 W. 64th St., New York 23, N. Y. Illard Storage Battery Co., 200 Carnegle Hall, Cleveland 15, Ohio.
RDNEY ELECTRIC CORP., 105 Chambers St., New York 7, N. Y. ADV. PG. 253.

#### ATTERY CHARGERS

1. Electron Tube
2. Engine Driven
3. Metallic Oxide
4. Motor Generator
5. Portable

AERICAN TELEVISION & RADIO CO., 300 E. Fourth Cst., St. Paul 1, Minn. 3. ADV. PG. 334. agido Corp., 2037 W. Division St., Chicago 22, III. 3. idor Electric Co., 4353 Duncan Ave., St. Louis, Mo. 1-5. GUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. 2-3-4-5. ADV. PG. 153. Jue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 2-3-4. vers Battery & Spark Plug Co., Reading, Pa. 1-3-5. I Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.

WECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. 3. ADV. PG. 292.
WITINGTHAL ELECTRIC CO., Geneva, III. 1. ADV. G. 444. trol Corp., 718 Central Ave., Minneapolis 14, Minn.

ttric Products Co., 1725 Clarkstone Rd., Cleveland 2, Ohio. 4.

ttric Storage Battery Co., 42 S. 15th St., Philadel-hia 2, Pa. 5.

CTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., hicago 40, III. 3. ADV. PG. 413.

40 PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 7, N. Y. 1.3-5. ADV. PG. 274.

\$\$\text{steel Metallurgical Corp., 2200 Sheridan Road, North hicago, III. 3.}

d., Clifton, N. J. ADV. PG. 189-193.
GERAL ELECTRIC CO., Apparatus Sales Div., 1 River J., Schenectady 5, N. Y. 1-3-4-5. ADV. PG. 1-23. Crator Corp., 1820 N. Nash St Adv. Home-4-5.

Helite Corp., Port Chester, N. Y. 2-4.

MARD INDUSTRIES, INC., Divisions: Cyclohm Motor Drp., Electric Motor Corp., Racine, Wis. 2-4. ADV. Engineering Co., 1415 First Ave., Mankato, Minn.

K.CO LABS., INC., 131-38 Sanford Ave., Flushing 55, Y. 1-3-5. ADV. PG. 236, 237. Electric Equipment Co., 9123 Inman Ave., Cleveland

Electric Equipment Co., 9123 Inman Ave., Cieveland Ohio. 1-3-5.
Electric & Mfg. Co., 2806 Clearwater St., Los ageles 39, Calif. 3.
Molpin-Christie Corp., 3410 W. 67th St., Los Anles 43, Calif. 1-3-5.
Mory & Co., Inc., P. R., 3029 E. Washington St., dianapolis 6, Ind. 3-5.
MJEL RECTIFIER CORP., 557 Roggers Ave., Brooklyn, N. Y. 3-5. ADV. PG. 523.
MJIC Specialties Co., 1005-1007 W. Washington St., bomington, Ill. 1.
Mard Overseas Ltd., Century House, Shaftesbury Ave., andon, W. C. 2, England. 1-3.
MGS Electric Mfg. Co., 501 S. Market St., Galion, Ohio.

On & Sons Inc., D. W., University Ave. at 25th St., E., Minneapolis 14, Minn. 2.
OP)-GREEN CO., 71-5 Warren St., New York 7, Y. 5. ADV. PG. 520.
Pol; Equipment Co., 55 Antoinette St., Detroit 2, ich. 1-3.

ch. 1-3.

RA HEON MFG. CO., Equipment Sales Div., Waltham Mass. 1-3. ADV. PG. 336, 337.

Refier Engineering Co., Inc., 1803 E. Seventh St., Angeles 21, Calif. 1-3.

Scher Mfg. Corp., 4521 Alpine Ave., Cincinnatl 36, 0. 1-3-5.

ST DARD ELECTRIC TIME CO., 89 Logan St., Spring-d Mass. 3. ADV PG. 494

d, Mass. 3. ADV. PG. 494.
The Electric & Machine Works, 15 S. Jefferson St., Cago, III. 1-3-5.
TR TELEVISION CORP., 1001 First Ave., Asbury k, N. J. 3-5. ADV. PG. 262.
Unival Motor Co., 456 Universal Drive, Oshkosh, WIs.

Vidn Electronic Corp., 312 E. Washington St., Indian-ills 4, Ind. 1-3. We Scientific Co., W. M., 1515 Sedgwick St., Chicago III. 3.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. 3-4-5. ADV. PG. 109-115. Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio. 5.

#### BEARINGS

1. Jewel
2. Miniature Ball
3. Miniature Needle

BIRD CO., RICHARD H., 1 Spruce St., Waltham, Mass. 1. ADV. PG. 244.
Duotone Co., Inc., Keyport, N. J. 1.
Gafti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J. 1. N. J. 1.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1. ADV. PG. 1-23.
LANDIS & GYR, INC., 45 W. 45th St., New York 36, N. Y. 2. ADV. PG. 315.
MINIATURE PRECISION BEARINGS, INC., Keene, N. H. 2. ADV. PG. 221.
New Hampshire Ball Bearings, Inc., Peterborough, New Hampshire. 2. Hampshire. 2. Swiss Jewel Co., Lafayette Bldg., Philadelphia 6, Pa.

1. S. GASKET CO., Fluorocarbon Products Div., P. 0. Box 93, Camden, N. J. 2. ADV. PG. 472. Vallorbs Jewel Co., Lancaster, Pa. 1. WILMAD GLASS CO., INC., Landisville, N. J. 1. ADV.

# BELLOWS

BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J. ADV. PG. 259.
Flexonics Corp., 1315 S. Third Ave., Maywood, III. Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
TITEFLEX INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 399.
U. S. GASKET CO., Fluorocarbon Products Div., P. 0. Box 93, Camden, N. J. ADV. PG. 472.

#### -Dial Drive

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, GENERAL UEWIENI INFO. 007, 111. ADV. PG. 120.

JF D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

Phico Corp., Tioga & C Sts., Philadelphia 34, Pa. Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Ton-Tex Corp., 247 Pearl St., N. W., Grand Rapids 2, Mich.

WHITE DENTAL MFG. CO., S. S., Industrial Div., 10
E. 40th St., New York, N. Y. ADV. PG. 391.

# BENCH TEST SET-UPS

Point, N. Y.
Booth Co., Arthur E., 4124 Beverly Blvd., Los Angeles, Calif. Mornay-Bonardl, Inc., 3223 Burton Ave., Burbank, Northeastern Engineering, Inc., Manchester, N. H.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

Belock Instrument Corp., 13-11 111th St., College

# **BLOCKS—Fuse Blocks & Holders**

Aerolite Electronics Corp., 507 26th St., Union City, Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y.
BUSSMANN MFG. CO., St. Louis 7, Mo. ADV. PG. 370.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
EBY, INC., HUGH H., 4700 Stenton Ave., Philladelphia 44, Pa. ADV. PG. 156.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.
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. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J.
LITTELFUSE, INC., Des Plaines, III. ADV. PG. 465.
MONOWATT DEPT., GENERAL ELECTRIC CO., 66 Bissell
St., Providence, R. I. ADV. PG. 22.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. NEU-SIL CURP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258. Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Callf. Wade Electric Products Co., 400 Jacob St., Sturgls, Mich.

#### BLOWERS—Small

Air Control Installations, Ltd., Ruislip, Middlesex, Eng-AIR-MARINE MOTORS, INC., 2183 Jackson Ave., Sea-ford, N. Y. ADV. PG. 504. Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y.
Fasco Industries, Inc., Rochester 2, N. Y.
Globe Industries, Inc., 125 Sunrise Place, Dayton 7, Globe Industries, Inc., 123 Surinse Flace, Cayson ,, Ohio.

HEINZE ELECTRIC CO., 685 Lawrence St., Lowell, Mass. ADV. PG. 374.

Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, III.

Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y. Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa. McLean Engineering Laboratorles, Princeton, N. J. Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio. Cleveland 7, Ohio.

MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Ontario, Wis. ADV. PG. 439.

Mission Electric Mfg. Co., Inc., 132-134 W. Colorado, Mission Electric Mfg. Co., Inc., 132-134 W. Colorado, Pasadena, Calif.
Oster Mfg. Co., John, Racine, Wis.
Redmond Co., Inc., Owosso, Mich.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
ROTRON MFG. Co., INC., 7-9 Schoonmaker Lane, Woodstock, N. Y. ADV. PG. 76.
Stanat Tool & Machine Co., 47-28 37th St., Long Island City 1, N. Y.
Standard Electric Mfg. Co., West Berlin N. J.
Universal Electric Co., 300 E. Main St., Owosso, Mich.
Welch Scientific Co., W. M., 1515 Sedgwick St.,
Chicago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

#### **BOARDS—Capacitor or Resistor**

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, 111. ADV. PG. 234, 235.

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.

DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.

Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.

Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y. City, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197. Keystone Electronics Corp., 423 Broome 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 44, Photocircuits Corp., Glen Cove, N. Y.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41 Elm
St., Stoneham 80, Mass. ADV. PG. 287.
U. S. ENGINEERING CO., 521 Commercial St., Glendale 3, Calif. ADV. PG. 432.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

# BOARDS-Strip Type

Aerolite Electronics Corp., 507 26th St., Union City, Aerolite Electronics Corp., 307 Dec., 152 MacQueston N. J.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
CINCH MFG. CORP., 1026 S. Homan St., Chicago 24, Ill. ADV. PG. 234, 235.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Keystone Electronics Corp., 423 Broome St., New York LYNN ELECTRONIC RESEARCH CO., 228 W. Palm Ave., Burbank, Calif. ADV. PG. 499.

Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif. Photocircuits Corp., Glen Cove, N. Y.

PRECISION METAL PRODUCTS CO. OF MALDEN, 41 Elm St., Stoneham 80, Mass. ADV. PG. 287.

U. S. ENGINEERING CO., 521 Commercial St., Glendale 3, Calif. ADV. PG. 432.

# BOBBINS-Coil Winding

ACCURATE PAPER TUBE CO., 801 N. Peoria St., Chicago 22, III. ADV. PG. 524.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

AMERICAN LAVA CORP., Chatanooga 5, Tenn. ADV. PG. 95.

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, III. ADV. PG. 326.

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222 233 ADV. PG. 222, 223.

EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 7,
N. Y. ADV. PG. 274.

GENERAL CERAMICS & STEATITE CORP., Keasbery,
N. J. ADV. PG. 195, 197.

Gries Reproducer Corp., 100 Willow Ave., New York 54,
N. Y.

Industrial Devices, Inc., 22 State Rd., Edgewater, N. J. Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y. ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG.

KIRCHBERGER & CO., INC., M., 1425 Thirty-Seventh St., Brooklyn 18, N. Y. ADV. PG. 498. Kuhn & Jacob Molding & Tool Co., 1200 Southland St.,

Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, III. Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, III.

Chicago 39, III.

PRECISION PAPER TUBE CO., 2033 W. Charleston St.,
Chicago 47, III. ADV. PG. 470. Chicago 47, III. ADV. PG. 470.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

PG. 228, 229.

perior Steatite & Ceramic Corp., 32-49 Gale Ave.,
Long Island City 1, N. Y.

her Electric & Machine Works, 15 S. Jefferson St.,

Chicago III. Superior

Chicago, III.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.

Weymouth Instrument Co., 1440 Commercial St., East

# Weymouth 89, Mass. BOLOMETERS

## See Tubes, Bolometer

# **BOLTS**—Expansion or Toggle E-Expansion . . . . T-Toggle

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago Expansion Bolt Co., Boone Ave., Marion, Ohio.

E-T.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. E-T. ADV. PG. 342.

Blaco Mfg. Co., 6543 Euclid Ave., Cleveland 3, Ohio. T.

Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago
22 III F.

Chicago Expansion Bolt Co., 22, III. E. 22, III. E. 3. F. D. MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. E-T. ADV. PG. 402, 403. National Lead Co., 111 Broadway, New York 6, N. Y. E. Star Expansion Bolt Co., 147-149 Cedar St., New York 6, N. Y. E-T. 261, N. Y. E-T. 363-405 W. Erie St., Chicago 10, III.

United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Iil. E.

#### BOOKS

#### See Technical Books—Publishers

# BOOMS-Microphone

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y. Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36,

Camera Equipment Co., 1600 Broadway, New York, N. Y. Olesen Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif.

PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.

# BOOSTERS—Television

Alliance Manufacturing Co., Lake Park Blvd., Alliance,

Approved Electronic Instrument Corp., 146 Liberty St., New York 6, N. Y.
Astatic Corp., The, Conneaut, Ohio.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14,

Decimeter, Inc., 1430 Market St., Denver 2, Colo. ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485. I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind. Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

N. J.
J. F. D. MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
LA POINTE-PLASCOMOLD CORP., Windsor Locks, Conn.

ADV. PG. 99.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

Phoenix Electronics Inc., 50 Island St., Lawrence, Mass.

Radio Merchandise Sales, Inc., 1165 Southern Blvd.,

New York 59, N. Y.

New York 59, N. Y.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 323.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Sonic Industries Inc., 221 W. 17th St., New York 11,

N. Y.

SPENCER-KENNEDY LABS, INC., 186 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 351.

STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, III. ADV. PG. 59.

Tech-Master Products Co., 443-445 Broadway, New York

13, N. Y.

Television Equipment Corp., 238 William St., New York
38, N. Y.

Transvision Inc., 460 North Ave., New Rochelle, N. Y.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids,
Iowa. ADV. PG. 425.
Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind.

# **BOXES**—Metal, Plastic or Waterproof

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 495.

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464. Ames. Co., W. R., 150 Hooper St., San Francisco 7,

Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.
Auburn Button Works, Inc., Auburn, N. Y.
BALTIC METAL PRODUCTS CO., 120 Sutton St., Brooklyn, N. Y. ADV. PG. 201.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. CHURCHILL CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 396.
Colgate Mfg. Corp., Lindenhurst, N. Y.
Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.

Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.

N. Y.

Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

CRAFT MFG. CO., 3949 W. Schubert St., Chicago, Ill. ADV. PG. 388.

Cutler Metal Products Co., 1025 Line St., Camden, N. J.

DOLIN METAL PRODUCTS, INC., 315 Lexington Ave., Brooklyn 16, N. Y. ADV. PG. 554.

Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. INSULINE CORP. 0F AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 165.

Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.

Kollman Show Case Corp., Fort Wayne 1, Ind.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

LaMagna Mfg. Co., Inc., East Rutherford, N. J.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

Metalcraft. Inc., 86-08 130th St., Richmond Hill 18

Canada. Metalcraft, Inc., 86-08 130th St., Richmond Hill 18,

Metalcratt, Inc., 66 86 87 N. Y.
N. Y.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
Muckle Mfg. Co., Owatonna 55, Minn.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
OLYMPIC METAL PRODUCTS CO., INC., Phillipsburg, N. J. ADV. PG. 376.

N. J. ADV. PG. 376.
Par-Metal Products Corp., 32-62 49th St., Long Island

Par-Metal Products Corp., 32-b2 47th St., Lawrence, Mass. Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass. PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 506.
REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Riester & Thesmacher Co., Cleveland 13, Ohio. Shoe Form Co., Inc., Auburn, N. Y. South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J. Stevens-Walden, Inc., 475 Shrewsbury St., Worcester 4, Mass.

Stevens-Walden, Inc., 47,5 Sincisco.
Mass.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472.
Vector Electronic Co., 3352 San Fernando Rd., Los
Angeles 65, Calif.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16,
N. Y. ADV. PG. 483.

# BRACKETS—f-m & Television Antenna

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 495.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
BALTIC METAL PRODUCTS CO., 120 Sutton St., Brooklyn, N. Y. ADV. PG. 201.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. Donnelly Electric & Mfg. Co., 3050 Washington St., Boston. Mass.

Boston, Mass.
Edison Swan Electric Co., Ltd. (Clix Div.), 366 Madison Ave., New York 17, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., 1000 ford, III. ADV. PG. 120.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
J F D MFG. Co., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City, N. Y.

Long Island City, N. Y.

Long Island City, N. Y.

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31,

N. Y.

Phoenix Electronics Inc., 50 Island St., Lawrence, Mass.

Premax Products Div., Chisholm-Ryder Co., Inc., Niagara

Falls 2, N. Y.

Falls 2, N. Y.

hott Co., Walter L., 3225 Exposition Place, Los

Angeles 18, Calif.

Angeles 18, Calit.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

Inc., Rutherford & Neptune Highway, Asbury N. J. Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna R. R., West Chester, Pa.

# BREAKERS-Circuit

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,

Fasco Industries, Inc., Rochester 2, N. Y.
Federal Electric Products Co., 50 Paris St., Newark 5,
N. J.

N. J.
Heinemann Electric Co., 97 Plum St., Trenton 2, N. J.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave.,
Newark 5, N. J.
Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16,
N. Y.

N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Rohden Manufacturing Company, 4739 Montrose Ave.,
Chicago 41, III.
RUSSELL & STOLL CO., INC., 125-6 Barclay St., New
York 7, N. Y. ADV. PG. 387.
Spencer Thermostat Div., Metals & Control Corp., 34
Forest St., Attleboro, Mass.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

#### BRIDGES—Capacitance

AEROVOX CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 240-243.
Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Oregon.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26. England.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Clough Brengle Co., 6014 N. Broadway, Chicago, III.
Clough Brengle Co., 6014 N. Broadway, Chicago, III.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 149.
Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphla 44, Pa.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355. MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

MEASUREMENTS CORP., Boonton, N. J. ADV. Pt. 158, 159.

Muirhead & Co., Ltd., Beckenham, Kent, England.

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. SYLVANIA ELECTRIC PRODUCTS INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

# BRIDGES-ELECTRICAL

BRIDGES-IMPEDANCE

# BRIDGES-INDUCTANCE

See Instruments—Electrical Measuring

# BRIDGES-Meachm

Associated Research, Inc., 3788 W. Belmont, Chicago

Barnes Development Co., Lansdowne, Pa. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles Cole Instrum 15, Calif.

15, Calif.
Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
Feiler Engineering & Mifg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Industrial Instruments, Inc., 17 Pollack Ave., Jersey City 5 N. I.

City 5, N. J.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320. ra. ADV. PG.
Special Instru

Laboratory, Inc., 1003 Highland Instruments Ave., Knoxville, Tenn.
STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 502.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades

Park, N. J. Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

# BRIDGES—Temperature

Bristol Co., The., Waterbury 20, Conn. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Calif.
Foxboro Co., The, Foxboro, Mass.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29,

Pa.
VICTORY ENGINEERING CORP., Springfield Rd., Unlan,
N. J. ADV. PG. 204.

# BRIDGES—Thermistor

General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

# LECTRONIC and ALLIED PRODUCTS\_

ycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

ARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

PERRY GYROSCOPE DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 139, 140.

WLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

ICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 204.

#### RIDGES-VHF

#### See Instruments—Electrical Measuring

#### RIDGES—Wheatstone

arnes Development Co., Lansdowne, Pa. ectro-Mec Laboratory, 19 Murray St., New York 7, N. Y.
ENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
dustrial Instruments, Inc., 17 Pollack Ave., Jersey City, N. J.
istrument Laboratories, 315 W. Walton Place, Chicago, III.
eds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
ALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

ecial Instrument Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
ESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

#### ROADCAST INPUT CONTROL EQUIPMENT

NEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 386. BLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 06, 87. NVEN CO., 191 Central Ave., Newark 4, N. J. ADV. MCLIN, 191 Central Ave., Newark 4, N. J. ADV. PG. 121.

Mont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J. tes Radio Co., Quincy, III.

INERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

arconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Inton & Co., Inc., Ltd., 366 Madison Ave., New
York 17, N. Y.
DIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J., ADV. PG. 295, Inside Back & Back ALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320. landard Electronics Corp., 285 Emmet St., Newark, N. J. andard Telephones & Cables Ltd., Connaught House, Aldych, London, W. C. 2, England.

# RUSHES—Carbon & Graphite

delphia 25, Pa. NERAL CEMENT MFG. CO., 919 Taylor Ave., Rock-MERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
APHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.
Iwig Co., 2544 N. 30th St., Milwaukee 10, Wis. systone Carbon Co., Inc., Saint Marys, Pa.
TIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 264.
ager Carbon Co., 289 Church St., New York 13, ager Carbon Co., 289 Church St., New York 13, N. Y. eer Carbon Co., Lincoln Ave., St. Marys, Pa. ACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155. perior Carbon Products Co., 9115 George Ave., Cleve-

ctro-Nite Carbon Co., 1133 E. Columbia Ave., Phila-

and 5, Ohio.
S. Graphite Co. Div. of The Wickes Corp., 1621 Hol-

land Ave., Saginaw, Mich.
ESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

ctro-Nite Carbon Co., 1133 E. Columbia Ave., Phila-

# RUSHES—Metal-Graphite

delphia 25, Pa. APHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.
Iwig Co., 2544 N. 30th St., Milwaukee, Wis.
ystone Carbon Co., Inc., Saint Marys, Pa.
T10NAL CARBON CO., Division of Union Carbide &
Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
ADV. PG. 264. ager Carbon Co., 289 Church St., New York 13, N. Y. eer Carbon Co., Lincoln Ave., St. Marys, Pa. ACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155. perior Carbon Products Co., 9115 George Ave., Cleve-Jand 5, Ohio.
S. Graphite Co., Div. of The Wickes Corp., 1621
Holland Ave., Saginaw, Mich.
Ison Co., H. A., 105 Chestnut St., Newark 5, N. J.

deral Electric Products Co., 50 Paris St., Newark 5, N. J. iser Aluminum & Chemical Sales, Inc., 1924 Broad-way, Oakland 12, Calif.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

## **BUSHINGS—Hermetically Sealed**

Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y. N. Y.
Corning Glass Works, Corning, N. Y.
Edison Swan Electric Co., Ltd., (Clix Div.) 366 Madison Ave., New York 17, N. Y.
Edison Swan Electric Co., Ltd., (Clix Div.) 366 Madison Ave., New York 17, N. Y.
Edo Corp., College Point, N. Y.
ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG. 57.
Electronic Apparatus Co., Elkhart, Ind.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.
Fusite Corp., 6000 Fernview Ave., Cincinnati 13, Ohio.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
HELDOR MFG. CO., Div. of Heldor Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 238.
HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind. HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind. ADV. PG. 401. HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 77. Kearfott Co., Inc., 1150 McBride Ave., Little Falls, N. J.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4,
N. J. ADV. PG. 258.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG.

#### BUSHINGS—Nonmetallic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy, Mt. Vernon, N. Y.
ATLANTIC INDIA RUBBER WORKS, INC., Dept EL,
571 W. Polk St., Chicago 7, Ill. ADV. PG. 274.
Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Belling & Lee Ltd., 366 Madison Ave., New York 17, CENTRALAB, Div. of Globe-Union, Inc., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74. CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512. 51, N. Y. ADV. PG. 512. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.
Corning Glass Works, Corning, N. Y.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.
ELECTRONIC MECHANICS, INC., 70 Clifton, N. J. ADV. GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rock-GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 120.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, III.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.
HEYMAN MFG. CO., 300 Michigan Ave., Kenilworth, N. J. ADV. PG. 441.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.
Laconia Corp., 37 S. 6th St., Newark 7, N. J.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.
Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, III.

Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 130, 131.
NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 264.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258.
Polymer Corp., The, Reading, Pa.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 66.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Spaulding Fibre Co., Inc., 310 Wileten St., Ionavanda, N. Y.
Superior Steatite & Ceramic Corp., 32-49 Gale Ave.,
Long Island City 1, N. Y.
Synthane Corp., Oaks, Pa.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472.
U. S. Graphite Co., Div. of The Wickes Corp., 1621
Holland Ave., Saginaw, Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG.

#### CABINETS

#### See Also Housings

CABINETS-Metal ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 495.

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Ames Co., W. R., 150 Hooper St., San Francisco 7, Calif.

ART-LLOYD METAL PRODUCTS CORP., 2973 Crop. Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.
BALTIC METAL PRODUCTS CO., 120 Sutton St., Brooklyn, N. Y. ADV. PG. 201.
Bonney Forge & Tool Works, Allentown, Pa.
BOYLE METALCRAFT CORP., 150 Sullivan St., Brooklyn 31, N. Y. ADV. PG. 521.
Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J. Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio. Central Stamping & Mfg. Co., Polo, III. CHURCHILL CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 396. Cole Steel Equipment Co., 285 Madison Ave., New York 17, N. Y.
Colgate Mfg. Corp., Lindenhurst, N. Y.
Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.
Corry-Jamestown Mfg. Co., Corry, Pa.
Croname, Inc., 3701 Ravenswood Ave., Chicago, III.
Cutler Metal Products Co., 1025 Line St., Camden, Cutler Metal Products Co., 1025 Line St., Camden, N.J.

Donnelly Electric & Mfg. Co., 3050 Washington St., Boston, Mass.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

Electro Craft Inc., 68 Jackson St., Stamford, Conn. Falstrom Co., 44 Falstrom Court, Passaic, N. J.

Gates Radio Co., Quincy, III.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 165.

Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark S, N. J.

LaMagna Mfg. Co., Inc., East Rutherford, N. J.

LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.

Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, III. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada. Metalcraft, Inc., 86-08 130th St., Richmond Hill 18, Metalcraft, Inc., 86-08 130th St., Richmond Hill 18, N. Y.
Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, III.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
Muckle Mfg. Co., Owatonna 55, Minn.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.

PREMIER METAL PRODUCTS CO., 3160 Webster Ave.,
Bronx, N. Y. ADV. PG. 506.
Radio Engineering Labs, Inc., 36-40 37th St., Long
Island City 1, N. Y.
REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1,
Calif.
Riester & Thesmacher Co., Cleveland 13, Ohio.
South River Metal Products Co., Inc., 377-379 Turnpike,
South River, N. J.
Standard Pressed Steel Co., Box 775, Jenkintown 10,
Pa. Stevens-Walden, Inc., 475 Shrewbury St., Worcester 4, Mass. Sun Electric Corp., 6323 Avondale Ave., Chicago 31,

# CABINETS—Plastic

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, III.

ERIE RESITOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.
Hawley Products Co., St. Charles, III.
Keller Products Co., 41 Union St., Manchester, N. H. Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton, N. J.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 483. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Plastimold Corp., Attleboro, Mass.
Remler Co., Ltd., 2101 Bryant St., San Francisco
10, Calif. 10, Calif. RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66. STANDARD CABINET CO., 57 Washington Ave., Caristadt, N. J. ADV. PG. 519.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. BOX 93, Camden, N. J. ADV. PG. 472.
Vibraloc Corporation 425 Bush St., San Francisco 8,

CABINETS-Wood Admiral Corp., 3800 Cortland St., Chicago, III.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif.
Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, Bogen Co., Inc., David, 29 Ninth Ave., New York 14, R. T. Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y. Ewald Cabinet Co., 2559 W. 21st St., Chicago 8, III. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10. Colo Wood Products Corp., 1656 N. Besly Court, Chicago 22, III.
Ingraham Co., E., Bristol, Conn.
Jackson Industries, Inc., 500 E. 40th St., Chicago, Kollman Show Case Corp., Fort Wayne 1, Ind.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,
Inglewood, Calif.
Mattison Television & Radio Corp., 893 Broadway,
New York 3, N. Y.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
Pacific Mercury Television Mfg. Corp., 14500 Aetna St.,
Van Nuys, Calif.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
Pilot Radio Corp., 37-06 36th St., Long Island City 1,
N. Y.
Scientific Wood Cabinet Co. 28 Haber Co.

Scientific Wood Cabinet Co., 88 Holmes St., Belleville,

N. J.
Short Wave Plastic Forming Co., 2921 Alameda St.,
Burbank, Calif.
Steger Furniture Mfg. Co., Steger, III.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

Transvision Inc., 460 North Ave., New Rochelle, N. Y.

Triad Portable Case Corp., 310-314 W. Lincoln Ave., Mount Vernon, N. Y.

United Wood Specialty Mfg. Co., 951 Broadway, Fall

River, Mass.

Vibraloc Corporation, 425 Bush St., San Francisco 8, Calif.

Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago,

Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

# CABLE ASSEMBLIES

Aerolite Electronics Co., 507 26th St., Union City, N. J. ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J. N. J.
BRAND & CO., INC., WILLIAM, 104 Valley St., WIIlimantic, Conn. ADV. PG. 166, 167.
Buggie & Co., H. H., 726 Stanton St., Toledo, Ohio.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
Carol Cable Co., 190 Middle St., Pawtucket, R. I. CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III. ADV. PG. 506.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.
Custom Electronics Corp., 738 Speedwell Ave., Morris Plains, N. J.

Plains, N. J.

DAGE ELECTRIC CO., INC., 67 N. Second St., Beech
Grove, Ind. ADV. PG. 423.

DALE PRODUCTS, INC., Box 1, Columbus, Nebr. ADV.

DALE PRODUCTS, INC., Box 1, Columbus, Nebr. ADV. PG. 136, 137.

Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J. Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. Etraco Mfg. Co., Inc., Woods Church Rd., Flemington, N. J.

P. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland
Rd., Clifton, N. J. ADV. PG. 189-193.
Franklin Airloop Corp., 43-20 34th St., Long Island
City 1, N. Y.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. General Laminated Products, Inc., 2857 S. Halstead St.,

Chicago 8, III. GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15,

GENERAL R.F. FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160. GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245. Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. Holyoke Wire & Cable Co., Holyoke, Mass. Industrial Electronics Co., Inc., Hanover, Mass. Industrial Products Co., Danbury, Conn. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477. KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 274. Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

12, N. Y.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
LaMagna Mfg. Co., Inc., East Rutherford, N. J.
LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.
MacLeod & Hanopold, Inc., 10 Roland St., Charlestown

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood Calif.

Modelectric Products Corp., 1500 Bangs Ave., Asbury

Park, N. J.
Molded Insulation Co., 335 E. Price St., Philadelphia

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.
Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif. Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y.

N. Y.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8,
Mass. ADV. PG. 175.
Philoc Corp., Tioga & C Sts., Philadelphia 34, Pa.
Phoenix Electronics, Inc., 50 Island St., Lawrence,

Polytron Corp., 47 Martine Ave., White Plains, N. Y. Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. .I.

N. J.
Raypar, Inc., 7800 W. Addison St., Chicago, III.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave.,
Chicago 41, III.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Scientific Assembly Co., 65 Hope St., Brooklyn 11, N. Y.
Sittler Corp., 18 N. Ada St., Chicago 7, III.
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.
Telrex, Inc., Rutherford & Neptune Highway, Asbury Park, N. J.

Telvision Laboratories, Inc., 5045 W. Lake St., Chicago

TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 458. Tensor Electric Development Co., Inc., 343 Classon Ave.,

Brooklyn 5, N. Y.
Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.
Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22,

TRIMM, INC., 400 W. Lake St., Libertyville, III. ADV. PG. 180.

H. F. Resonator Corp., 224 Seventh St., Racine,

WIS.
UNITED MFG. & SERVICE CO., 405 S. Sixth St., Milwaukee 4, Wis. ADV. PG. 417.
United Technical Laboratories, Box 425-V, Morristown, N. J. Videon Electronic Corp., 312 E. Washington St., In-

Videon Electronic Corp., 312 E. Washington St., 10-dianapolis 4, Ind. Vokar Corp., 7300 Huron River Drive, Dexter, Mich. Wurlitzer Co., Rudolph, North Tonawanda, N. Y. YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG 482.

# CABLE HOOKS

CORNISH WIRE CO., 50 Church St., New York 7, N. Y ADV. PG. 138.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.
Laughlin Co., Thomas, 199 Fore, Portland, Me. PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 160.

# CABLE—Coaxial Flexible

Alpha Wire Corp., 50 Howard St., New York, N. Y. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-cago 50, III. ADV. PG. 212. Anaconda Wire & Cable Co., 25 Broadway, New York 4, Andrew Corp., 363 E. 75th St., Chicago 19, III. ANSONIA ELECTRICAL CO., 63 Main St., Ansonia, Conn.

ANSONIA ELECTRICAL CO., 63 Main St., Ansonia, Conn. ADV. PG. 92. BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471. Blake Co., Whitney, Dept. E, New Haven 14, Conn.

BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 475.
BRAND & CO., INC., WILLIAM, 104 Valley St., WIIII. mantic, Conn. ADV. PG. 166, 167.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 276. COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III. Chicago 18, III.

Consolidated Wire & Associated Companies, 1635 S.
Clinton St., Chicago 16, III.

Continental Electronics Mfg. Co., 4212-20 S. Buckner Continental Electronics Wifg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas. CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
General Cable Corp., 420 Lexington Ave., New York 17,

N. Y.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160.

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. 402, 403.

National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.

merce Bldg., Pittsburgh 30, Pa.
Okonite Co., Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8,

Mass. ADV. PG. 175.
Phelps Dodge Copper Products Corp., 40 Wall Street, New

Phelps Dodge Copper Products Corp., 40 wan Street, new York 5, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 279.
PRODUCT DEVELOPMENT CO., INC., 307 Bergen St., Kearny, N. J. ADV. PG. 515.
Rockbestos Products Corp., 285 Nicoll St., New Haven 4,

Conn.

Conn.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
SURPRENANT MFG. CO., 199 Washington St., Boston 8,
Mass. ADV. PG. 409.
Telegraph Construction & Maintenance Co., Ltd., Telcon

Works, Grenwich, London, S. E. 10, England.
Transradio Ltd., 138-A Cromwell Rd., London SW 7,
England.

Electric Wire & Cable Corp., 8 Ackerman Ave.,

Clifton, N. J.

Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.

# CABLE—Coaxial Rigid

Andrew Corp., 363 E. 75th St., Chicago 19, III.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New
York 1, N. Y. ADV. PG. 471.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York
22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd.,
Chicago 18, III.
Dielectric Products Co., Inc., 125 Virginia Ave., Jersey
City 5, N. J.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston
15, Mass. ADV. PG. 160.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn
N. Y. ADV. PG. 402, 403.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.
LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.
National Electric Products Co., 1356 Chamber of Commerce Bidg., Pittsburgh 30, Pa.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8,
Mass. ADV. PG. 175.
Phelps Dodge Copper Products Corp., 40 Wall St., New
York 5, N. Y.
Photocon Research Products, 421 N. Foothill Blvd.,
Pasadena, Calif.
PRODUCT DEVELOPMENT CO., INC., 307 Bergen St.,
Kearny, N. J. ADV. PG. 515.
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.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave.,
Clifton, N. J.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 189, Mass.

# CABLE—Insulated

ADVANCE INSULATED WIRE & CABLE CO., INC., 72
Woolsey St., Irvington, N. J. ADV. PG. 460.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
Mass. ADV. PG. 24.
Alpha Wire Corp., 50 Howard St., New York, N. Y.

MERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
merican Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
naconda Wire & Cable Co., 25 Broadway, New York 4, NSONIA ELECTRICAL CO., 63 Main St., Ansonia, Conn. EAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471. den Mfg. Co., 4647 W. Van Buren St., Chicago 44, III.

RNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
ake Co., Whitney, Dept E, New Haven 14, Conn.
ISTON INSULATED WIRE & CABLE CO., 63 Bay St.,
Boston 25, Mass. ADV. PG. 475.
AND & CO., INC., WILLIAM, 104 Valley St., Willimantic Conn. ADV. PG. 166, 167.
rol Cable Co., 190 Middle St., Pawtucket, R. I.
ase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
ESTER CABLE CORP., Hill St., Chester, N. Y. ADV.
PG. 277. PG. 277. Nyer Insulated Wire Co., 249 Roosevelt Ave., Paw-

Ally Insulated Wile Co., 2007, 100 Insulated Wile Co., 2007,

RNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 138.
ESCENT CO., INC., Front & Central Ave., Paw-tucket, R. I. ADV. PG. 36.
lectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
lex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. eral Cable Corp., 420 Lexington Ave., New York 17, II. Y.

N. Y.

WERAL ELECTRIC CO., Electronics Div., Electronics ark, Syracuse, N. Y. ADV. PG. 1-23.

Peral Insulated Wire Works, Inc., 69 Gordon Ave., providence 5, R. I.

Pard Insulated Wire Works, DIv., The Okonite Co., willber Barra, Pa

Justice J. H. J. H

Fall PLASTICS CORP., 25 Foster St., Worcester 8, ass. ADV. PG. 175.

STOID CORP., 42-61 24th St., Long Island City 1, Y. ADV. PG. 279.

CORP., 51 Lansdowne St., Cambridge 39, Mass. DV. PG. 377.

Is Island Insulated Wire Co., Inc., Cranston, R. I.

Bestos Products Corp., 285 Nicoll St., New Haven 4, benn

hnn. Riling's Sons Co., John A., 640 Broad St., Trenton 2,

E CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. a. 285. Rel Cord & Wire Co., 4723-31 W. Montrose Ave., pricago 41, III. Silex Wire & Cable Co., 79 Sidney St., Cambridge 39,

Silex Wire & Cable Co., 79 Sidney St., Cambridge 39, ass.

Stard Telephones & Cables Ltd., Connaught House, dwych, London, W. C. 2, England.

Sinberg-Carlson Co., Rochester 13, N. Y.

PRENANT MFG. CO., 199 Washington St., Boston 8, ass. ADV. PG. 409.

Tiraph Construction & Maintenance Co., Ltd., Telcon Drks, Greenwich, London, S. E. 10, England.

LSOLITE INSULATED WIRE CO., INC., 198 Main St., rrytown, N. Y. ADV. PG. 458.

Rubber Co., 1230 Avenue of the Americas, New k 20, N. Y.

Vir Electric Wire & Cable Corp., 8 Ackerman Ave., fton, N. J.

We Products Corp., Div. of The Gabriel Corp., 1523 E. th St., Cleveland 3, Ohio.

th St., Cleveland 3, Ohio.
Ween Wire Co., Pownal, Vt.
Weern Insulated Wire Co., 2425 E. 30th St., Los
igeles 58, Calif.
Waker Cable Corp., Kansas City 16, Mo.
Wird Storage Battery Co., 200 Carnegie Hall, Cleveland Ohio.

CALE—Microphane Ali Wire Corp., 50 Howard St., New York, N. Y.
AMRICAN PHENOLIC CORP., 1830 S. 54th Ave.,
1000 St. 111. ADV. PG. 212.
1001 St. 111. AVE., New
1001 INSTRUMENTS CORP., 350 Fifth Ave., New
1001 Nr. 1002 St., Chicago 44,
1001 Mfg. Co., 4647 W. Van Buren St., Chicago 44,

BI BACH RADIO CO., INC., 145 Hudson St., New 15k 13, N. Y. ADV. PG. 342.
BIA Co., Whitney, Dept. E, New Haven 14, Conn. BR D & CO., INC., WILLIAM, 104 Valley St., Willintic, Conn. ADV. PG. 166, 167.

Carol Cable Co., 190 Middle St., Pawtucket, R. I. CHESTER CABLE CORP., Hill St., Chester, N. Y.

CHESTER CABLE CORP., Hill St., Chester, N. L. ADV. PG. 277.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 138.
CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
General Insulated Wire Works, Inc., 69 Gordon Ave.,
Providence 5, R. I.

General Insulated Wire Works, Div., The Okonite Co., Providence 5, R. I.

Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

Koiled Kords, Inc., Box K, New Haven 14, Conn. Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, III.

National Electric Products Co., 1356 Chamber of Commerce Bidg., Pittsburgh 30, Pa.

Okonite Co., Canal St., Passaic, N. J.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 175.

PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 279.

ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 285.

ADV. PG. 285.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, SURPRENANT MFG. CO., 199 Washington St., Boston 8,

Mass. ADV. PG. 409.

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 V York 20, N. Y. ctor Electric Wire & Cable Corp., 8 Ackerman Ave.,

Victor Electric Wire & Cable Corp., Clifton, N. J.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### CABLE-Shielded

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

ANSONIA ELECTRIC CO., 63 Main St., Ansonia, Conn

ANSUNIA ELECTRIC STATE AND ADV. PG. 92.

ADV. PG. 92.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.

Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342. Blake Co., Whitney, Dept. E, New Haven 14, Conn. BOSTON INSULATED WIRE & CABLE CO., 63 Bay St.,

BOSTON INSULATED WIRE & CABLE CO., 63 Bay St.,
Boston 25, Mass. ADV. PG. 475.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
BREEZE CORPS., INC., 41 S. Sixth St., Newark 7,
N. J. ADV. PG. 259.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
Chase Brass & Copper Co., Inc., 236 Grand St.,
Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y.
ADV. PG. 277.

CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 277. Collyer Insulated Wire Co., 249 Roosevelt Ave., Paw-

Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Idl.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y.

ADV. PG. 138.

CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.

Dielectric Materials Co., 5315-17 N. Ravenswood Ave.,

Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40. III.
ESSEX Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Pd.. Clifton, N. J. ADV. PG. 189-193.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5. R. I.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.

Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
Holyoke Wire & Cable Co., Holyoke, Mass.
Koiled Kords, Inc., Box K, New Haven 14, Conn.
Lenz Electric Mfg. Co., 1751 North Western Ave.,
Chicago 47, III.

National Electric Products Co., 1356 Chamber of Commerce Bidg., Pittsburgh 30, Pa.
Okonite Co., Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 175.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 279.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 377.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I. Rockbestos Products Corp., 285 Nicoli St., New Haven 4, Conn.

Conn.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y.
ADV. PG. 285.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave.,
Chicago 41, III.
Simplex Wire & Cable Co., 79 Sidney St., Cambridge

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. 409.
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. 458.
Transradio, Ltd., 138A Cromwell Rd., London SW 7, England.

England. Rubber Co., 1230 Avenue of the Americas, New

Electric Wire & Cable Corp., 8 Ackerman Ave., on, N. J. York York 20, 1. Victor Electric Wire & Cable Corp., 5 .... Clifton, N. J.
Ward Products Corp., Div. of The Gabriel Corp., 1523
E. 45th St., Cleveland 3, Ohio.
Whitaker Cable Corp., Kansas City 16, Mo.

#### CABLE—Transmission Line

ADVANCE INSULATED WIRE & CABLE CO., INC., 72 Woolsey St., Irvington, N. J. ADV. PG. 460.

Alpha Wire Corp., 50 Howard St., New York, N. Y.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

Anaconda Wire & Cable Co., 25 Broadway, New York 4,

N. Y.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
ANSONIA ELECTRICAL CO., 63 Main St., Ansonia, Conn.

ADV. PG. 92.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.

Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

III.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG 166, 167.
Carol Cable Co., 190 Middle St., Pawtucket, R. I. Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn. bury 20, Conn. CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV.

PG. 277. Collyer Insulated Wire Co., 249 Roosevelt Ave., Paw-

Collyer Insulated Wire Co., 249 Roosevelt Ave., raw-tucket, R. I.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Gates Radio Co., Quincy, III.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

17, N. Y. GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

General Insulated Wire Works, Inc., 69 Gordon Ave.,

GENERAL ELECIRIC CO., Electronics ov., Park, Syracuse, N. Y. ADV. PG. 1-23.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
Hazard Insulated Wire Works Div., The Okonite Cq., Wilkes-Barre, Pa.

J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
JOHNSON CO., E. F., Wassca, Minn. ADV. PG. 248-251.
Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.
Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, III.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30 Pa.
Okonite Co., Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 175.
Phelps Dodge Copper Products Corp., 40 Wall Street, New York 5, N. Y.
Philico Corp., Tioga & C Sts., Philadelphia 34, Pa.
PLASTIOD CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 279.
PPODUCT DEVELOPMENT CO., INC., 307 Bergen St., Kearny, N. J. ADV. PG. 515.
Radlo Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, N. Y.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y.
ADV. PG. 285.
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.
Transradio Ltd., 138A Cromwell Rd., London S. W. 7, England.

U. S. Rubber Co., 1230 Avenue of the Americas, New U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y. Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J. Ward Products Corp., Div. of The Gabriel Corp., 1523 E. 45th St., Cleveland 3, Ohio.

# CABLE-uhf

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, III.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St.,
Boston 25, Mass. ADV. PG. 475.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
CHESTER CABLE CORP., HIII St., Chester, N. Y.
ADV. PG. 277. CHESTER CABLE GONT, AND ADV. PG. 277.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S.
Chicago St. Chicago 16, III. Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S.
Clinton St., Chicago 16, III.
DALE PRODUCTS, INC., Box 1, Columbus, Nebr.
ADV. PG. 136, 137. Clinton St., Chicago 16, III.

DALE PRODUCTS, INC., Box 1, Columbus, Nebr. ADV. PG. 136, 137.

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.

National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.

Okonite Co., Canal St., Passaic, N. J.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 175.

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. 279.

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.

Transradio, Ltd., 138A Cromwell Rd., London S. W. 7, England.

Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J. Clifton, N. J.

# CALIBRATORS—SWEEP CALIBRATORS—UHF See Instruments—Electrical Measuring

# CAMERAS-Oscilloscope

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DuMont Laboratories, Inc., Allen B., Instrument Div., 2500 Main Ave., Clifton, N. J.
Electro-Medical Lab., Inc., South Woodstock, Vt.
Electrodyne Co., 32 Oliver St., Boston, Mass.
FAIRCHILD CAMERA & INSTRUMENT CORP., 88-06
Van Wyck Blvd., Jamaica 1, N. Y. ADV. PG. 416.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
Photographic Products, Inc., 6916 Romaine St., Hollywood 38, Calif.

wood 38, Calif. Warrick Co., Frederick P., Rt. 1, W. Long Lake Rd., Bloomfield Hills, Mich.

# CAMERAS—Radar Recording

FAIRCHILD CAMERA & INSTRUMENT CORP., 88-06 Van Wyck Bivd., Jamaica 1, N. Y. ADV. PG. 416. Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. Photographic Products, Inc., 6916 Romaine St., Hollywood 38, Calif.

# CAMERAS—Television

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
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 ELECTRIC Co., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL PRECISION LABORATORY, INC., Pleasantville, N. Y. ADV. PG. 84.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Cinema-Television Ltd., Worsley Bridge Rd., London,

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219. RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back

#### CAMERAS—X-Ray

FAIRCHILD CAMERA & INSTRUMENT CORP., 88-06
Van Wyck Blyd., Jamaica 1, N. Y. ADV. PG. 416.
Jarrel-Ash Co., 165 Newberry St., Boston 16, Mass.
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.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
X-Ray Dept. of General Electric Co., 4855 Electric Ave.,
Milwaukee 14, Wis.

#### CANS

#### NOTE: (h) indicates hermetically sealed types

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. ADV. PG. 326.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
Colgate Mfg. Corp., Lindenhurst, N. Y.
CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 435.
Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.

Continental Can Co., Inc., 100 E. 42nd St., New York
17, N. Y.
CRAFT MFG. CO., 3949 W. Schubert St., Chicago, III.
ADV. PG. 388.
Donnelly Electric & Mfg. Co., 3050 Washington St.,
Boston 19, Mass.
Electronic Apparatus Co., Elkhart, Ind.
Guthman Inc., Edwin I., 155 Throop St., Chicago, III.
HELDOR MFG. CO., Div. of Heldor Bushing & Terminal
Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV.
PG. 238.
HERMASEAL CO. INC. Pivereide Priva Elthant

HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind. HERMASEAL CO., INC., KIVEISIDE CO., (h)

ADV. PG. 401.

HERMETIC SEAL PRODUCTS CO., 29-37 South 6th

St., Newark 7, N. J. ADV. PG. 77. (h)

HUDSON TOOL & DIE CO., INC., 118 S. 14th St.,

Newark, N. J. ADV. PG. 225.

K-V Transformer Corp., 4414 Park Ave., New York 57,

(h)

Lojack Precision Corp., 32-60 62nd St., Woodside, N. Y.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
OLYMPIC METAL PRODUCTS CO., INC., Phillipsburg,
N. J. ADV. PG. 376.
Paul & Beekman Inc., 1801 Cortland St., Philadelphia

40, Pa.

Repath Co., Paul R., 641 E. 61st St., Los Angeles 1,
Calif.

Scovill Manufacturing Co., Waterbury 20, Conn.

Stone City Machine & Tool Co., Inc., P. 0. Box 351,
1206 Seventh St., Bedford, Ind.

Telegraph Construction & Maintenance Co., Ltd., Telcon
Works, Greenwich, London, S. E. 10, England.

Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45
Mass.

TRIAD TRANSCORMER MEG. CO. 4055 Redwood Ave.

Mass.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302. (h)
Vokar Corp., 7300 Huron River Drive, Dexter, Mich. (h)
Worcester Pressed Aluminum Corp., 13-15 Hope Ave.,

Worcester 3. Mass.

# NOTE:

Throughout all capacitor listings
(h) indicates hermetically sealed types
(p) indicates pressure types
(v) indicates vacuum types

# CAPACITORS

# Capacitors, Fixed

Lapacitors, Fixed

1. Ceramic
2. Electrolytic
3. Energy Storage
4. Feed Through
5. Fixed Composition
6. Gas Filled
7. High Voltage
8. Metallized Paper
9. Mica
10. 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 20. Trimmer-Mica 21. Trimmer-Vacuum

# 22. Tuning-Receiver 23. Tuning-Transmitter

AEROVOX CORP., 740 Believille Ave., New Bedford, Mass. 1-2-3-4-5-7-8-9-10-11-12-15. ADV. PG Mass. 1-2-3-4-5-7-8-9-10-11-12-15. ADV. PG. 240-243. (h)
AIRCRAFT-MARINE PRODUCTS, INC., 2100 Paxton St. Harrisburg 10, Pa. 7-14. ADV. PG. 469. (h)
American Condenser Co., 4410 Ravenswood Ave., Chicago 40, III. 2-10. (h)
American Radionic Co., Inc., 33 & 55 Flatbush Ave., Brooklyn, N. Y. 10.
Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. 17. ARCO ELECTRONICS, INC., 103 Lafayette St., New York, N. Y. 1-7-9-10-19. ADV. PG. 396.
Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, Arnhold Ceramics, Inc., I E. 5/til 5t., IVEW 1918 26, N. Y. 1-19.

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va. 1.

ASTRON CORP., 255 Grant Ave., East Newark, N. J. 2-8-10. ADV. PG. 209. (h)

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. 8.

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. 1. (h) BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 23. ADV. PG. 397.

British Radio Electronics Ltd., 1 Thomas Circle, Washington 5, D. C. 15 d Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. 18-23.
CENTRALAB, DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. 1-4-7-14-19. ADV. PG. 71-74.
CHICAGO CONDENSER CORP., 3255 W. Armitage Ave., Chicago 47, III. 8-10-11. ADV. PG. 274. (h). Condenser Products Co., 7517 N. Clark St., Chicago 26, III. 3-7-11-12-14.
Cornell-Dubilier Electric Corp., South Plainfield, N. J. 1-2-3-5-6-7-8-9-10-12-13-14. (h). Corson Electric Mfg. Corp., 540 39th St., Union City, N. J. 7-11-14. (h). Cosmic Radio Corp., 853 Whittier St., New York 53, N. Y. 2-10.
DEUTSCHMANN CORP., TOBE, 921 Providence Hwy., Norwood, Mass. 2-3-4-7-8-10-11-14. ADV. PG. 280. Dolinko & Wilkens, Inc., 89 Adams St., Hoboken, N. J. 7-17. Dolinko & Wilkens, Inc., 89 Auains St., Indiana, 7-17.

DUMONT ELECTRIC CO., 308 Dyckman St., New York, N. Y. 2-3-4-5-7-10-11-12. ADV. PG. 199.

Eitel-McCullough, Inc., San Bruno, Calif. 17-23.

Eitectro Motive Mfg. Co., South Park & John St., Willimantic, Conn. 1-4-7-9-10-12-15-19-20.

ERIE RESISTOR CO., 644 W. 12th St., Erie, Pa. 14-7-9-11-15-19. ADV. PG. 271.

Fansteel Metallurgical Corp., 2200 Sheridan Road, North Chicago, III. 16.

(h)
FAST & CO., JOHN E., 3101 N. Pulaski Rd., Chicago 41, III. 7-10-11-12. ADV. PG. 489. (h)

Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. 4-7-10. ASI & CU., JUHN E., 3101 N. Fulashi Ru., Chiagh 41, III. 7-10-11-12. ADV. PG. 489. (h) Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. 4-7-10. (h) GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. 1. ADV. PG. 195, 197. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-2-3-7-10-11-12-14-16. ADV. PG. 1-23. (h) General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J. 18-22-23. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 9-13. ADV. PG. 82, 83. Glenco Corp., Metuchen, N. J. 1-11-19. Good-All Electric Mfg. Corp., 112 W. First St., Ogallala, Neb. 5-8-10-11. (h)(p)(v) Gridge Corp., Metuchen, N. J. 1-11-19. Guod-All Electric Mfg. Corp., 540 39th St., Union City, N. J. 7-10-11-14. (h) Gulton Mfg. Corp., Metuchen, N. J. 1-11-19. Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III 19-20. HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. 18-22-23. ADV. PG. 215-217. HANSELL, INC., U., The, Westerly, R. I. 1. ADV. PG. 406. rlec Corp., 422 N. Fifth St., Milwaukee 3, Wis. (h) 1-19. (h)
HI-Q DIVISION, AEROVOX CORP., Seneca Ave., Olean,
N. Y. 1-4-7-19. ADV. PG. 242, 243.
ILLINOIS CONDENSER CO., 1616 N. Throop St., Chicago
22, III. 2-10. ADV. PG. 267. (h)
Industrial Condenser Corp., 3243 N. California Ave.,
Chicago 18, III. 2-3-7-10-11-12. (h)
Jeffers Electronics Co., DuBois, Pa. 1-4-5-7.
JENNINGS RADIO MFG. CO., 1098 E. William St.,
San Jose 12, Calif. 3-4-7-14 17-21-23. ADV. PG.
25-27. (ICHNISON CO. F. E. Warner Mill. (12.23. ADV. PG. 25-27.

JOHNSON CO., E. F., Waseca, Minn. 6-18-23. ADV. PG. 248-251.

Lapp Insulator Corp., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y. 6-7-23. (h)(p)(v)

LaRose & Associates, W. T., P. O. Box 55, Troy N. Y. 4-9. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. 9-13-15.

LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. 19. ADV. PG. 491.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind. 2. Development Co., 12 E. Howard St., Phoebus, Va. 1-4-19.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 1-2-4-7-8-9-11-15-16-19.

ADV. PG. 158, 159, icamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. 2-3-4-5-9-10-14-15. illen Mfg. Co., James, 150 Exchange St., Malden, Mass. 14-18-23. olded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 22. ucon Corp., 9 St. Francis St., Newark 5, N. J. 1. uirhead & Co., Ltd., Beckenham, Kent, England. 9-10-13.15.
ullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. 6-7-12-18.
uter Co., 1255 S. Michigan Ave., Chicago, III. 1-19.
ATIONAL CAPACITOR Co., 1828 Westminster St., Providence 8, R. I. 7-8-10-11. ADV. PG. 423. (h)
ATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. 18-20-22-23. ADV. PG. 328, 329.
48 Mfg. Co., 1260 Clybourn Ave., Chicago 10, III.
22-23. 22-23.
hilco Corp., Lioga & C Sts., Philadelphia 34, Pa.
1-2-9-10-15-18-19-22.
hotocircuits Corp., Glen Cove, N. Y. 11.
LANET MFG. CORP., 225 Belleville Ave., Boomfield,
N. J. 2. ADV. PG. 182.
(h)
lytron Corp., 47 Martine Ave., White Plains, N. Y.
16. ter Co., 1850 Sheridan Rd., North Chicago, III. 3-7-10-12-14.

/RAMID ELECTRIC CO., 1445 Hudson Blvd., North Bergen, N. J. 2-3-7-8-10-12. ADV. PG. 107. (h) ailty Components, Inc., St. Marys, Pa 5. dio Condenser Co., Camden, N. J. 22-23.

ADIO MATERIALS CORP., 1708 Belmont Ave., Chicago 13, III. 1-19. ADV. PG. 186, 187. (h) (p) (v) ngamo Electric Co., Capacitor Div., Marion, III 2-9-10-15. (h) 2-9-10-15. (h)

ckles, F. W., Div. General Instrument Corp., 165 Front

St., Chicopee, Mass. 18.

rague Electric Co., 125 Marshall St., North Adams,

Mass. 1-2-3-4-7-8-9-10-11-12-14-15-16. (h)

ACKPOLE CARBON CO., St Marys, Pa. 5. ADV. PG. ANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd. Chicago 19, III. 15-19. ADV. PG. 59. andard Telephone & Cables, Ltd. Connaught House, Aldwych, London WC2, England. 3-9-10-12-15. Tectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. 23. Tegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London W. 3, England. 1-2-3-4-5-7-9-10-11-12-14-15-19. CONDENSER CORP. Title Condenser Corp., 65 Hope St., Brooklyn, N. Y. 22. TRAMON, INC., Stepney, Conn. 1-9. ADV. PG. 450 ESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. 3-7-10-12-14. ADV. PG. 109-

EASUREMENTS CORP., Boonton, N. J. 1-9-13-22.

# SES, PORTABLE

(for Radios, Phonographs, Amplifiers, etc.)

eaton Co., T. C , Electronics Div. Millville, N. J.

nslow Co., Inc., 9 Liberty St., Newark 5, N. J. 9. sconsin Porcelain Co., Sun Prairie, Wis. 1-19.

LTIC METAL PRODUCTS CO., 120 Sutton St., Brookyn, N. Y. ADV. PG. 201. gen Co., Inc., David, 29 Ninth Ave , New York 14, N. Y.

htral Stamping & Mfg. Co., Polo, III.

URCHILL CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 396 ler Metal Products Co., 1025 Line St., Camden, anelly Electric & Mfg. Co., 3050 Washington St., TE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV.

PG. 271.

Viviey Products Co., St. Charles, III.

Iman Show Case Corp., Fort Wayne 1, Ind.

lack Precision Corp., 32-60 62nd St., Woodside, N. Y.

Igna Electronics Co., 9810 Anza Ave., P. O. Box 338,

Inglewood, Calif.

Imarch Radio & Television Corp., 61 Crescent St.,

Brooklyn 8, N. Y.

Vivon Corp., 221 E Cullerton St., Chicago 16,

III.

Henix Electronics, Inc., 50 Island St., Lawrence, Mass. Fio Merchandise Sales, Inc., 1165 Southern Blvd., Jew York 59, N. Y.
HARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66.
Fill Manufacturing Co., Waterbury 20, Conn. add Portable Case Corp., 310-314 W Lincoln Ave., Jount Vernon, N. Y.
S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

# LS-Photoelectric

ADLEY LABS, INC., 82 Meadow St., New Haven 10, Conn. ADV. PG. 254.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Haledy Electronics Co., 57 William St., New York 5, Haiedy Electronics Co., 57 William St., New York D., N. Y.
INTERNATIONAL RECTIFIER CORP, 1521 E. Grand Ave., El Segundo, Calif. ADV. PG. 393.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
RADIO CORP OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
Photovolt Corp., 95 Madison Ave., New York 6, N. Y.
Piezo Products Co., Whitney St., Framingham, Mass.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

#### CELLS-Photovoltaic

BRADLEY LABS., INC., 82 Meadow St., New Haven 10, Conn. ADV. PG. 254. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

CEMENTS-Radio Ambroid Co., 305 Franklin St., Boston 10, Mass. Barrett Varnish Co , 1532 S. 50th Court, Chicago 50, Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, GENERAL LEMENT MFG. CO., 727

III. ADV. PG. 120.

HARDMAN CO., INC., H. V., 571 Cortlandt St., Belleville, N. J. ADV. PG. 505.

MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 462. Moyen, C. P., 908 Chicago Ave , Chicago, III.
Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32, N. Y. ADV. PG. 517. CERAMICS See Insulation Materials CHAINS-Small Drive BEAD CHAIN MFG. CO., 110 Mountain Grove St , Bridge-port 5, Conn. ADV. PG. 503. CHAMBERS-lonization

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.
Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.

EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa ADV. PG. 451.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Georator Corp., 1820 N. Nash St., Arlington, Va. Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10. III Chicago 10, III

Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
Radiation Counter Laboratories, Inc., 5122 W. Grove St.,
Skokie, III.

Sensitive Research Instrument Corp., 9 Elm Ave., Mt.
Vernon, N. Y.

Technical Associates, 140 W. Providencia Ave., Burbank,

Calif.

VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

# CHAMBERS—Shielded Screen

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. Lindsay Structure, Inc., 5000 W. Dempster St , Skokle,

# CHAMBERS—Test American Instrument Co., 8030 Georgia Ave., Silver

Spring, Md.
Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y. BOWSER TECHNICAL REFRIGERATION DIV., BOWSER, INC., Terryville, Conn. ADV. PG. 93, 94.

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J. Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, III.
MURPHY & MILLER INC., 1322 S. MIchigan Ave.,
Chicago 5, III. ADV. PG. 352.
Northern-Zaleski, Ltd., Pratt Oval, Glen Cove, N. Y.
Refrigeration Systems, Inc., 646 W. Washington Blvd.,
Chicago 6, III. Chicago 6, Ill.

STANDARD CABINET CO., 57 Washington Ave., Carlstadt,
N. J. ADV. PG. 519.

Statham Laboratories, Inc., 12401 W. Olympic Blvd.,
Los Angeles 64, Calif. Stokes Machine Co., F. J., 5850 Tabor Rd., Olne P. O., Philadelphia 20, Pa.
TENNEY ENGINEERING INC., 26 Avenue B, Newark 5, N. J. ADV. PG. 358.

#### CHANGERS—Automatic Record

Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, III. Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y. Garrard Sales Corp., 164 Duane St., New York 13, N. Y. Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee, Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. 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. 495. Ace Mfg. Corp., Chalfont, Pa. Acklin Stamping Co., 1923 Nebraska Ave., Toledo 7, Ohio.

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69., Mass. ADV. PG. 464.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

Ames Co., W. R., 150 Hooper St., San Francisco 7, Calif.

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J. N. J.
BALTIC METAL PRODUCTS CO., 120 Sutton St., Brook-Jan. N. Y. ADV. PG. 201.

BOYLE METALCRAFT CORP., 150 Sullivan St., Brooklyn, 31, N. Y. ADV. PG. 521.

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. CHURCHILL CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 396.
Colgate Mfg. Corp., Lindenhurst, N. Y.
CRAFT MFG. Co., 3949 W. Schubert St., Chicago, Ill.
ADV. PG. 388.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Cutler Metal Products, 1025 Line St., Camden, N. J. Delco Radio Div., General Motors Corp., Kokomo, Ind. Donnelly Electric & Mfg. Co., 3050 Washington St., Boston 19, Mass. Electro Craft Inc., 68 Jackson St., Stamford, Conn. Hathaway Instrument Co., 1315 S. Clarkson St., Denver Hathaway Insurance Co., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. AV. PG. 238.

Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, III. Ave., Chicago 12, III.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

K-V Transformer Corp., 4414 Park Ave., New York 57. N. Y. Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
La Magna Mfg. Co., East Rutherford, N. J.
LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.
Lojack Precision Corp., 32-60 621d St., Woodside, N. Y.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
Inglewood, Calif.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
Metalcraft, Inc., 86-08 130th St., Richmond Hill 18,
N. Y. Minute Man Products, Inc., 430 E. 102nd St., New York, Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
MULTI METAL CO., 1350 Garrison Ave., New York 59,
N. Y. ADV. PG. 316.
OLYMPIC METAL PRODUCTS CO., INC., Phillipsburg,
N. J. ADV. PG. 376.
Par-Metal Products Corp., 32-62 49th St., Long Island
City 3, N. Y. Par-Metal Products Corp., 52 Cb., 1988.

City 3, N. Y.

Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.

Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.

PREMIER METAL PRODUCTS CO., 3160 Webster Ave.,

Bronx, N. Y. ADV. PG. 506.

REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.

Repath Co., Paul R., 641 E. 61st St., Los Angeles 1,

Calif.

REF MIG. Corp., Jericho Turnpike, Mineola, N. Y.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1,
Calif.
Scovill Manufacturing Co., Waterbury 20, Conn.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6,
N. Y.

Standard Electronics Corp., 285 Emmet St., Newark,

Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,

WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 483. Worcester Pressed Aluminum Corp., 13-15 Hope Ave.,

Worcester, Mass. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

# CHASSIS-Wood

Ingraham Co., E., Bristol, Conn. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Monarch Radio & Television Corp., 61 Crescent St.,

Brooklyn 8, N. Y.

#### CHECKERS

See also Analyzers

# CHECKERS—Cathode Ray Tube

NATIONAL UNION RADIO CORP., 350 Scotland Road, Orange, N. J. ADV. PG. 310.

#### CHECKERS—Crystal Rectifier

Airborne Instrument Lab., Inc., 160 Old Country Rd., Mineola, N. Y Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln,

Mass.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,

#### CHEMICALS—Electronic

Baker Chemical Co., J. T., Phillipsburg, N. J.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
EMERSON & CUMING CO., 126 Massachusetts Ave.,
Boston 15, Mass. ADV. PG. 35.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
GENERAL CHEMICAL DIV., Allied Chemical & Dye Corp.,
40 Rector St., New York 6, N. Y. ADV. PG. 453.
Mallinckrodt Chemical Works, Second & Mallinckrodt Sts.,
St. Louis 7, Mo. St. Louis 7, Mo.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Calif. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.

# CHEMICALS—Luminescent

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y. du Pont de Nemours & Co., Inc., E. I., Wilmington 98, GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rock-GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

GENERAL CHEMICAL DIV., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y. ADV. PG. 453.

Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.

Menlo Research Laboratory, Menlo Park, Calif.

PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 220.

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. 272.

# 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. 453.
Mallinckrodt Chemical Works, Second & Mallinckrodt Sts.,
St. Louis 7. Mo. St. Louis 7, Mo.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.

# NOTE:

Throughout all choke listings: (h) indicates hermetically sealed types

# CHOKES-Audio

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 496. (h)
Acro Products Co., 369 Shurs Lane, Philadelphia 28, Acro Transformer Mfg. Corp., 26-02 4th St., Astorla N. Y.

AIRCRAFT TRANSFORMER CORP., West & Willow Aves.,
Long Branch, N. J. ADV. PG. 276. (h)

AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby,
Pa. ADV. PG. 517.

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 343.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. ADV. PG. 368. (h)

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III. ADV. PG. 56.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Cossor (Canada) Ltu, Sources (h)
N. S., Canada. (h)
N. S., Canada. (h)
CREST LABORATORIES, INC., Whitehall Bldg., Far
Rockaway, N. Y. ADV. PG. 515. (h)
DE COURSEY ENGINEERING LAB., P. O. Box 235,
Los Angeles 25, Calif. ADV. PG. 76.
DIT-MCO INC., 729 Baltimore Ave., Kansas City 6, Mo.
ADV. PG. 452. Inc. 5 Hadley St., Cambridge, Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Electrical Windings, Inc., 2015 N. Kolmar Ave., Chi-Electrical windings, Inc., 2015 N. Ruillar Ave., Chicago 39, III.

ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383. (h) EMPIRE COIL CO., INC., 85 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 422. (h) The College of wood, III. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 292. (h)
Gramer Transformer Co., 2734 N. Pulaski Rd., Chicago 39, III. 39, III. Guthman Inc., Edwin I., 15 Throop St., Chicago, (h) HIGHLAND ENGINEERING CO., Main St. & Urban Ave.
Westbury, N. Y. ADV. PG. 412. (h
Industrial Electronics Co., Inc., Hanover, Mass.
Industrial Transformer Co., Gouldsboro, Pa. (h
K-V Transformer Corp., 4414 Park Ave., New York 57
N. Y. N. Y. (h)
LANGEVIN MANUFACTURING CORP., 37 W. 65th St.,
New York 23, N. Y. ADV. PG. 438.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn 19, N. Y. ADV. PG. 491. (h)
Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. (h)
MEASUREMENTS CORP., Boonton, N. J. ADV. PG.
158. 159. 158, 159.
Merit Coil & Transformer Corp., 4427 N. Clark St.,
Chicago 40, III.
Mid-West Coil & Transformer Co., 1642 N. Halsted St.,
Chicago 14, III. (h) Chicago 14, III. (h)
Muirhead & Co., Ltd., Beckenham, Kent, England.
NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha,
N. J. ADV. PG. 346 (h)
Partridge Transformers, Ltd., Roebuck Rd., Tolworth,
Surrey. England. Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. Parmeko Ltd., 366 Madison Ave., New York 17, N. Y. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago III. ADV. PG. 375. III. ADV. PG. 375.
Radio Music Corp., 84 S. Water St., Port Chester, Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Randall, Inc., Douglas, 102 High St., Westerly, R. I. (h)
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.
Rollins Corp., P. O. Box 213, Lewes, Del. (h)
S. N. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis. (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)
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
Standard Electronics Corp., 285 Emmet St., Newark,
N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, III. (h)
Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.
Super Electric Products Corp., 46 Oliver St., Newark,
N. J.
Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif.

Thermador Electric Mfg. Co., 5119 District Blvd., Los
Angeles 22, Calif.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III. (h)
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. V. Mt. Vernon, TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. TPANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV. Pg. 379.
TRANSFORMERS, INC., 532 North St., Endlcott, N. Y. ADV. Pg. 427.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. Pg. 302.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h) Varo Mfg. Co., Inc., Box 638, Garland, Texas. (h)

CHOKES-Filter Acro Products Co., 369 Shurs Lane, Philadelphia 28 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria N. Y.
AIRCRAFT TRANSFORMER CORP., West & Wildow
Aves., Long Branch, N. J. ADV. PG. 276. (h)
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 517.

AIRPAX PRODUCTS CO., Middle River, Baltimore 20,
Md. ADV. PG. 343.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly

Hills, Calif. (h) Altec Lansing Corp., 9550 Sainta Wolfield Dryc., Devery Hills, Calif.

AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minne-apolis 7, Minn. ADV. PG. 368.

(h)

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, M. V. N. Y.
CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501
W. Addison St., Chicago 18, III. ADV. PG. 56. (h)
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
COMMUNICATION ACCESSORIES CO., Box 345, 110th
St. & Hillcrest Rd., Hickman Hills, Mo. ADV. PG.
290. 290. CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittania St., Meriden, Conn. ADV. PG. 292. Continental Electric Co., Inc., 334 Ferry St., Newark 5, (Canada) Ltd., 301-303 Windsor St., Halifax, Cossor Cossor (Canada) Ltd., 301-303 Windsor St., Halitax, N. S., Canada. (h)
DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, III. ADV. PG. 294.
DE COURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. ADV. PG. 76.
DEUTSCHMANN CORP., TOBE, 921 Providence Hwy., Norwood, Mass. ADV. PG. 280.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307. 307 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass,
EISLER ENGINEERING CO., INC., 740 S. 13th St.,
Newark 3, N. J. ADV. PG. 362.
Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
Electro Engineering Works, 6021 College Ave., Oakland Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.

ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383. (h) SMPIRE COIL CO., INC., 85 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 422.

EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 274.

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 188. (h) FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297. (h) FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23. GENERAL ELECTRIC CO., ELECTRONICS CH., ELECTROS CH., Park, Syracuse, N. Y. ADV. PG. 1-23.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.

General Transformer Co., 18240 Harwood Ave., Homewood, III.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 292
Gramer Transformer Co., 2734 N. Pulaski Rd., Chicago 111. Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Halldorson Co., 4500 Ravenswood Ave., Chicago 40, III
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412. (h)
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau
Ave., Brooklyn 22, N.Y. ADV. PG. 514.
Industrial Electronics Co., Inc., Hanover, Mass.
Industrial Transformer Co., Gouldsboro, Pa.
K-V Transformer Corp., 4414 Park Ave., New York 57,
N. Y. N. Y.
LANGEVIN MANUFACTURING CORP., 37 W. 65th St.,
New York 23, N. Y. ADV. PG. 438.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn 19, N. Y. ADV. PG. 491. Magnavox Co., The., Components Div., Fort Wayne 4, Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.

Melpar, Inc., 452 Swann Ave., Alexandria, Va. (h)
Merit Coil & Transformer Corp., 4427 N. Clark St.,
Chicago 40, III.
Mid-West Coil & Transformer Co., 1642 N. Halsted St.,
Chicago 14, III.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Callf.
National Coil Co., P. O. Box 1237, Sheridan, Wyo.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
NEW YORK TRANSFORMER CO., INC., Third Ave.,
Alpha, N. J. ADV. PG. 346.
North Electric Mfg. Co., 501 S. Market St., Gallon,
Ohio. 158, 159.

Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.

Ohio.

Peless Electrical Products Div. of Altec Lansing Corp., 56 Santa Monica Blvd., Beverly Hills, Calif. Paleko Ltd., 366 Madison Ave., New York 17, N. Y. (h) PEDOFLUX CORP., 4900 W. Grand Ave., Chicago 3, ADV. PG. 375. (h) Pro Corp., Tioga & C Sts., Philadelphia 34, Pa. Ray Music Corp., 84 S. Water St., Port Chester, N. Y. Raynic Transformer Co., 411 S. Sangamon St., Chlgo 7, III. Raylinc., Douglas, 102 High St., Westerly, R. I. (h) RWHEON MFG. CO., Equipment Sales Div., Waltham (h) RASS. ADV. PG. 336, 337. Roh Electric Co., 8020 S. Park Ave., Chicago 19, III. Rois Corp., P. O. Box 213, Lewes, Del. (h) So. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis. (h) Solwestern Industrial Electronics Co., 2831 Post Oak, P. O. Box 13058, Houston 19, Texas. (h) Spalties, Inc., Skunks Misery Rd., Syosset, N. Y. SO(RE ROOT MFG. CORP., 391 Saw MIII River Rd., rays. N. Y. ADV. PG. 347. (h) ST.DARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., cago 39, III. ADV. PG. 59. Stard Electronics Corp., 285 Emmet St., Newark, N. J. Stlard Telephones & Cables Ltd., Connaught House, Iwych, London, W. C. 2, England. Stlard Transformer Corp., Elston, Kedzie & Addison, Cago 18, III. (h) Stard Winding Corp., 44-62 Johnes St., Newburgh,

stago 18, III. (h)
Steard Winding Corp., 44-62 Johnes St., Newburgh, Electric Products Corp., 46 Oliver St., Newark,

Tark-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Jeles 37, Calif. (h)
Theiador Electric Mfg. Co., 5119 District Blvd., Los (h) The lador Electric Mig. Co., 1987 (h) 1988 (h) 1988 (h) 1989 (h) 1 TRISFORMER SPECIALTY CO., Bala Cynwyd, Pa. TRISFORMERS, INC., 532 North St., Endicott, N. Y

TRANSFORMER MFG. CO., 4055 Redwood Ave., Angeles, Calif. ADV. PG. 302. (h) ELECTRONICS CORP., 276 Warren St., Lyndhurst, UN D TRANSFORMER CO., 150 Varick St., New York

N. Y. ADV. PG. Inside Frent Cover. (h)
A lafg. Co., Inc., Box 638, Garland, Texas. (h)
INGHOUSE ELECTRIC CORP., P. 0. Box 5578,
ISBURGH 30, Pa. ADV. PG. 109-115.
WILLER INSULATED WIRE CO., INC., 150 E. Aurora
Waterbury 91, Conn. ADV. PG. 491. (h)

ActiProducts Co., 369 Shurs Lane, Philadelphia 28

Acr ransformer Mfg. Corp., 26-02 4th St., Astoria

# CBKES-Power

AH AFT TRANSFORMER CORP., West & Willow Aves., Branch, N. J. ADV. PG. 276. (h)
AIR SIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ARX PRODUCTS CO., Middle River Baltimore 20, ADV. PG. 343.

Ale Lansing Corp., 9356 Santa Monica Blvd., Beverly 75, Calif. (h)
DEVELOPMENT CO., 2833 13th Ave., S., Minnetis 7, Minn. ADV. PG. 368. (h)
DELECTRONICS CORP., 60 Springfield Ave., Springfl. N. J. ADV. PG. 90.
Cacid-Burns Mfg. Co., 40 E. Second St., Mineola, Cossi (Canada) Ltd., 301-303 Windsor St., Halifax S., Canada. (h)
CO INC., 729 Baltimore Ave., Kansas City 6, Mo. PG. 452. Description Co., Inc., 5 Hadley St., Cambridge, E e cal Windings, Inc., 2015 N. Kolmar Ave., Chicago Till

(h)

ELERONIC TRANSFORMER CO., INC., 215 W. 25th

S. New York, N. Y. ADV. PG. 383. (h)

EM E COIL CO., INC., 85 Beechwood Ave., New
Reelle, N. Y. ADV. PG. 422. (h)

EPC PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn

1 N. Y. ADV. PG. 274. (h)

Etra Mfg. Co., Inc., Woods Church Rd., Flemington,

PRINTI ELECTRIC, INC., 30 Rockefeller Plaza, New YI 20, N. Y. ADV. PG. 188. (h)
FRE TRANSFORMER CO., INC., 1736 Weirfield St.,
B Klyn 27, N. Y. ADV. PG. 297. (h)
Gardr Electric Mfg. Co., 4227 Hollis St., Emeryville Biklyn 27, N. Y. ADV. PG. 277.

Gaffr Electric Mfg. Co., 4227 Hollis St., Emeryville 8.alif.

GEN AL ELECTRIC CO., Electronics Div., Electronics Pt., Syracuse, N. Y. ADV. PG. 1-23.

GEN AL ELECTROSONICS, INC., 32 W. 22nd St., N. York 10, N. Y. ADV. PG. 525. (h)

Gend Transformer Co., 18240 Harwood Ave., Home-wir III.

(h) GOSN ELECTRIC & MFG. CO., 2921 W. Olive St., Bhank, Calif. ADV. PG. 292.
Gran Transformer Co., 2734 N. Pulaski Rd., Chicago

III.

HIGIAND ENGINEERING CO., Main St. & Urban Ave.,

Webury, N. Y. ADV. PG. 412.

Indu Ial Electronics Co., Inc., Hanover, Mass.

Indu Ial Transformer Co., Gouldsboro, Pa.

Weansformer Corp., 4414 Park Ave., New York 57,

(h)

LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York, N. Y. ADV. PG. 438. (h)
Light Electric Corp., 214 Lackawanna Ave., Newark 4, Magnavox Co., The, Components Div., Fort Wayne 4, Neasurements corp., Boonton, N. J. ADV. PG. 158,

MEASUREMENTS CURP., Boonton, N. J. AUV. PG. 158, 159, Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, III.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.
NEW YORK TRANSFORMER CORP., Third Ave., Alpha, N. J. ADV. PG. 346.
(h) OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, III. ADV. PG. 79.
Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
(h) Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
Parmeko Ltd., 366 Madison Ave., New York 17, N. Y.

N. Y.
Randall, Inc., Douglas, 102 High St., Westerly, R. I. (h)
RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337. (h)
ROllins Corp., P. 0. Box 213, Lewes, Del. (h)
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347. (h)
Standard Electronics Corp., 285 Emmet St., Newark,
N. J.

Standard Transformer Corp., Elston, Kedzie, & Addison, Chicago 18, III. (h)
Standard Winding Corp., 44-62 Johnes St., Newburgh,

N. Y.
Super Electric Products Corp., 46 Oliver St., Newark, N. J. Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif.

Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III. (h)

Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernos, N. Y. (h)

TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV. PG. 379.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y.
(h)

ADV. PG. 427. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
N. J. ADV. PG. 413. (h)
UNITED TRANSFORMER CO., 150 Varick St., New 150 Varick St., New side Front Cover. (h) WITED TRANSFURWER CU., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h) Varo Mfg. Co., Inc., Box 638, Garland, Texas (h) WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 491. (h)

# CHOKES—r-f (Heavywire Low Voltage)

ACE COIL & ELECTRONICS CO., 912 Middlesex Ave., Metuchen, N. J. ADV. PG. 446. Aerolite Electronics Corp., 507 26th St., Union City, Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y. BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90. Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
Cambridge 38, Mass. ADV. PG. 437.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41,
Ill. ADV. PG. 506.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
Condor Radio Mfg. Co., 116 N. Montezuma, Prescott, Ariz.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. (h)

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.

Custom Electronics Corp., 738 Speedwell Ave., Morris Plains, N. J. Plains, W. J.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y. ELECTRONIC COILS, INC., Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 372. Etraco Mfg. Co., Inc., Woods Church Rd., Flemington, N. J. FAST & CO., JOHN E., 3101 N. Pulaski Rd., Chicago N. J.
FAST & CO., JOHN E., 3101 N. Pulaski Rd., Chicago
41, III. ADV. PG. 489.
FUGLE-MILLER LABORATORIES, 398 Main St. Metuchen, N. J. ADV. PG. 512, 513.
Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville Gardner Electric Wilg. Co., 722.

8, Calif.

Gates Radio Co., Quincy, III.

GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St.,
Burbank, Calif. ADV. PG. 292.

Guthman Inc., Edwin I., 15 Throop St., Chicago, III. (h)

HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave.,

Renalun 22, N. Y. ADV. PG. 514. HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 514. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477. K-V Transformer Corp., 4414 Park Ave., New York 57, (h)

LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159. erit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III.

Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif Calif.
National Coil Co., P. O. Box 1237, Sheridan, Wyo.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44,
Ill. ADV. PG. 79.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 152.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19,
Ill. SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347. Standard Electronics Corp., 285 Emmet St., Newark, Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
Thordarson-Meissner Mfg. Div., Mt. Carmel, III. (h)
United Pressed Products Co., 741 W. Harrison St.,
Chicago 7, III.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.
Varo Mfg. Co., Inc., Box 638, Garland, Texas
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,
Mo.

#### CHOKES---r-f & i-f

ACE COIL & ELECTRONICS CO., 912 Middlesex Ave., Metuchen, N. J. ADV. PG. 446. Aerolite Electronics Corp., 507 26th St., Union City, Aerolite Electronics Corp., 507 26th St., Union City, N. J.

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437.

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III. ADV. PG. 506.

Condor Radio Mfg. Co., 116 N. Montezuma, Prescott, Ariz. Ariz.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. (h)

Custom Electronics Corp., 738 Speedwell Ave., Morris DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307.
DIT-MCO INC., 729 Baltimore Ave., Kansas City 6,
Mo. ADV. PG. 452
Electricoil Transformer Co., Westerly Rd., Osslning, Electricoil Transformer Co., Westerly Rd., Osslning, N. Y.

ELECTRONIC COILS, INC., P. O Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 372.

ESSEX Electronics, Berkeley Heights, N. J.

FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.

GOSLIN ELECTRIC & MFG. Co., 2921 W. Olive St., Burbank, Calif. ADV. PG. 292

Guthman Inc., Edwin I., 15 Throop St., Chicago, III. (h) HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, N. Y. ADV. PG. 398.

HILLBURN ELECTRONIC PRODUCTS Co., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 514

HI-Q DIVISION, AEROVOX CORP., Seneca Ave., Olean, N. Y. ADV. PG. 242, 243.

International Resistance Co., 401 N. Broad St., Philadelphia B, Pa.

JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251

Joyner Corp., 462 N. Parkside Ave., Chicago 44, III.

LEE SPRING CO., 30 Main St., Brooklyn 1, N. Y. ADV. PG. 363. LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn. N. Y. ADV. PG. 491. Lewis Spring & Mfg. Corp., 2646 W. North Ave., Chicago 47, III. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.
Merit Coil & Transformer Corp., 4427 N. Clark St.,
Chicago 40, III.
Millen Mfg. Co., James, 150 Exchange St., Malden, Chicago 40, 111.

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, III.

National Coil Co., P. O. Box 1237, Sheridan, Wyo.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, III. ADV. PG. 79.

PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 152.

Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.

Ross Mfg. Co., 2405 Armitage Ave , Chicago 47, III. Sickles F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.

Sierra Electronic Corp., San Carlos, Calif.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, Ill. ADV. PG. 59 Chicago 39, III. ADV. PG. 59 Standard Electronics Corp., 285 Emmet St., Newark, Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y. 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,
N. J Teleradio Engineering Corp., 99 Wall St., New York, Thordarson-Meissner Mfg. Divs., Mt. Carmel, III. (h)
United Pressed Products Co., 741 W. Harrison St., Chi-Cago 7, III.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
Wilcox Electric Co , 1400 Chestnut St., Kansas City, Mo.

#### CHOPPERS-DC-AC

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 343.

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth
ADV. PG. 334. St., St Paul 1, Minn. ADV. PG. 334.
APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44,
Princeton, N. J. ADV. PG. 528.
James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180. MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.

Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Ave., Philadelphia 44, Pa. ADV. PG. 304, 305.

STEVENS-ARNOLD INC., 22 Elkins St., South Boston, Mass. ADV. PG. 46.

Vokar Corp., 7300 Huron River Drive, Dexter, Mich. VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

# CHRONAXIMETERS

Electro-Medical Lab., Inc., South Woodstock, Vt.

# CHRONOGRAPHS—Inertialess

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Electro-Medical Lab., Inc., South Woodstock, Vt.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill
Rd., Great Neck, N. Y. ADV. PG. 278.

# CHRONOSCOPES

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mount Vernon, N. Y. ADV. PG. 523.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 278.

Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42 Mass. bridge 42, Mass

# CIRCUITS-Potted

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 497. Audio Products Corp., 2265 Westwood Blvd., Los Angeles Audio Products Corp., 2265 Westwood Divu., Los Angeles 64, Calif.
Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
ERIE RESISTOR CO., 644 W. 12th St., Erie, Pa. ADV. PG. 271. PG. 271.
PCA, Inc, 6368 DeLongpre Ave., Hollywood 28, Calif.
Peschel Electronics, Inc., 13 Garden St., New Rochelle,
N. Y. Photocircuits Corp., Glen Cove, N. Y.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 320. Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif. Walkirt Co., 145 W. Hazel, Inglewood, Calif.

# CIRCUITS—Printed, Stamped or Etched

N. J. ADV. PG. 497. AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. AMERICAN LAVA COLU., 95.

Avion Instrument Corp., Paramus, N. J
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe
Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CENTRONICS CO., 41-05 Lawrence St., Flushing 55,
N. Y. ADV. PG. 525.

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne,

Decimeter, Inc., 1430 Market St., Denver 2, Colo.
DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla,
Calif. ADV. PG. 378.
ELECTRALAB INC., 110 Broad St., Boston 10, Mass. ELECTRALAB INC., 110 Bload St., Doctor S., ADV. PG. 402.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y. EMELOID CO., INC., THE, 1239 Central Ave., Hillside 5, N. J. ADV. PG. 405.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271. ERIE RESISTOR CURP., 644 W. 12th St., Che, 12th ADV. PG 271.

ETCHED PRODUCTS CORP., 39-01 Queens Blvd., Long Island City 4, N. Y. ADV. PG. 299.

Franklin Airloop Corp., 43-20 34th St., Long Island City 1, N. Y.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

Herlec Corp., 422 N. Fifth St., Milwaukee 3, Wis.

Insulating Fabricators of New England, Inc , 69 Grove St., Watertown 72, Mass.

Javex, 921 State, Garland, Texas.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Metaplast Process Inc., 9-17 37th Ave., Long Island City 1, N. Y.

MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. Molded Insulation Co., 335 E. Price St., Philadelphia England Etching & Plating Co., 25 Spring St., New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.

Northeastern Engineering, Inc., Manchester, N. H. PCA, Inc, 6368 DeLongpre Ave., Hollywood 28, Calif. Photocircuits Corp, Glen Cove, N. Y. Plastics & Electronics Co., Inc., P. O. Box 38, Station J. Buffalo 8, N. Y.

RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66.

Sprague Electric Co., 125 Marshall St., North Adams, Mass.

STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Aerolite Electronics Corp , 506 26th St., Union City, STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG 59. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

PG. 228, 229.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

Tech Laboratories, Inc., Bergen & Edsall Blvds, Palisades Park, N. J

Technograph Printed Circuits, Inc., 191 Main St., Tarrytown, N. Y.
Telvision Laboratories, Inc., 5045 W. Lake St., Chi-

cago 44, III.
Trans-Gel Products, Inc., 212-40 Jamaica Ave., Queens

Trans-Gel Products, Mic., 222-To College, N. Y.
Village, N. Y.
U. S. ENGINEERING CO., 521 Commercial St., Glendale
3, Calif. ADV. PG. 432.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box
93, Camden, N. J. ADV. PG. 472.
Wheaton Co., T. C., Electronic Div., Millville, N. J.
Willson Camera Co., Inc., 1401 Lawrence Road, Haver-

WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG.

# CLAMPS for TUBES

AUGAT BROS., INC., 33 Perry Ave., Attleboro, Mass. ADV. PG. 194.
Belling & Lee Ltd., 366 Madison Ave, New York 17, N. Y. Birtcher Corp., 4371 Valley Blvd., Los Angeles 32, Calif. BREEZE CORPS., INC , 41 S. Sixth St., Newark 7, N. J. ADV. PG. 259. ADV. PG. 259.
Buck Engineering Co., 37-41 Marcy St., Freehold, N. J. CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III ADV. PG. 234, 235.
Edison Swan Electric Co., Ltd., (Clix Div.) 366 Madison Ave., New York 17, N. Y.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave , Brooklyn, N. Y. ADV. PG. 402, 403.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. MATIONAL CO., INC , 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329. Remier Co., Ltd., 2101 Bryant St., San Francisco 10, Remier Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Calif.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
TIMES FACSMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV PG. 526.
Tinnerman Products, Inc., P. O. Box 6688, Dept. No 16, Cleveland 1, Ohio.

# CLIPS—Fuse

Aerolite Electronics Corp., 507 26th St., Union City, N. J.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
ATLAS ELECTRONICS MFG. CO., 312 Stuart St., Boston 16, Mass. ADV. PG. 429.
BEL-FUSE, INC., 311 Mountain Rd., Union City, N. J. ADV. PG. 521.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342. BUSSMAN MFG. CO., St. Louis 7, Mo ADV. PG. 370. CINCH MFG. CORP., 1026 S. Homan St., Chicago 24, III. ADV. PG. 234, 235. Dante Electric Mfg. Co., Bantam. Conn FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498. GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV PG. 120. Ideal Industries, Inc., Park & Borden Aves., Sycamore, III. Ideal Industries, Inc., Park & Dollan Charle, Competer Tube & Products Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Manuary 5, N. J. Newark 5, N. J.

LITTELFUSE, INC., Des Plaines, III. ADV. PG. 465.

NATIONAL CO., INC., 61 Sherman St , Malden 48, Mass.

ADV. PG. 328, 329.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

Schott Co., Walter L , 3225 Exposition Pl., Los Angeles 18, Calif. 18, Calif.
SHERMAN MFG. CO., H. B., 22 Barney St., Battle Creek, Mich. ADV. PG. 200.
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.
Trumbull Electric Dept. of General Electric Co., Plainwille Conn. ville, Conn.

#### CLIPS-Grid

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

MGRICAN PHENOLIC CORP., 1830 S. 54th Ave., Chlcago 50, III. ADV. PG. 212.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt Vernon, N. Y.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.

Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.

FEDERAL SCREW PRODUCTS INC., 234 W. Huron St., Chicago 10, III. ADV. PG. 498.

Franklin Airloop Corp., 43–20 34th St., Long Island City, N. Y. GENERAL CEMENT MFG. CO, 919 Taylor Ave., Rockford, III. ADV. PG. 120.
Hobson Brothers, 4049 W. Fullerton St., Chicago 39, III.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N Y. ADV. PG. 477.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
JOHNSON CO, E. F., Waseca, Minn. ADV. PG. 248-251.
Kulka Electric Mfg. Co., Inc., 30 South St., Mount Vernon, N. Y.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif. Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N.Y.
Zierick Mfg. Corp., Beechwood & Rockdale Aves, New Rochelle, N.Y.

# CLIPS-Test Aerolite Electronics Corp., 507 26th St., Union City,

N. J
American Radio Hardware Co., Inc., 152 MacQueston
Pkwy., Mt. Vernon, N. Y
Belling & Lee Ltd., 366 Madison Ave., New York 17,
N. Y.
Edison Swan Electric Co., Ltd., (Clix Div), 366 Madison
Ave., New York 17, N. Y.
Frankel Connector Co., 27 Vestry St., New York, N. Y.
GENERAL CEMIENT MFG. CO. 919 Taylor Ave., Rockford, TII. ADV. PG. 120.

GRAYHILL, 4536 W. Madison St., Chicago 24, III

ADV. PG. 510.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

Millen Mfg. Co, James, 150 Exchange St., Malden, Mueller Electric Co , 1583 E. 31st St., Cleveland 14, NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.
RAPID SPECIALTIES CO., 325 W. Huron St., Chicago 10, III. ADV. PG. 523.
Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Calif.
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.
Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.

# CLOTHS-Speaker Grille

Flock Process Co., Inc., 26 Fahey St., Springdale,

F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV PG. 403.

hott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif. \*NERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford,

#### OTHS-Woven Wire

ase Brass & Copper Co., Inc., 236 Grand St., Water-bury 20, Conn. eveland Wire Cloth & Mfg Co., 3573 E. 78th St., Cleveland 5, Ohio. ock Process Co., Inc., 26 Fahey St., Springdale, III. ADV. PG. 120. LLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. ADV. PG. 494. JLTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 316 ebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J. INERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, nott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

# ATINGS—Conductive See also Graphite, Colloidal

heson Colloids Co., 1950 Washington Ave., Port Huron, herican Resinous Chemical Co., 103 Foster St., Peabody, Mass. X & CO., INC., 50 Broad St., New York 4, N. Y. ADV. PG. 484.

Pont de Nemours & Co., Inc., E. I., Wilmington 98, ctrochemical Industries, Inc., Jacques St., Worcester,

NERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
In Co., Inc., A. C., 10th St. & 44th Ave., Long Island Dity 1, N. Y.
Fex, 921 State, Garland, Texas.
Ferty Mirror Div., Libbey-Owens-Ford Glass Co., Farentum, Pa.

as & Waldstein Co., 438 Riverside Ave., Newark 4,

taplast Process Inc., 9-17 37th Ave., Long Island City CRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 62. ical Film Engineering Co., 2731-37 N. 6th St., Phila-

delphia 33, Pa. Instiehl Chemical Co., 104 Lake View Ave., Waukegan,

vereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, ac Co., The, 147 Meadow Rd., Rutherford, N. J. PHAR MILLS, INC., 112-130 26th St., Brooklyn 32, J. Y. ADV. PG. 517.

# MATINGS-CONDUCTIVE—Tube Interior

eson Colloids Co., 1950 Washington Ave., Port Huron, Wich. Letrochemical Industries, Inc., Jacques St., Worcester, Mass. ERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35. 'as & Waldstein Co., 438 Riverside Ave., Newark 4, N. J. aplast Process Inc., 9-17 37th Ave., Long Island City ladelphia Quartz Co., 1146 Public Ledger Bldg., Philalelphia 6, Pa. iation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III. ac Co., The, 147 Meadow Rd., Rutherford, N. J.

ATINGS—Protective \*Indicates Service Coating only. Perican Chemical Paint Co., Ambler, Pa. Perican Products Mfg. Corp., 8127-33 Oleander St., New Orleans 18, La. Resinous Chemical Co., 103 Foster St., Pea-CHOR METAL CO., 244 Boerum St., Brooklyn 6, ACHOR METAL CU., 244 Boerum St., Closes, A. M. Y. ADV. PG. 58.
Frett Varnish Co., 1532 S. 50th Court, Cicero 50, III.
Gresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
V Chemical Co., Midland, Mich.
Of Pont de Nemours & Co., E. I., Wilmington 98, Lez Plastics & Chemicals, Inc., 1921 Walck Rd., North

onawanda, N. Y.
ECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clif-

on, N. J. ADV. PG. 444.

BERSON & CUMING CO., 126 Massachusetts Ave.,
soston 15, Mass. ADV. PG. 35.

Standard Oil Co., 15 W. 51st St., New York 19, 1. Y. Fality Chemical Products Corp., 472 Frelinghuysen Ave., Sewark, N. J.

GUERAL CEMENT MFG. CO., 919 Taylor Ave., Rock-

GVERAL CHEMICAL DIV., Allied Chemical & Dye Corp.,
O Rector St., New York 6, N. Y. ADV. PG. 453.
UERAL PLASTICS CORP.,\* 611 Main Ave., Clifton,

Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y. Halowax Products Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island Gity 1, N. Y. Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y. INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 438.

438.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11. N. J. ADV. PG. 62, 63.
Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
Lukens Steel Co. and Division, By-Products Steel Co. and
Lukenweld, 447 Luken Building, Coatesville, Pa.
Maas & Waldstein Co., 438 River Ave., Newark 4, N. J.
Marblette Corp., 37-21 30th St., Long Island City, N. Y.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.
462.

Micross Inc., 2958 Los Feliz Blvd., Los Angeles

New Jersey Wood Finishing Co., Chines, J. Branco Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.
PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. ADV. PG. 503.
Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis 4, Ind.

11 S. Meridian St., Indianapolis 4, Ind.
Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15,

Schenectady Varnish Co., Schenectady, N. Y.
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.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472.
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.
WESTINGHOUSE ELECTRIC CORP., P.O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32,
N. Y. ADV. PG. 517.

#### COATINGS—Salt Spray Resistance \*Indicates Service Coating only.

American Chemical Paint Co., Ambler, Pa.
American Products Mfg. Corp., 8127-33 Oleander St.,
New Orleans 18, La.
American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
ANCHOR METAL Co., 244 Boerum St., Brooklyn 6, N. Y.
ADV PG 58.

ADV. PG. 58.
Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945,
Arcadia, Calif.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98,

Del.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd.,
Clifton, N. J. ADV. PG. 444.
Esso Standard Oil Co., 15 W. 51st St., New York 19,

N. Y.
GENERAL CHEMICAL DIV., Allied Chemical & Dye Corp.,
40 Rector St., New York 6, N. Y. ADV. PG. 453.
GENERAL PLASTICS CORP.,\* 611 Main Ave., Clifton,
N. J. ADV. PG. 334.
Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.
Halowax Products Division, Union Carbide & Carbon
Corp., 30 E. 42nd St., New York 17, N. Y.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
Mass & Waldstein Co., 438 River Ave., Newark 4, N. J.
Marblette Corp., 37-21 30th St., Long Island City, N. Y.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.
462.

Midland Industrial Finishes Co., Waukegan, III.
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,

Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island, N. Y.

Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
U. S. Stoneware Co., The, Akron 9, Ohio.
Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32, N. Y. ADV. PG. 517.

# CODE & TAB MARKERS

Avery Adhesive Label Corp., Monrovia, Calif. Brady Co., W. H., 1612 E. Spring St., Chippewa Falls, BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
Topflight Tape Co., 116 E. Market St., York, Pa.
Western Lithograph Co., 600 E. Second St., Los Angeles 54, Calif.

# COIL ASSEMBLIES

A.P.W. CO., 72 W. Main St., Rockaway, N. J. ADV. PG. 402.

ACE COIL & ELECTRONICS CO., 912 Middlesex Ave., Metuchen, N. J. ADV. PG. 446.

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena

ACME ELECTRUNICS, INC., 500 N. Called A. Calif. ADV. PG. 496.

Acme Wire Co., New Haven 14, Conn.
Aero Coil Inc., 507-26th St., Union City, N. J.

Aerolite Electronics Corp., 507 26th St., Union City,

N. J.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
Mass. ADV. PG. 24.
ALLIED CONTROL CO., INC., 2 East 'End Ave., New
York 21, N. Y. ADV. PG. 150, 151.
American Relay & Controls Inc., 4901 W. Flournoy St.,
Chicago 44, III.

American Relay & Controls Inc., 4901 W. Flournoy St., Chicago 44, III.

Atlas Coil Winders, Inc., Stamford, Conn.
Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Best Mfg. Co., 1200 Grove St., Irvington 11, N. J.
BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. Caddell-Burns Mfg. Co., 40 E Second St., Mineola, N. Y.

N. Y.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
Cambridge 38 Mass. ADV. PG. 437.

Cambridge 38, Mass. ADV. PG. 437.
Carbonneau Industries, Inc., Grand Rapids, Mich.
CENTRONICS CO., 41-05 Lawrence St., Flushing 55,
N. Y. ADV. PG. 525.
Chicago Electronic Engineering Co., 3223 W. Armitage
Ave., Chicago 47, III.

Ave., Chicago 47, III.
Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 14, Ohio.
Coil Winders Inc., 61 Bergen St., Broollyn 2, N. Y.
COILCRAFT, INC., 3716 N. Cidero Are., Chicago 41, III. ADV. PG. 506.
COMMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, III. ADV. PG. 462.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 292.
Cycle Electronics Laboratories, 356 Glenwood Ave., East Orange, N. J.

Orange, N. J.

DANO ELECTRIC CO., Main St., Winsted, Conn. ADV.

PG. 508.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago
41, III.

Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge,
Mass.

Ecco High Frequency Corp., 7020 Hudson Blvd., North

Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
Beechwood Ave., New Rochelle, N. Y.
Boyl. PG. 422.
Beco PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y.
ADV. PG. 274.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y.
ADV. PG. 188.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J.
ADV. PG. 189-193.
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J.
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J.
Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J. General Transformer Co., 18240 Harwood Ave., Home-

wood, III. GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J.

ADV. PG. 245.
Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III.
Hallen Co., 416 Peninsular Ave., San Mateo, Calif.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, N. Y. ADV. PG. 398.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau
Ave., Brooklyn 22, N. Y. ADV. PG. 514.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, III. ADV. PG. 519.
Industrial Electronics Co., Inc., Hanover, Mass.
JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, III.
K-V Transformer Corp., 4414 Park Ave., New York 57,
N. Y.

N. Y.
LANGEVIN MANUFCTURING CORP., 37 W. 65th St.,
New York 23, N. Y. ADV. PG. 438.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
LEE SPRING CO., 30 Main St., Brooklyn 1, N. Y. ADV.

LEONARD ELECTRIC PRODUCTS CO., 1562 61st St. Brooklyn N. Y. ADV. PG. 491.

MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.

Racine, Wis. ADV. PG. 439.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, III. Millen Mfg. Co., James, 150 Exchange St., Malden,

Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.

Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34,

MATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

Neomatic Inc., 879 Wellesley Ave., Los Angeles 49,

North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
NORTH HILLS ELECTRIC CO., P. O. Box 427, Great
Neck, N. Y. ADV. PG. 132.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.
Peerless Electrical Products Div. of Altec Lansing Corp.,
9356 Santa Monica Blvd., Beverly Hills, Calif.
Philmore Mfg. Co., Inc., 113 University Place, New
York 3, N. Y.. Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y. PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 412.

ADV. PG. 412. Pilot Radio Corp., 37-06 36th St., Long Island City 1,

Polytron Corp., 47 Martine Ave., White Plains, N. Y. Power Conversions, 2635 W. Grand Ave., Chicago 12,

III.
Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J. Randall, Inc., Douglas, 102 High St., Westerly, R. I. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
REDMAN ELECTRONICS CORP., P. O. 80x 72, Thompsonville, Conn. ADV. PG. 152.
Sag Harbor Industries, Inc., Sag Harbor, N. Y. Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.

Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
Sickles, F. W., Div. General Instrument Corp., 165
Front St., Chicopee, Mass.
Soreng Mfg. Corp., 9555 Eden Ave., Schiller Park, III.
Speer Resistor Corp., St. Marys, Pa.
SPERRY GYROSCOPE Co., Div. of the Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
STANDARD COIL PRODUCTS Co., 2329 N. Pulaski Rd.,
Chicago 39, III. ADV. PG. 59.
Standard Electronics Corp., 285 Emmet 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., Newburg, N. Y.
Summit Coil Co., 67 Union Pl., Summit, N. J.
Super Electric Products Corp., 46 Oliver St., Newark,
N. J.
Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave.,

Los Angeles 37, Calif.
Teleradio Engineering Corp., 99 Wall St., New York
5, N. Y.

Telvision Laboratories, Inc., 5045 W. Lake St., Chicago

Electric Development Co., Inc., 343 Classon Ave.,

Brooklyn 5, N. Y. etrad Co., 4921 Exposition Blvd., Los Angeles 16, Tetrad

Ther Electric & Machine Works, 15 S. Jefferson St., Chicago, III.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV.

PG. 379.

Tri-Dex Co., P. O. Box 643, Lindsay, Calif.
United Pressed Products Co., 741 W. Harrison St.,
Chicago 7, III.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
N. J. ADV. PG. 413.

Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,
Mo.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

# COIL WINDING MACHINES See Machines-Coil Winding

# COIL WINDINGS

A.P.W. CO., 72 W. Main St., Rockaway, N. J. ADV.

ACRE VI. U., 72 W. Main St., Rockaway, N. J. ADV. PG. 402.

ACE COIL & ELECTRONICS CO., 912 Middlesex Ave., Metuchen, N. J. ADV. PG. 446.

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 496.

Acme Wire Co., New Haven 14, Conn.

Acro Transformer Mfg. Corp., 26-02 Fourth St., Astoria 2, N. Y.

Aero Coil Inc., 507-26th St., Union City, N. J. Aerolite Electronics Corp., 507 26th St., Union City, N. J. AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 517.

AIRDESIGN, INC., 241 Fairnell Ave., Opper Sars, 1. ADV. PG. 517.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 150, 151.

American Relay & Controls Inc., 4901 W. Flournoy St., Chicago 44, Ill.

Associated Production Co., 162 N. Clinton St., Chicago 6. Ill.

ASSOciated Production Co., 102 N. Cillicon St., One-cago 6, III.

Atlas Coil Winders, Inc., Stamford, Conn.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Best Mfg. Co., 1200 Grove St., Irvington 11, N. J.
BOGUE ELECTRIC MFG. Co., 52 Iowa Ave., Paterson 3,

N. J. ADV. PG. 153.

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola,

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437. Carbonneau Industries, Inc., Grand Rapids, Mich.

CENTRONICS CO., 41-05 Lawrence St., Flushing 55, N. Y. ADV. PG. 525. Chicago Electronic Engineering Co., 3224 W. Armitage Ave., Chicago 47, Ill. Clippard Instrument Laboratory, Inc., 7390 Colerain Ave.,

Cincinnati 14, Ohio.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41,
III. ADV. PG. 506.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago
18, III. ADV. PG. 462.
Cossor (Canada) Ltd., 301-303 Windsor St., Ha/ifax,

N. S., Canada. Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5,

R. I. CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 517. Rockaway, N. Y. ADV. PG. 517. Cycle Electronics Laboratories, 356 Glenwood Ave., East

Orange, N. J.
DANO ELECTRIC CO., Main St., Winsted, Conn. ADV.

PG. 508.

Delco Radio Div., General Motors Corp., Kokomo, Ind.
DeLuxe Coils, Inc., Wabash, Ind.
Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 14, III.

Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge,

Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J. Electrical Windings, Inc., 2015 N. Kolmar Ave., Chi-

Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, III.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.
ELECTRONIC COILS, INC., P. O. Box 1641, 44 Taylor
St., Springfield, Mass. ADV. PG. 372
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th
St., New York, N. Y. ADV. PG. 383.
Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn
17, N. Y. ADV. PG. 274.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Etraco Mfg. Co., Inc., Woods Church Rd., Flemington, N. J.

Etraco Mig. Co., Inc., Woods Church Ru., Flemmington, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 188.
Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. Five Star Co., 440 Mixville Rd., West Cheshire, Conn. FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

field, N. J.

General Transformer Co., 18240 Harwood Ave., Homewood, III.

Geotronic Labs., Inc., Dallas 8, Texas.
GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245. amer Transformer Co., 2734 N. Pulaski Rd., Chicago

Guthman Inc., Edwin I., 15 S. Throop St., Chicago, Ill.

39, III.
Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III.
Hallen Co., 416 Peninsular Ave., San Mateo, Calif.
HIGHLAND ENGINEERING CO., Main St. & Urban
Ave., Westbury, N. Y. ADV. PG, 412.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau
Ave., Brooklyn 22, N. Y. ADV. PG. 514.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave.,
Chicago 25, III. ADV. PG. 519.
Industrial Electronics Co., Inc., Hanover, Mass.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
Jeffers Electronics Co., DuBols, Pa.
JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.
JOyner Corp., 462 N. Parkside Ave., Chicago 44, III.
K-V Transformer Corp., 4414 Park Ave., New York 57,
N. Y. ADV. PG. 438.
LANGEVIN MFG. CORP., 37 W. 65th St., New York
23, N. Y. ADV. PG. 438.
LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn, N. Y. ADV. PG. 491.
Mannavox Co.. The. Components Div., Fort Wayne 4. Ind.

Brooklyn, N. Y. ADV. PG. 491.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Magnetic Windings Div., Essex Wire Corp., Fremansburg Ave. & Hobson Blvd., Easton, Pa.

MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, III.
MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. ADV. PG. 171.
Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, III.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Miller Co., J. W., 5917 S. Main St., Los Angeles 3,

Modelectric Products Corp., 1500 Bangs Ave., Asbury Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34,

National Coil Co., P. O. Box 1237, Sheridan, Wyo.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
Neomatic Inc., 879 Wellesley Ave., Los Angeles 49,

Electric Mfg. Co., 501 S. Market St., Galion,

ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 412.

Polytron Corp., 47 Martine Ave., White Plains, N. Y. Power Conversions, 2635 W. Grand Ave., Chicago 12, III. Presto Electric Co., Inc., 600 Fulton St., Elizabeth,

Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill.
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.
Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 152.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 19, Ill.
Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
Sickles, F. W., Div. General Instrument Corp., 165
Front St., Chicopee, Mass.
Soreng Mfg. Corp., 9555 Eden Ave., Schiller Park, Ill.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, Ill. ADV. PG. 59.
Standard Electronics Corp., 285 Emmet St., Newark,
N. J.
Standard Transformer Corp., Elston, Kedzie & Addison,

Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, III. 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. T V Products Corp., 907 E. 23rd St., Paterson, N. J. Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif.

Los Angeles 37, Calif.
Teleradio Engineering Corp., 99 Wall St., New York 5, Tel-Rad Mfg. Co., Inc., 7th & Madison St., Fennimore,

Telvision Laboratories, Inc., 5045 W. Lake St., Chicago

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif. Ther Electric & Machine Works, 15 S. Jefferson St., Chicago, III.

There Electric & Machine Wolse, 20 of Chicago, III.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.

Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.

TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa.

TRANSFORMER SPLANDER ADV. PG. 379.

TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 302.

Tri-Dex Co., P. O. Box 643, Lindsay, Calif.
UNION ELECTRIC PRODUCTS CO., 24 Edison Pl., Newark 2, N. J. ADV. PG. 526.

United Pressed Products Co., 741 W. Harrison St., Chicago 7, III.

N. J. ADV. PG. 413. Vokar Corp., 7300 Huron River Drive, Dexter, Mich. Weymouth Instrument Co., 1440 Commercial St., East

Weymouth 89, Mass.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers,
N. Y. ADV. PG. 482.

# COILS—Antenna

Metuchen, N. J. ADV. PG. 446.

Aero Coil Inc., 507-26th St., Union City, N. J.

Aerolite Electronics Corp., 507 26th St., Union City,

Aerolite Electronics Corp., 507 26th St., Union City, N. J.

Andrew Corp., 363 E. 75th St., Chicago 19, III.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437.
Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
CENTRONICS CO., 41-05 Lawrence St., Flushing 55, N. Y. ADV. PG. 525.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III.
ADV. PG. 506.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
Delco Radio Div., General Motors Corp., Kokomo, Ind. Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, III.

III.
Essex Electronics, Berkeley Heights, N. J.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III.
Hallen Co., 416 Peninsular Ave., San Mateo, Callf.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port
Washington, N. Y. ADV. PG. 398.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave.,
Brooklyn 22, N. Y. ADV. PG. 514.

Brooklyn 22, N. Y. ADV. PG. 514. HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chlcago 25, Ill. ADV. PG. 519. Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.

# LECTRONIC and ALLIED PRODUCTS.

ADV. PG. 363.
ONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV.PG. 491.

EASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159. dissner Mfg. Div., Maguire Industries, Inc., Mt. Cardissner Mfg. Div., Maguire Industries, Inc., Mt. Car-mel, III. erit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III. Iler Co., J. W., 5917 S. Main St., Los Angeles 3, nroe Coil Co., 2839 N. Narragansett Ave., Chicago nroe Coil Co., 2839 N. Narragaisett Ave., Chicago, III.
iter Co., 1255 S. Michigan Ave., Chicago, III.
itional Coil Co., P. O. Box 1237, Sheridan, Wyo.
THON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
ilco Corp., Tioga & C Sts., Philadelphia 34, Pa.
ilmore Mfg. Co., Inc., 113 University Place., New
York 3, N. Y.
Ivron Corp., 47 Martine Ave., White Plains, N. Y. York 3, N. Y.—
lytron Corp., 47 Martine Ave., White Plains, N. Y.
dex Corp., 2076 N. Elston Ave., Chicago 14, III.
iDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 152.

Villan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.

S Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.

kles, F. W., Div. General Instrument Corp., 165 Front

St., Chicopee, Mass. Ries, F. W., DIV. General Instrument Corp., 165 Front St., Chicopee, Mass. ANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., hicago 39, III. ADV. PG. 59. andard Electronics Corp., 285 Emmet St., Newark, andard Winding Corp., 44-62 Johnes St., Newburgh, anwyck Winding Co., 137 Walsh Ave., Newburgh, mmit Coil Co., 67 Union Pl., Summit, N. J. Der Electric Products Corp., 46 Oliver St., Newark, Peradio Engineering Corp., 99 Wall St., New York 5, Rad Mfg. Co., Inc., 7th & Madison St., Fennimore, Triangular Mrg. Divs., Mt. Carmel, III.

Ifted Pressed Products Co., 741 W. Harrison St., Chicago 7, III.

S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413. st Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif. Site Tuning Corp., 421 W. 54th St., New York, N. Y. Cox Electric Co., 1400 Chestnut St., Kansas City, NKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

ILS-Choke P. W. CO., 72 W. Main St., Rockaway, N. J. ADV. PG. 402.

E COIL & ELECTRONICS CO., 912 Middlesex Ave., Metuchen, N. J. ADV. PG. 446.

TO Products Co., 369 Shurs Lane, Philadelphia 28, Pa. To Coil Inc., 507-26th St., Union City, N. J. Folite Electronics Corp., 507 26th St., Union City, N. J. N. J.
dec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif.
das Coil Winders, Inc., Stamford, Conn.
comatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
RKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.
Ist Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
ND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.
d Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
ideali-Burns Mfg. Co., 40 E. Second St., Mineola,
N. Y. MBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437 Cron Mfg. Co., 415 S. Aberdeen St., Chicago, III. NTRONICS CO., 41-05 Lawrence St., Flushing 55, N. Y. ADV. PG. 525. Cago Electronic Engineering Co., 3223 W. Armitage Rve., Chicago 47, III. ELCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III. ADV. PG. 506. Il Winders Inc., 61 Bergen St., Brooklyn 2, N. Y. MAR ELECTRIC Co., 3349 W. Addison St., Chicago 18, III. ADV. PG. 462. Intinental Electric Co., Inc., 334 Ferry St., Newark 5. N. J. 6, N. J. (Canada) Ltd., 301-303 Windsor St., Hallfax, N. S., Canada. N. S., Canada. le Electronics Laboratories, 356 Glenwood Ave., East Prange, N. J.

RADIO PRODUCTS CO., INC., 2300 W. Armitage ave., Chicago 47, Ill. ADV. PG. 294. NO ELECTRIC CO., Main St., Winsted, Conn. ADV. Co Radio Div., General Motors Corp., Kokomo, Ind.
Luxe Coils, Inc., Wabash, Ind.
LTZ DESIGN & MFG. CO., Grandview 6, Mo. ADV.

mitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. LER ENGINEERING CO., INC., 740 S. 13th St., Jewark 3, N. J. ADV. PG. 362.

E SPRING CO., 30 Main St., Brooklyn 1, N. Y. Electrical Windings, Inc., 2015 N. Kolmar Ave., Chi-Electrical Windings, Inc., 2013 N. Resulting, N. Y. cago 39, III.
Electricoll Transformer Co., Westerly Rd., Ossining, N. Y. ELECTRONICS COILS, INC., P. O. Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 372.
Electronic Parts Mfg. Co., 508 25th St., Union City, 111.

Electronic Parts Mfg. Co., 508 25th St., Union City, N. J.

ELECTRONIC TRANSFORMER Co., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.

EMPIRE COIL CO., INC., 85 Beechwood Ave., New Rochelle, N. J. ADV. PG. 422.

Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.

EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 274.

Essex Electronics, Berkeley Heights, N. J.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

Filtron Co., Inc., 131-05 Fowler Ave., Flushing N. Y.

FREED TRANSFORMER CO., INC., 1736 Weirfield St.,

Brooklyn 27, N. Y. ADV. PG. 297.

FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.

Gates Radio Co., Quincy, III.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

General Transformer Co., 18240 Harwood Ave., Homewood, III.

Geotronic Labs., Inc., Dallas 8, Tex. Geotronic Labs., Inc., Dallas 8, Tex. Gramer Transformer Co., 2734 N. Pulaski Rd., Chicago Gramer Transformer Co., 2734 N. Pulaski Rd., Chicago 39, III.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y. Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III. Hallen Co., 416 Peninsular Ave., San Mateo, Calif. HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, N. Y. ADV. PG. 398.
HIGHLAND ENGINEERING CO., Main St., & Urban Ave., Westbury, N. Y. ADV. PG. 412.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 514.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago, 25, III. ADV. PG. 519.
Industrial Electronics Co., Inc., Hanover, Mass. Industrial Transformer Co., Gouldsboro, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Jeffers Electronics Co., DuBois, Pa.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, III. K-V Transformer Corp., 4414 Park Ave., N. Y. 57, N. Y. LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.
Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, III. LEE SPRING Co., 30 Main St., Brooklyn 1, N. Y. ADV. PG. 363.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., PG. 363. LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., LEUNARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491.

Lewis Spring & Mfg. Corp., 2646 W. North Ave., Chicago 47, III.

Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. ADV. PG. 171.

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass 34, III. National Coil Co., P. O. Box 1237, Sheridan Wyo

Co., J. W., 5917 S. Main St., Los Angeles 3,

34, III.
National Coil Co., P. O. Box 1237, Sheridan, Wyo.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44,
III. ADV. PG. 79.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.
Peerless Electrical Products Div. of Altec Lansing Corp.,
9356 Santa Monica Blvd., Beverly Hills, Calif.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
Philico Corp., Tioga & C Sts., Philadelphia 34, Pa.
Power Conversions, 2635 W. Grand Ave., Chicago 12,
III.

Electric Co., Inc., 600 Fulton St., Elizabeth,

Radex Corp., 2076 N. Elston Ave., Chicago 14, III.
Randall, Inc., Douglas, 102 High St., Westerly, R. I.
REDMAN ELECTRONICS CORP., P. 0. Box 72, Thompsonville, Conn. ADV. PG 152.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.

Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
Sickles, F. W., Div. General Instrument Corp., 165
Front St., Chicopee, Mass.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great
Neck, N. Y. ADV. PG. 139, 140.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
STACKPOLE CARBON CO., St. Mary's Pa. ADV. PG.

STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 59. Standard Electronics Corp., 285 Emmet St., Newark, N. J.

Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, III.

Standard Winding Corp., 44-62 Johnes St., Newburgh, Stanwyck Winding Co., 137 Walsh Ave., Newburgh,

Summit Coll Co., 67 Union Pl., Summit, N. J. Super Electric Products Corp., 46 Oliver St., Newark,

N. J.
T V Products Corp., 907 E. 23rd St., Paterson, N. J.
Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los
Angeles 37, Calif.
Teleradio Engineering Corp., 99 Wall St., New York

Tel-Rad Mfg Co., Inc., 7th & Madison St., Fennimore,

Wis.
Tetrad Co., 4921 Exposition Blvd., Los Angeles 16,

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa-

ADV. PG. 379.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302.
UNION ELECTRIC PRODUCTS CO., 24 Edison Pl., Newark 2, N. J. ADV. PG. 526.
United Pressed Products Co., 741 W. Harrison St., Chl-

YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

# COILS—Electronic Heating Inductor

Aero Coil Inc., 507-26 St., Union City, N. J. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
Coll Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
High Frequency Heating Co., 143 Glen Park Ave., Gary,

High Frequency Heating Co., 143 Glen Park Ave., Gary, Ind.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
INDUCTION HEATING CORP., 181 Wythe Ave., Brooklyn 11, N. Y. ADV. PG. 467.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.
Randall, Inc., Douglas, 102 High St., Westerly, R. I. 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. Akameda St., Burbank, Calif.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

# COILS-Flyback

Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41,
III. ADV. PG. 506.
D X RADIO PRODUCTS CO., INC., 2300 Armitage Ave.,
Chicago 47, III. ADV. PG. 294.
Du Mont Laboratories, Inc., Allen B., Television Receiver
Div., Electronic Parts Dept., 35 Market St., East Paterson, N. J.

ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th
St., New York, N. Y. ADV. PG. 383.

EMPIRE COIL CO., INC., 85 Beechwood Ave., New
Rochelle, N. Y. ADV. PG. 422.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III.
Heppner Mfg. Co., P. O. Box 612, Round Lake, III.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau
Ave., Brooklyn 22, N. Y. ADV. PG. 514.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, III.
K-V Transformer Corp., 4414 Park Ave., New York 57,
N. Y.
Merit Coil & Transformer Corp., 4427 N. Clark St.,
Chicago 40, III.
Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34,
III.

Monroe Cott Co., 2037 N. Natrogalisett Are., Chicago Jr., III.

Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
Raypar, Inc., 7800 W. Addison St., Chicago, III.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 152.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
Sickles, F. W., DIV. General Instrument Corp., 165 Front
St., Chicopee, Mass.
SQUARE ROOT MFG. CORP., 391 Saw MIII River Rd.,
Yonkers, N. Y. ADV. PG. 347.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, III. ADV. PG. 59.
Standard Transformer Corp., Elston, Kedzle & Addison,
Chicago 18, III.
Standard Winding Co., 44-62 Johnes St., Newburgh,
N. Y.

Stankyck Winding Co., 137 Walsh Ave., Newburgh, N. Y. T V Products Corp., 907 E. 23rd St., Paterson, N. J. Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif. Teleradio Engineering Corp., 99 Wall St., New York, N. Y. Tel-Rad Mfg. Co., Inc., 7th & Madison St., Fennimore, Wis.
Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif.

Tails.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302.
United Pressed Products Co., 741 W. Harrison St., Chicago 7, III.

#### **COILS**—Magnet

A. P. W. CO., 72 W. Main St., Rockaway, N. J. ADV. A. P. W. CU., 72 W. Main St., Rockaway, N. J. ADV. PG. 402.

ACE COIL & ELECTRONICS CO., 912 Middlesex Ave., Metuchen, N. J. ADV. PG. 446.

Acme Wire Co., New Haven 14, Conn.

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 150, 151.

American Relay & Controls, Inc., 4901 W. Flournoy St., Chicago 44, III.

Rest Mfr. Co. 1200 Grove St. Invision 11 N. L. Chicago 44, III.
Best Mfg. Co., 1200 Grove St., Irvington 11, N. J.
BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.
Cadell-Burns Mfg. Co. 40 E. Second St., Mineola, N. Y.
Carbonneau Industries, Inc., Grand Rapids, Mich.
CENTRONICS CO., 41-05 Lawrence St., Flushing 55,
N. Y. ADV. PG. 525.
Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y.
COLLCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III.
ADV. PG. 506.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
N. S., Canada. N. S., Canada.
Cotto-Coil Co., Inc., 65 Pavillion Ave., Providence 5, R. I.
Cycle Electronics Laboratories, 356 Glenwood Ave., East
Orange, N. J.
DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. Canada. PG. 508

DeLuxe Coils, Inc., Wabash, Ind.
Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago
14, Ill.

14, III.
EISLER ENGINEERING CO., INC., 740 S. 13th St.,
Newark 3, N. J. ADV. PG. 362.
Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago

Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, III.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.
ELECTRONIC COILS, INC., P. O. Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 372.
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 274
Five Star Co., 440 Mixville Rd., West Cheshire, Conn.

Flue Star Co., 440 Mixville Rd., West Cheshire, Conn.
FUGLE-MILLER LABORATORIES, 398 Main St.,
Metuchen, N. J. ADV. PG. 512, 513.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield,

N. J. GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J.

ADV. PG. 245.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, III. ADV. PG. 519.
Industrial Transformer Co., Gouldsboro, Pa.
K-V Transformer Corp., 4414 Park Ave., New York 57,

Industrial Transformer Co., Gouldsboro, Pa.
K-V Transformer Corp., 4414 Park Ave., New York 57,
N. Y.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero
Ave., Chicago 38, III. ADV. PG. 274.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts.,
Racine, Wis. ADV. PG. 439.
MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J.
ADV. PG. 171.
MId-West Coil & Transformer Co., 1642 N. Halsted St.,
Chicago 14, III.
Neomatic Inc., 879 Wellesley Ave., Los Angeles 49, Calif.
Peerless Electrical Products Div. of Altec Lansing Corp.,
9356 Santa Monica Blvd., Beverly Hills, Calif.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y.
ADV. PG. 412.
Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
Ramdall Inc., Douglas, 102 High St., Westerly, R. I.
Rollan Electroics, Inc., S. Buckout St., Irvington, N. Y.
Randald 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.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, III. ADV. PG. 59.
Standard Transformer Corp., Elston, Kedzle & Addison,
Chicago 18, III.
Standard Winding Corp., 44-62 Johnes St., Newburgh,

Chicago 18, III.
Standard Winding Corp., 44-62 Johnes St., Newburgh,
N. Y.
Super Electric Products Corp., 46 Oliver St., Newark,

Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif.
Teleradio Engineering Corp., 99 Wall St., New York,

Rad Mfg. Co., Inc., 7th & Madison St., Fennimore,

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif. Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.

Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV. UNION ELECTRIC PRODUCTS CO., 24 Edison Pl., Newark

2, N. J. ADV. PG. 526. U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,

N. J. ADV. PG. 413.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

# COILS—Motor & Generator Field

Acme Wire Co., New Haven 14, Conn.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Atlas Coll Winders, Inc., Stamford, Conn.
BOGUE ELECTRIC MFG. CO., 52 lowa Ave., Paterson 3, N. J. ADV. PG. 153. Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. Continental Electric Co., Inc., 334 Ferry St., Newark 5, Coto-Coil Co., Inc., 65 Pavillion Ave., Providence 5, R. I.
DeLuxe Coils, Inc., Wabash, Ind.
Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago

41, III. Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17,

N. Y.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, III. ADV. PG. 519.
National Electric Coil Co., Columbus 16, Ohio.
Radex Corp., 2076 N. Elston Ave., Chicago 14, III.
Randall, Inc., Douglas, 102 High St., Westerly, R. I.
Rollan Eelctric Co., 8020 S. Park Ave., Chicago 19, III.
Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, III.
SPERRY GYROSCOPE Co., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Ther Electric & Machine Works, 15 S. Jefferson St.,
Chicago, III.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III WESTINGHOUSE ELECTRIC CORP, P. O. B Pittsburg 30, Pa. ADV. PG. 109-115.

# COILS—Multiple Wound

P. P. W. UU., 72 W. Main St., Rockaway, N. J. ADV. PG. 402.
ACE COIL & ELECTRONICS CO., 912 Middlesex Ave., Metuchen, N. J. ADV. PG. 446.
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. A. P. W. CO., 72 W. Main St., Rockaway, N. J. ADV.

Aero Coil Inc., 507-26th St., Union City, N. J.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa.

ADV. PG. 517.

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 150, 151.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

American Relay & Controls, Inc., 4901 W. Flournoy St., Chicago 44, III.

Atlas Coil Winders, Inc., Stamford, Conn.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437.

CENTRONICS CO., 41-05 Lawrence St., Flushing 55, N. Y. ADV. PG. 525.

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III. ADV. PG. 506.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I. Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J.

DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 508.

PG. 508.

Delco Radio Div., General Motors Corp., Kokomo, Ind.
Delcuxe Colls, Inc., Wabash, Ind.
DIT-MCO INC., 729 Baltimore Ave., Kansas City 6, Mo.
ADV. PG. 452.

DIT-MCU INC., 729 Daithnois .....,
ADV. PG. 452.
Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago
14, III.
Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago

39, III.

ELECTRONIC COILS, INC., P. O. Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 372.

ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.

EMPIRE COIL CO., INC., 85 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 422.
Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 274.
ESSEX Wire Corp., 1601 Wall St. Fort Wayne 6, Ind.

EPCÖ PRODUCTS, INC., 2500 Attailed Ave., State of N. Y. ADV. PG. 274.

Sesex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Etraco Mfg. Co., Inc., Woods Church Rd., Flemington, N. J.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.

FUGLE-MILLER LABORATORIES, 398 Main St.,
Metuchen, N. J. ADV. PG. 512, 513.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

N. J. General Transformer Co., 18240 Harwood Ave., Homewood, Ill.

Gramer Transformer Co., 2734 N. Pulaski Rd., Chicago 39, III.
Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, N. Y. ADV. PG. 398.
Heppner Mfg. Co., P. O. Box 612, Round Lake, III.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chlcago 25, III. ADV. PG. 519.
Industrial Transformer Co., Gouldsboro, Pa.
K-V Transformer Corp., 4414 Park Ave., New York 57,
N. Y.

N. Y.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23,
N. Y. ADV. PG. 438.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
Magnetic Windings Div., Essex Wire Corp., Freemansburg
Ave. & Hobson Blvd., Easton, Pa.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts.,
Racine, Wis. ADV. PG. 439.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

159. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,

MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. ADV. PG. 171.
Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, III.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
National Coil Co. D. C. C.

Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
National Coil Co., P. O. Box 1237, Sheridan, Wyo.
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.
Peerless Electrical Products Div. of Altec Lansing Corp.,
9356 Santa Monica Blvd., Beverly Hills, Calif.
Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
Randall, Inc., Douglas, 102 High St., Westerly, R. I.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
Standard Transformer Corp., Elston, Kedzie & Addison,
Chicago 18, Ill.

Standard Transformer Colp., Science, Chicago 18, III.
Summit Coil Co., 67 Union Pl., Summit, N. J.
Super Electric Products Corp., 46 Oliver St., Newark, N. J.
Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los

Angeles 37, Calif.
Teleradio Engineering Corp., 99 Wall St., New York 5,

Tel-Rad Mfg. Co., Inc., 7th & Madison St., Fennlmore,

Wis. etrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif. Tetrad

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
Transformer Engineers, 389 S. Arroyo Parkway, Pasadena,

TRANSFORMER MFG. CO., Angeles, Calif. ADV. PG. 302 Los Angeles, Calif. ADV. PG. 302.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 412 4055 Redwood Ave.,

N. J. ADV. PG. 413.
West Coast Electronics Co., 1601 S. Burlington St., Los

Angeles 6, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

# COILS-Pickup

A. P. W. CO., 72 W. Main St., Rockaway, N. J. ADV.

PG. 402.

Aero Coil Inc., 507 26th St., Union City, N. J.

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.

CENTRONICS CO., 41-05 Lawrence St., Flushing 55,

N. Y. ADV. PG. 525.

Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago
39. III.

Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, III.

ELECTRONIC COILS, INC., Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 372.

ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, III. ADV. PG. 519.

Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa.

Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.

ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 412.
Super Electric Products Corp., 46 Oliver St., Newark,

N. J.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
Tri-Dex Co., P. O. Box 643, Lindsay, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
N. J. ADV. PG. 413.

# COILS-Power & a-f Coil Windings

Acme Wire Co., New Haven 14, Conn.

Act Products Co., 369 Shurs Lane, Philadelphia 28, Pa. Act Transformer Mfg. Corp., 26-02 4th St., Astoria N. Y. ALAX PRODUCTS CO., Middle River, Baltimore 20, ADV. PG. 343.
ALED CONTROL CO., INC., 2 East End Ave., New k 21, N. Y. ADV. PG. 150, 151.
Alt Lansing Corp., 9356 Santa Monica Blvd., Beverly Is., Calif. Att Coil Winders, Inc., Stamford, Conn.

BAIER & WILLIAMSON, 235 Fairfield Ave., Upper
Pby, Pa. ADV. PG. 397.

BO ELECTRONICS CORP., 60 Springfield Ave., SpringId, N. J. ADV. PG. 90.

Carli-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
Cost (Canada) Ltd., 301-303 Windsor St., Halifax, IS., Canada.
Cotoil Co., Inc., 65 Pavillion Ave., Providence 5, R. I.
CEIT LABORATORIES, INC., Whitehall Bldg., Far
kaway, N. Y. ADV. PG. 515.
Cre Transformer Corp., 1834-36 W. North Ave., Chi-0 22, III.
De Radio Div., General Motors Corp., Kokomo, Ind.
Delte Coils, Inc., Wabash, Ind.
III. DESIGN & MFG. CO., Grandview 6, Mo. ADV. Dontzer Electric Co., Inc., 5 Hadley St., Cambridge, is. Electrical Windings, Inc., 2015 N. Kolmar Ave., Chio 39, Ill.

Electricoll Transformer Co., Westerly Rd., Ossining, LTRONIC TRANSFORMER CO., INC., 215 West 25th, New York, N. Y. ADV. PG. 383.

Ess Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

Etho Mfg. Co., Inc., Woods Church Rd., Flemington,
J. FETANTI ELECTRIC, INC., 30 Rockefeller Plaza, New k 20, N. Y. ADV. PG. 188.
Fiffn Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. FivStar Co., 440 Mixville Rd., West Cheshire, Conn.
FIRID TRANSFORMER CO., INC., 1736 Weirfield St., Fisklyn 27, N. Y. ADV. PG. 297.
Gerel Transformer Co., 18240 Harwood Ave., Homed. III. detinic Labs., Inc., Dallas 8, Texas.
Grair Transformer Co., 2734 N. Pulaski Rd., Chicago
Lil.
HILAND ENGINEERING CO., Main St. & Urban Ave.,
Albury, N. Y. ADV. PG. 412.
Interial Electronics Co., Inc., Hanover, Mass.
Interial Transformer Co., Gouldsboro, Pa.
LA EVIN MFG. CORP., 37 W. 65th St., New York 23,
III.
LARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Fibklyn, N. Y. ADV. PG. 491. Vipklyn, N. Y. ADV. PG. 491. Najvox Co., The, Components Div., Fort Wayne 4, Meiser Mfg. Div., Maguire Industries, Inc., Mt. finel, III.

I est Coil & Transformer Co., 1642 N. Halsted St., Maj NAL CO., INC., 61 Sherman St., Malden 48, Mis. ADV. PG. 328, 329.

RDN CORP., 196 Albion Ave., Paterson 2, N. J. PG. 362.

Risko Ltd., 366 Madison Ave., New York 17, N. Y. Coil Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. Series Electrical Products Div. of Altec Lansing Corp., 16 Santa Monica Blvd., Beverly Hills, Calif. Altec Lansing Corp., 16 Santa Monica Blvd., Beverly Hills, Calif.

17 Inc., Douglas, 102 High St., Westerly, R. I.

18 Inc., Douglas, 102 High St., Westerly, R. I.

19 Inc., Douglas, 102 High St., Westerly, R. I.

19 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

11 Inc., Douglas, 102 High St., Westerly, R. I.

12 Inc., Douglas, 102 High St., Westerly, R. I.

13 Inc., Douglas, 102 High St., Westerly, R. I.

14 Inc., Douglas, 102 High St., Westerly, R. I.

15 Inc., Douglas, 102 High St., Westerly, R. I.

16 Inc., Douglas, 102 High St., Westerly, R. I.

17 Inc., Douglas, 102 High St., Westerly, R. I.

18 Inc., Douglas, 102 High St., Westerly, R. I.

19 Inc., Douglas, 102 High St., Westerly, R. I.

19 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

10 Inc., Douglas, 102 High St., Westerly, R. I.

11 Inc., Douglas, 102 High St., Westerly, R. I.

12 Inc., Douglas, 102 High St., Westerly, R. I.

12 Inc., Douglas, R. I.

13 Inc., Douglas, R. I.

14 Inc., Douglas, R. I.

15 Inc., Douglas, R. I.

16 Inc., Douglas, R. I.

16 Inc., Douglas, R. I.

17 Inc., Douglas, R. I.

17 Inc., Douglas, R. I.

18 Inc., Douglas, R. Inc., R. Staard Transformer Corp., Elston, Kedzie & Addison, tago 18, III. Stird Winding Corp., 44-62 Johnes St., Newburgh, Stayck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
Sup Electric Products Corp., 46 Oliver St., Newark,
N.J. Tar.-Stolle Electronics, Inc., 3970 S. Grand Ave., It Angeles 37, Calif.

Teti. Co., 4921 Exposition Blvd., Los Angeles 16, Cf.

hourson-Meissner Mfg. Divs., Mt. Carmel, III.
odiran Corp., 156 Gramatan Ave., Mt. Vernon,
NY. raibrmer Engineers, 389 S. Arroyo Parkway, Pasada, Calif. RASFORMER SPECIALTY CO., Bala Cynwyd, Pa. A'. PG. 379.

TRIN TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Angeles, Calif. ADV. PG. 302.

J. ELECTRONICS CORP., 276 Warren St., Lyndhurst, NJ. ADV. PG. 413. Webputh Instrument Co., 1440 Commercial St., East Immouth 89, Mass.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CAMBRIDGE THERMONIC CORP., 445 Concord Ave.,
Cambridge 38, Mass. ADV. PG. 437.
Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
CENTRONICS CO., 41-05 Lawrence St., Flushing 55, N. Y.
ADV. PG. 525.
Clippard Instrument Laboratory, Inc., 7390 Colerain Ave.,
Cincinnati 14. Ohio. Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 14, Ohio.
Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41,
III. ADV. PG. 507.
Corning Glass Works, Corning, N. Y.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Custom's Electronics Corp., 738 Speedwell Ave., Morris Plains. N. J. N. S., Canada.
Custom's Electronics Corp., 738 Speedwell Ave., Morris Plains, N. J.

DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, IIII. ADV. PG. 294.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 120.
Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.
Essex Electronics, Berkeley Heights, N. J.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.
Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III.
Hallen Co., 416 Peninsular Ave., San Mateo, Calif.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. ADV. PG. 398.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 514.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, III. ADV. PG. 519.
INSULTINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City N. Y. ADV. PG. 477.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.
Jovner Corp., 462 N. Parkside Ave., Chicago 44, III. 251.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
LEE SPRING CO., 30 Main St., Brooklyn 1, N. Y. ADV. PG. 363.

LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn N. Y. ADV. PG. 491. Brooklyn, N. Y. ADV. PG. 491. Lerner Instrument & Electronic Mfg. Corp., 47-49 Bergen St., Brooklyn 2, N. Y. Lewis Spring & Mfg Co., 2646 W. North Ave., Chicago 47, III.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Son Main St., Los Angeles 3, Monroe Coil Co., 2839 N. Narragansett Ave., Olicago 34, Ill.
Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
National Coil Co., P. O. Box 1237, Sheridan, Wyo.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
NORTH HILLS ELECTRIC CO., P. O. Box 427, Great
Neck, N. Y. ADV. PG. 132.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Photocircuits Corp., Glen Cove, N. Y.
Pilot Radio Corp., 37-06 36th St., Long Island City 1,
N. Y. Monroe Coil Co., 2839 N. Narragansett Ave., Chicago RADIO CORP. 0F AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Raypar, Inc., 7800 W. Addison St., Chicago, III.

REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 152.

Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.

Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.

Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.

SPELÍMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 332, 333.

SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y., ADV. PG. 347.

STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 59.

Standard Electronics Corp., 285 Emmet St., Newark, N. J., Wildel Corp., 241 Chapter St., Newark, N. J., Wildel Corp., 241 Chapter St., Newark, N. J., Wildel Corp., 242 Chapter St., Newark, N. J., Wildel Corp., 243 Chapter St., Newark, N. J., Wildel Corp., 241 Chapter St., Newark, N. J., Wildel Corp., 242 Chapter St., Newark, N. J., Wildel Corp., 243 Chapter St., Newark, N. J., Wildel Corp., 244 (42) Chapter St., Newark, N. J., Wildel Corp., 243 Chapter St., Newark, N. J., Wildel Corp., 244 (42) Chapter St., Newark, N. J., Wildel Corp., 244 (42) Chapter St., Newark, N. J., Wildel Corp., 245 Chapter St., Newark, N. J., Wildel Corp., 246 Chapter St., Newark, N. J. Standard Winding Corp., 44-62 Johnes St., Newburgh, Stamwyck 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, N. J. Teleradio Engineering Corp., 99 Wall St., New York 5, Nv. 1. Turker of the Nv. 1. Nv

Wheaton Co., T. C., Electronic Div., Millville, N. J.

COILS-Relay & Solenoid See Coils, Magnet

# COILS-Speaker

Acme Wire Co, New Haven 14, Conn.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. Carbonneau Industries, Inc., Grand Rapids, Mich.
CENTRONICS CO., 41-05 Lawrence St., Flushing 55, N. Y. ADV. PG. 525.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill.
ADV. PG. 506.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
DX RADIO PRODUCTS CO.. INC.. 2300 Armitage Ave.. 41, III.
DX RADIO PRODUCTS CO., INC., 2300 Armitage Ave., Chicago 47, III. ADV. PG. 294.
DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 508.

Delco Radio Div., Ceneral Motors Corp., Kokomo, Ind.

DeLuxe Coils, Inc., Wabash, Ind.

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago

14, Ill. Dormeyer Industries, 3418 N. Milwaukee Ave., Unicago 14, III.

ELECTRONIC COILS, INC., P. O. Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 372.

ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 383.

Eitran Corp., St. Anne, III.
Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J.
ADV. PG. 245.
Heppner Mfg. Co., P. O. Box 612, Round Lake, III.
HOULIHAN CO., T. J., 2508-14 W. Lawrence St., Chicago 25, III. ADV. PG. 519.

K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. N. Y.
Magnetic Windings, Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa.
Mid-West Coil & Transformer Co., 1642 N. Halsted St.,
Chicago 14, III. Molded Insulation Co., 335 E. Price St., Philadelphia Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 375.
Quam Nichols Co., 526 E. 33rd Place, Chicago 16, Ill. Racon Electric Co., 52 E. 19th St., New York 3, N. Y. Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif. Calif. Co., 4921 Exposition Blvd., Los Angeles 16, TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.

Utah Radio Products Co., Inc., 1123 E. Franklin St., Huntington, Ind.

COILS—Television Focusing A.P.W. CO., 72 W. Main St., Rockway, N. J. ADV. PG. 402.

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.

Cinema-Television Ltd., Worsley Bridge Rd., London, Cinema-Television Lady, Science, Science, Edge, Science, Co., England, Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y. DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 508.
DeLuxe Coils, Inc., Wabash, Ind.
Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, III. 41, III.

Electro Acoustic Industries, Ltd., 366 Madison Ave., New York 17, N. Y.

ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 383.

Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245. ADV. PG. 245.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, III. ADV. PG. 202.

HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. ADV. PG. 398.

HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, III. ADV. PG. 519.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30. Pa. Philadelphia 30, Pa.
Magnavox Co., The, Components Div., Fort Wayne 4, Magnetic Windings Div., Essex Wire Corp., Freemans-burg Ave. & Hobson Blvd., Easton, Pa. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Car-mel, III. Merit Coil & Transformer Corp., 4427 N. Clark St., Chi-cago 40, III. Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34, . S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413. West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Philmore Mfg. Co., Inc., 113 University Place, New
York 3, N. Y.
Rellable Spring & Wire Forms Co., Fulton Rd. & Paris
Ave., Cleveland 9, Ohio.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill. White Tuning Corp., 421 W. 54th St., New York, N. Y. Wilcox Electric Co., 1400 Chestnut St., Kansas City,

OS-r-f & i-f Receiving or Transmitting

Acrooil Inc., 507-26th St., Union City, N. J. Acroe Electronics Corp., 507 26th St., Union City,

AUL. Coil Winders, Inc., Stamford, Conn. Authatic Mfg. Corp., 65 Gouvernor St., Newark, N. J. ALER & WILLIAMSON, 235 Fairfield Ave., Upper Joby, Pa. ADV. PG. 397.
301 ELECTRONICS CORP., 60 Springfield Ave., Springfi, N. J. ADV. PG. 90.

Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, III.

Super Electric Products Corp., 46 Oliver St., Newark, Teleradio Engineering Corp., 99 Wall St., New York 5, Telvision Laboratories, Inc., 5045 W. Lake St., Chicago 44, III.

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif.

TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 302.

COILS-Toroidal A.P.W. CO., 72 W. Main St., Rockaway, N. J. ADV. PG. 402.

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 496.
Aero Coil Inc., 507 26th St., Union City, N. J.

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 343.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153. BUGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.

BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 157.

C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. N. Y.
Carbonneau Industries, Inc., Grand Rapids, Mich.
Chicago Electronic Engineering Co., 3223 W. Armitage
Ave., Chicago 47, Ill.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
COMMUNICATION ACCESSORIES CO., Box 345, 110th
St. & Hillcrest Rd., Hickman Hills, Missouri. ADV. PG. 290.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meridan, Conn. ADV. PG. 292.

DX RADIO PRODUCTS CO., INC., 2300 Armitage Ave.,
Chicago 47, III. ADV. PG. 294.

DECOURSEY ENGINEERING LAB., P. 0. Box 235, Los
Angeles 25, Calif. ADV. PG. 76.

DEUTSCHMANN CORP., TOBE, 921 Providence Hwy.,
Norwood, Mass. ADV. PG. 280.

DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV.
PG. 307. PG. 307.

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362.

Electricoil Transformer Co., Westerly Rd., Ossining, N. Y. Electro-Mec Laboratory, 19 Murray St., New York 7, N. Y.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.
GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J.
ADV PG. 245. ADV. PG. 245.

HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.

HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 172.
Industrial Transformer Co., Gouldsboro, Pa. Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif. LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491. Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco Lynch Carrier Systems, 1997, 5, Calif.
5, Calif.
Parmeko Ltd., 366 Madison Ave., New York 17, N. Y.
Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
Magnetics, Inc., Box 230-E, Butler, Pa.
Minnesota Electronics Corp., 47 W. Water St., St.
Paul 1, Minn.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
Railway Communications, Inc., Smith Road & Glenwood,
Raytown. Mo. 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. 336, 337.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.
Sickles, F. W., Div. General Instrument Corp., 165
Front St., Chicapee, Mass. 39, Calif.
Sickles, F. W., Div. General Instrument Corp., 165
Front St., Chicopee, Mass.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
Standard Telephones & Cables, Ltd., Connaught House,
Aldwych, London, W.C. 2, England.
Standard Transformer Corp., Elston, Kedzie & Addison,
Chicago 18, Ill.
Standwyck Winding Co., 137 Walsh Ave., Newburgh,
N. Y. Telvision Laboratories, Inc., 5045 W. Lake St., Chi-Telvision Laboratorics, ...., cago 44, III.
Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif.
Torocoil Co., 1374 Mobile Court, St. Louis, Mo.
Transformer Engineers, 389 S. Arroyo Parkway, Pasadena, Calif.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302.

Tri-Dex Co., P. O. Box 643, Lindsay, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inslde Front Cover.
UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 302.
Wang Laboratories, 296 Columbus Ave., Boston 16, WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

COILS—Transformer Coils & Windings A.P.W. CO., 72 W. Main St., Rockaway, N. J. ADV. PG. 402.

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 AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 517.
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 343.

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 150, 151.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Associated Production Co., 162 N. Clinton St., Chicago Associated Production Co., 202 ....
6, III.
Atlas Coil Winders, Inc., Stamford, Conn.
Aurex Corp., 1117 N. Franklin St., Chicago 10, III.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.
Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. ADV. PG. 153. N. J. ADV. PG. 153.

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90. held, N. J. ADV. PG. 90.
Chicago Electronic Engineering Co., 3224 W. Armitage Ave., Chicago 47, Ill.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill.
ADV. PG. 506.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago
18, Ill. ADV. PG. 498. 18, III. ADV. PG. 498.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. N. S., Canada. Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I.
CREST LABORATORIES, INC., Whitehall Bldg., Far
Rockaway, N. Y. ADV. PG. 515.
Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill.
Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J.

DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 508. Delco Radio Div., General Motors Corp., Kokomo, Ind. DeLuxe Coils, Inc., Wabash, Ind. DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
Eastern Specialty Co., Philadelphia 40, Pa.
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. 362.

Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, III.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.
ELECTRONIC COILS, INC., Box 1641, 44 Taylor St.,
Springfield, Mass. ADV. PG. 372.
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th
St., New York, N. Y. ADV. PG. 383.
EMPIRE COIL CO., INC., 85 Beechwood Ave., New
Rochelle, N. Y. ADV. PG. 422.
Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn
17, N. Y. ADV. PG. 274.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Etraco Mfg. Co., Inc., Woods Church Rd., Flemington,
N. J. N. J.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New
York 20, N. Y. ADV. PG. 188.
Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville
8. Calif. eneral Transformer Co., 18240 Harwood Ave., Home-wood, III. Geotronic Labs., Inc., Dallas 8, Texas.
GLASER-STEERS CORP., 2 Main St., Belleville 9,
N. J. ADV. PG. 245.
Gramer Transformer Co., 2734 N. Pulaski Rd., Chicago
39, III. HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
Industrial Electronics Co., Inc., Hanover, Mass.
Industrial Transformer Co., Gouldsboro, Pa.
K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. N. Y.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23,
N. Y. ADV. PG. 438.
LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.

LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind. Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa.

MASTER APPLIANCE MFG. CO., Fourth & Ontarlo Sts., Racine, Wis. ADV. PG. 439. Racine, Wis. ADV. PG. 439. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Car. mei, III.
Merit Coil & Transformer Corp., 4427 N. Clark St.,
Chicago 40, III.
Mid-West Coil & Transformer Co., 1642 N. Halsted
St., Chicago 14, III.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 328, 329.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Parmeko Ltd., 366 Madison Ave., New York 17, N. Y.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.
Peerless Electrical Products Div. of Altec Lansing
Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
Philmore Mfg. Co., Inc., 113 University Place, New
York 3, N. Y.
Photocircuits Corp., Glen Cove, N. Y.
Power Conversions, 2635 W. Grand Ave., Chicago 12,
III. Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.

Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
Randall, Inc., Douglas, 102 High St., Westerly, R. I.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
Ross Mfg. Co., 2405 Armittage Ave., Chicago 19, Ill.
Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
Standard Electronics Corp., 285 Emmet St., Newark,
N. J. Presto Electric Co., Inc., 600 Fulton St., Elizabeth, Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, III. Standard Winding Corp., 44-62 Johnes St., Newburgh, Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
Super Electric Products Corp., 46 Oliver St., Newark,
N. J.
T V Products Corp., 907 E. 23rd St., Paterson, N. J.
Teleradio Engineering Corp., 99 Wall St., New York 5, Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Callf.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N.Y.
Transformer Engineers, 389 S. Arroya Parkway, Pasadona Calif. dena, Calif.
TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa ADV. PG. 379.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave. Angeles, Calif. ADV. PG. 302.

N ELECTRIC PRODUCTS CO., 24 Edison Pl.,

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Newark 2, N. J. ADV. PG. 526. U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst. N. J. ADV. PG. 413.
Utah Radio Products Co., Inc., 1123 E. Franklin St., Huntington, Ind.
Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. COILS—Width Control Aero Coil Inc., 507-26th St., Union City, N. J.
Aerolite Electronics Corp., 507 26th St., Union City,
N. J. Aerolite Electronics Corp., 507 26th St., Union Ctly, N. J.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
CENTRONICS CO., 41-05 Lawrence St., Flushing 55, N. Y. ADV. PG. 525.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill.
ADV. PG. 506.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DeLuxe Coils, Inc., Wabash, Ind.
DuMont Laboratories, Inc., Allen B., Television Receiver
Div., Electronic Parts Dept., 35 Market St., Est
Paterson, N. J.
Essex Electronics, Berkeley Heights, N. J.
Essex Electronics, Berkeley Heights, N. J.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.
Guthman Inc., Edwin I., 15 S. Throop St., Chicago, Ill.
Heppner Mfg. Co., P. O. Box 612, Round Lake, Ill.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave.
Brooklyn 22, N. Y. ADV. PG. 514.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chlcago 25, Ill. ADV. PG. 519.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn, N. Y. ADV. PG. 491.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,
Ill.
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National Coil Co., P. O. Box 1237, Sheridan, Wyo. Philoc Corp., Tioga & C Sts., Philadelphia 34, Pa. RADIO CORP. OF AMERICA, Engineering Products Pept, Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

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U. ELECTRONICS CORP., 276 Warren St., Lyndhurst, NJ. ADV. PG. 413.

# CO RIMETERS—Photoelectric

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Broker Electronics Laboratory, 1546 Second Ave., New Ye 28, N. Y.
Caman Aviation Electronics, Ltd., 8280 St. Lawrence Bl., Montreal, P. Q.
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Fand Optical Co., Inc., 4401 Bronx Blvd., New York N. Y. r Lab., Inc., Henry A., 4723 Elm St., Bethesda 6 N. Y. Gair Lab., Inc., Henry A., 4723 Elm St., Bethesda Md. Instant Development Laboratories, Inc., 163 Highland

A. Needham Heights, Mass.

MAFFACTURERS ENGINEERING & EQUIPMENT CO.,
Vow Grove, Pa. ADV. PG. 496.

Photoit Corp., 95 Madison Ave., New York 16, N. Y.

In Instrument Co., 6516 Detroit Ave., Cleveland 2,

Alth. Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
Tioson & Associates, John E., 7210 S. Yates Ave.,
ago 49, III.

Wel Scientific Co., W. M., 1515 Sedgwick St., Chi-

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Ine Instruments Lab., Inc., 160 Old Country Rd., teola, N. Y. 2.

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AMICAN ELECTRONEERING CORP., 5025-29 W. Jerson Blvd., Los Angeles 16, Calif. 1-7-8-11. A. PG. 396. Appl Electronics Co., Inc., 1246 Folsoni St., San Ecisco 3, Calif. 6.

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ATOC INSTRUMENT Co., 84 Massachusetts Ave., Cibridge 39, Mass. 1-11. ADV. PG. 461.
AVI Instrument Corp., Paramus, N. J. 1.
BARIR & WILLIAMSON, 235 Fairfield Ave., Upper Day, Pa. 10. ADV. PG. 397.
Ben Radio Division, Bendix Aviation Corp., Baltimore 4.0. 19-11.
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BOGE, Inc., H. O., 915 Broadway, New York 10, N. T.

BOG: ELECTRIC MFG. CO., 52 Iowa Ave., Paterson
3. J. ADV. PG. 153.
BOG Railway Equipment Div., Bogue Electric Mfg. Co.,
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Brel Electronics Corp., 55 Vandam St., New York 13,

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Electro Craft Inc., 68 Jackson St., Stamford, Conn. 11.
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Farmers Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh 21, Pa. 3-9.
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FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 2-7-9-11. ADV. PG. 189-193.
Finch Telecommunications, Inc., Passaic, N. J. 4.
Fisher Research Lab., 1961 University Ave., Palo Alto, Calif. 6.

Calif. 6.
Gates Radio Co., Quincy, III. 6-8.
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Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif. 3.

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Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif. 6-11.

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Miles Reproducer Co., Inc., 812 Broadway, New York

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Pa. 1-2. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. 4-10. ADV. PG. 50, 51. Philoc Corp., Tioga & C Streets, Philadelphia 34, Pa. 4-7-9.

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Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo. 9-10.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. 6-7. ADV. PG. 336, 337.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y. 1-2-11.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. 1-2-7. ADV. PG. 139, 140. Standard Electronics Corp., 285 Emmet St., Newark, N. J. 6.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. 1-2-3-4-6-7-8-9-10-11.

STELMA, INC., 389 Ludlow St., Stamford, Conn. 10. ADV. PG. 164.

Stromberg-Carlson, Co., Rochester, 13, N. Y. 2-8-9.

ADV. PG. 164.

Stromberg-Carlson Co., Rochester 13, N. Y. 2-8-9.
T. L. G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. 10. ADV. PG. 499.
Technical Materiel Corp., The, P. O. Box 142, 121 Spencer Place, Mamaroneck, N. Y. 4-10.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. 4. ADV. PG. 311.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. 4. ADV. PG. 526.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 1-3-8-11. ADV. PG. 262.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St. New York 14, N. Y. 1-6-7-8-10-11.
U. S. Instrument Corp., 409 Broad St., Summit, N. J. 8-9.

Vocaline Co. of America, Inc., Old Saybrook, Conn. 3.
West Coast Electronics Co., 1601 S. Burlington St., Los
Angeles 6, Calif. 9-11.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. 2-3-6-7-9-10-11. ADV. PG.

109-115.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 7.

Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y. 1-4-11.

# COMPARATORS—Automatic Resistance See Instruments—Electrical Measuring

# COMPARATORS—Capacitance

Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cleveland 14, Ohio.
COMMUNICATIONS MEASUREMENTS LAB., INC., 120 Greenwich St., New York 6, N. Y. ADV. PG. 468.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297. PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

# COMPARATORS—Circuit Linearity COMPARATORS-Crystal

See Instruments-Electrical Measuring

#### COMPARATORS—Dielectric

Foxboro Co., The, Foxboro, Mass.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New
York 4, N. Y. ADV. PG. 355.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.

#### Comparators—Inductance

COMMUNICATION MEASUREMENTS LAB., INC., 120 Greenwich St., New York 6, N. Y. ADV. PG. 468. Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul. Minn

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#### COMPARATORS—Iron Core

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

#### 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. 127, 128.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

# COMPUTERS—Analog

Anelex Corporation, Concord, N. H.
Avion Instrument Corp., Paramus, N. J.
Beckman Instruments, Inc., 820 Mission St., South

Pasadena, Calif.
Boeing Airplane Co., Seattle 14, Wash.
Computer Corp. of America, 149 Church St., New York,

N. Y.
Consolidated Engineering Corp., 300 N. Sierra Madre
Villa, Pasadena 8, Calif.
Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md.

dale, Md.
Electronic Associates, Inc., Long Branch, N. J.
General Magnetics, Inc., 135 Bloomfield Ave.,
field, N. J.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver
10, Colo.

10, Colo.
LABORATORY FOR ELECTRONICS, INC., 43 Leon St.,
Boston 15, Mass. ADV. PG. 239.
Librascope, Inc., 1607 Flower St., Glendale, Calif.
Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
Miller Corp., William, 325 N. Halstead Ave., Pasadena

Miller Corp., William, 325 N. Halstead Ave., Pasadena 8, Calif.
Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
REEVES INSTRUMENT CORP., 215 E. 91st., New York, N. Y. ADV. PG. 473.
Rutherford Electronics Corp., 3707 S. Robertson Blvd., Culver City, Calif.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

# COMPUTERS-Digital

Anelex Corporation, Concord, N. H.
APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box
44, Princeton N. J. ADV. PG. 528.
Avion Instrument Corp., Paramus, N. J.
Beckman Instruments, Inc., 820 Mission St., South
Pasadena, Calif.
Computer Research Corp., 3348 W. El Segundo Blvd.,
Hawthorne, Calif.
Computing Devices of Canada, Ltd., 338 Queen St.,
Ottawa 4, Ont.
Consolidated Engineering Corp., 300 N. Slerra Madre
Villa, Pasadena 8, Calif.

DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.

ELECTRONIC COMPUTER CORP., 160 Avenue of the Americas, New York 13, N. Y. ADV. PG. 298.

Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.

Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.

Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y. N. Y.
International Business Machines Corp., Tube Analysis
Laboratory, Poughkeepsie, N. Y.
Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.

LABORATORY FOR ELECTRONICS, INC., 43 Leon St.,
Boston 15, Mass. ADV. PG. 239.

Minnesota Electronics Corp., 47 W. Water St., St.
Paul 1, Minn.
Pacific Electronics, Saticoy, Calif.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd.,
Great Neck, N. Y. ADV. PG. 278.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337.
Rutherford Electronics Corp., 3707 S. Robertson Blvd.,
Culver City, Calif. Rutherford Electronics Corp., 200 S. Roberts Culver City, Calif.
TECHNITROL ENGINEERING Co., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 509.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. Walkirt Co., 145 W. Hazel, Inglewood, Calif.

# COMPUTERS-Electronic

See Machines

# CONDENSERS

See Capacitors

#### CONES-Metal-TV

Spincraft, Inc., 4128 W. State St., Milwaukee 8, Wis. Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
United Specialties Co., 9765 S. Cottage Grove Ave., Chi-

cago 28, III.

#### CONES-Speaker

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III. Hawley Products Co., St. Charles, III. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.
Stevens Products Inc., 86-88 Main St., East Orange, N. J.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave.,
White Plains, N. Y. ADV. PG. 338.

# CONNECTORS

1. Anode 2. Anter Antennae 2. Antennae 3. Diode 4. Interlock 5. Phono 6. Printed Circuit

Aerolite Electronics Corp., 507 26th St., Union City, N. J. 1-2-4-5.

AIRCRAFT-MARINE PRODUCTS, INC.; 2100 Paxton St., Harrisburg 10, Pa. 1-2-5-6. ADV. PG. 469.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. 2-3-4-5-6. ADV. PG. 24.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. 2-4. ADV. PG. 212.

Andrew Corp., 363 E. 75th St., Chicago 19, III. 2

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 2. ADV. PG. 397.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. 1-2-4-5. ADV. PG. 342.

Brockhaven Electronics Corp., Box 931, Sanford, N. C. 1. C. 1. CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. 6. ADV. PG. 71-74. CINCH MFG. CORP., 1026 S. Homan St., Chicago 24, III. 2-3-4-5-6. ADV. PG. 234, 235. COMMUNICATION MEASUREMENTS LAB., INC., 120 Greenwich St., New York 6, N. Y. 6. ADV. PG. 468. DAGE ELECTRIC CO., INC., 67 N. Second St., Beech Grove, Ind. 2. ADV. PG. 423. Dante Electric Mfg. Co., Bantam, Conn. 2. DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. 4. ADV. PG. 183-185. ELCO CORPORATION, 190 Glerwood Ave., Philadelphia 40, Pa. 2-5. ADV. PG. 48. ERIE RESISTOR CORP., 644 W. 12th St., Erle, Pa. 6. ADV. PG. 271. ADV. PG. 271.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. 1-2-5. ADV. PG. 120.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. 1. ADV. PG. 1 River Rd., Schenectauy J., ... 1-23. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. 4. General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III. 1-2-3-4-5.

GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. 2. ADV. PG. 160. Glenco Corp., Metuchen, N. J. 6. Gulton Mfg. Corp., Metuchen, N. J. 6. Industrial Products Co., Danbury, Conn. 2. Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J. 2.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. 2-5. ADV. PG. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. 5. ADV. PG. 402, 403.
Javex, 921 State, Garland, Texas. 2-6.
JOHNSON CO., E. F., Waseca, Minn. 1. ADV. PG. 248-251 248-251.

JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. 2. ADV. PG. 234, 235. Joy Mfg. Co., Electrical Connector Div., 4235 Clayton Ave., St. Louis, Mo. 2-3-4-5.

KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. 2-4. ADV. PG. 144, 145.

N. Y. 2-4. ADV. PG. 144, 145. KINGS ELECTROMICS, 40 Majoreaus III.
N. Y. 2-4. ADV. PG. 144, 145.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif. 2.
MENDELSOHN SPEEDGUN CO., INC., 457 Bloomfield Ave., Bloomfield, N. J. 2. ADV. PG. 502.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, III. 4-6. ADV. PG. 445.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 1. Molded Insulation Co., 335 E. Price St., Philadelphia 44, Molded Insulation Co., 335 E. Files St., Pinas St., Pa. 2.

MONOWATT DEPT., GENERAL ELECTRIC CO., 66 Bissell St., Providence, R. I. 1-2-3-4-5-6. ADV. PG. 22. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. 1. ADV. PG. 328, 329.

NATIONAL TEL-TRONICS CORP., 35 St., Casmirs Ave., Yonkers, N. Y. 1. ADV. PG. 513.

Photocircuits Corp., Glen Cove, N. Y. 6.
Roflan Co., Everett, Mass. 2.

Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Calif. 2.

Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y. 1-4-5.

Angeles 18, Calif. 2.

Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y. 1-4-5.

T. L. G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. 4. ADV. PG. 499.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England. 2.

Tensor Electric Development Co., Inc., 343 Classon Ave., Brooklyn 5. N. Y. 4-5.

Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif. 2.

J. H. F. Resonator Corp., 224 Seventh St., Racine, Wis. 2. 2.5, Galif. 2.

V.H.F. Resonator Corp., 224 Seventh St., Racine, Wis. 2.

UCINITE CO., DIV., UNITED-CARR FASTENER CORP.,
459 Watertown St., Newtonville, Mass. 1-2-5. ADV. PG. 101. UNITED CARR FASTENER CORP., Cambridge, Mass. 1.

ADV. PG. 100. Waltham Horological Corp., 899 Main St., Waltham,

Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass. 2-3.
WINCHESTER ELECTRONICS INC., Glenbrook, Conn. 1.

ADV. PG. 81.
Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass. 2.

# CONNECTORS—Coaxial Cable Aerolite Electronics Corp., 507 26th St., Union City,

N. J. Allied Industries, Inc., 1023 S. 21st St., Louisville 10, Ky.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chlcago 50, III. ADV. PG. 212.

Andrew Corp., 363 E. 75th St., Chicago 19, III.

Astatic Corp., The, Conneaut, Ohio.

Automatic Metal Products Co., 315 Berry St., Brooklyn 11, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
Brookhaven Electronics Corp., Box 931, Sanford, N. C.
Buggie & Co., H. H., 726 Stanton St., Toledo, Ohio.
Burndy Engineering Co., Inc., Norwalk, Conn.
Cannon Electric Co., 3209 Humboldt St., Los Angeles 31,
Calif. Calif.

DAGE ELECTRIC CO., INC., 67 N. Second St., Beach
Grove, Ind. ADV. PG. 423.

ELECTRO PRECISION PRODUCTS INC., 119-01 22nd
Ave., College Point, N. Y. ADV. PG. 431.

GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15,
Mass. ADV. PG. 160.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J.
ADV. PG. 245.

GLASER-STEERS CORP., 2 Main St., Benevine 7, No. 9, ADV. PG. 245.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.
J F D MFG. Co., 1NC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
MENDELSOHN SPEEDGUN CO., INC., 457 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 502.
Molded Insulation Co., 335 E. Price St., Philadelphla, Pa.

Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 515. Scintilla Magneto Div., Bendix Aviation Corp., Sidney,

N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
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.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5,
N. J. ADV. PG. 399.
Transradio Ltd., 138A Cromwell Rd., London S. W. 7,
England.

England. U. H. F. Resonator Corp., 224 Seventh St., Racine, Wis. UCINITE CO. DIVISION, UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 101.

Waltham Horological Corp., 899 Main St., Waltham,

Mass.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.
Workshop Associates, Div. of The Gabriel Co., 135 Crescent
Rd., Needham Heights, Mass.

# CONNECTORS—Electrical

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
Cannon Electric Co., 3209 Humboldt St., Los Angeles 31,

ELCO CORPORATION, 190 Glenwood Ave., Philadelphia 40, Pa. ADV. PG. 48, Scintilla Magneto Div., Bendix Aviation Corp., Sidney,

N. J. ADV. PG. 399.
WINCHESTER ELECTRONICS INC., Glenbrook, Conn.

#### CONNECTORS—Power

ELCO CORPORATION, 190 Glenwood Ave., Philadelphia 40, Pa. ADV. PG. 48. Equipment & Service Co., 6815 Oriole Drive, Dallas 9, Joy Mfg. Co., Electrical Connector Div., 4235 Clayton Ave., St. Louis, Mo.

# CONTACTORS

Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1,

Wis.

Lakeside Ave., Orange, N. J.

Lakeside Ave., Orange, O

ELECTRO PRECISION PRODUCTS, INC., 119-01 22nd Ave., College Point, N. Y. ADV. PG. 431. Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. 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. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis

10, Mo.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.
R.B.M. Div., Essex Wire Corp., Logansport, Ind. Struthers-Dunn Inc., 150 N. 13th St., Philadelphia 7,

Trumbull Electric, Dept. of General Electric Co., Plain-

ville, Conn.

Veeder-Root, Inc., 20 Sargeant St., Hartford 2, Conn.

WARD LEONARD ELECTRIC CO., 31 South St., Mt.

Vernon, N. Y. ADV. PG. 173, 174.

Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Zenith Electric Co., 152 W. Walton St., Chicago 10, IV

CONTACTS—Electrical ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
Automatic Metal Products Co., 315 Berry St., Brooklyn 11, N. Y.
Baker Co., Inc., 113 Astor St., Newark 5, N. J.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 503.
BRAININ CO., C. S., 320 Washington St., Mt. Vernon, N. Y. ADV. PG. 424.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
CONTINENTAL CONNECTOR CORP., 30-30 Northern Blvd., Long Island City, N. Y. ADV. PG. 183.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, WisECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 120.

nsteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, III. eanklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.

ale Dorothea Mechanisms, 81-01 Broadway, Elm-

ale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.

ENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

ENERAL PLATE DIVISION, Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270.

BSON ELECTRIC CO., 8361 Frankstown Ave., Pittsburgh 21, Pa. ADV. PG. 439.

RAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.

Eystone Carbon Co., Inc., Saint Marys, Pa.

AKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.

ALO TOOL & MFG. CO., 4025 W. Lake St., Chidicago 24, Ill. ADV. PG. 424.

Ballory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

EY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465.

PG. 465. X MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 160. ACKPOLE CARBON CO., St. Mary's, Pa. ADV. PG.

154, 155. Icon Mfg. Co., 8008-12 Wallace St., Chicago 20, III. CINITE CO., DIVISION, UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV.

PG. 101 NITED ( CARR FASTENER CORP., Cambridge, Mass. ADV. PG. 100.
PESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Ilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

#### ONTROLS—Alarm System

GUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, Place, Chicago 14, III.
Place, West Orange, N. J. ADV. PG. 88, 89.
Pectronic Control Corp., 1573 Forest St., Detroit, Mich.
PRONICS, INC., 2649 N. Howard St., Philadelphia
33, Pa. ADV. PG. 451.
Philadelphia 15., Ashland, Mass.
Place Dorothea Mechanisms, 81-01 Broadway, Elmhurst,
N. Y.

AMEWELL CO., THE, Newton Upper Falls 64, Mass.

AMEWELL CU., IHE, Newton Opper Land, ADV. PG. 367.

ENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

AMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 215-217.

dustrial Electronics Co., Inc., Hanover, Mass.

menite Electric Co., 407 S. Dearborn St., Chicago

menite Electric Co., 407 S. Dearborn St., Gincago 5, III.
anning, Maxwell & Moore, Inc., Stratford, Conn. tomatic Inc., 879 Wellesley Ave., Los Angeles 49, Calif. totabell Company, 116 Nassau St., New York 7, N. Y. PLEY CO., INC., Middletown, Conn. ADV. PG. 490. JSSELL & STOLL CO., INC., 125-6 Barclay St., New York 7, N. Y. ADV. PG. 387.
GNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York N. Y. ADV. PG. 288.
TANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 494.
S. Gauge Div., American Machine and Metals, Inc., Sellersville, Pa.
ESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,

Sellersville, PaleSTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. orner Electronic Devices, Rankin, III.

# ONTROLS—Auto Radio Remote

G. S. LABORATORIES, INC., 391 Ludlow St., Stam-G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

ENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74. oname, Inc., 3701 Ravenswood Ave., Chicago, III.-!co Radio Div., General Motor's Corp., Kokomo, Ind. AMMARLUND MFG. CO., 460 W. 34th St., New 4York 1, N. Y. ADV. PG. 215-217.

D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

FEWART MFG. CORP., F. W., 4311 Ravenswood Ave., Chicago 13, III. ADV. PG. 514.

Heviso Corp., 7466 W. Irving Park Road, Chicago 34, III. HITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. ADV. PG. 391.

# ONTROLS—Automatic Tuning

R ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. G. S. LABORATORIES, INC., 391 Ludlow St., Stam-ford, Conn. ADV. PG. 454. 1LLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87. Ico Radio Div., General Motors Corp., Kokomo, Ind. Ignieering Research Associates, Inc., 1902 W. Minne-haha Ave., St. Paul, Minn. eltronic Co., 19500 W. Eight Mile Rd., Detroit 19,

# CONTROLS—Automatic Voltage Regulating

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Burlington Instrument Co., Burlington, Iowa.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Ohio.

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.

Electric Regulator Corp., 50 Day St., South Norwalk,

Conn.

Conn.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

Gates Radio Co., Quincy, III.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

General Magnetics, Inc., 135 Bloomfield Ave., Bloom
Gald N. 1

General Magnetics, Inc., 135 Bloomneid Ave., Droull-field, N. J.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 361.
Pedersen Electronics Co., Mount Diablo Blvd., Lafay-

Pedersen Electronics Co., Mount Diablo Bivo., Laray-ette, Calif.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
RED BANK DIVISION, Bendix Aviation Corp., Red Bank, N. J. ADV. PG. 125, 126.
Sherron Electronics Co., 1201 Flushing Ave., Brook-Ivn 6 N. Y.

lyn 6, N. Y.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford,

Conn. ADV. PG. 168, 169.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

# CONTROLS—Capacitance Operated

Foxboro Co., The, Foxboro, Mass.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, 111. Niagara Electron Laboratories, Andover, N. Y. Photobell Company, 116 Nassau St., New York 7, N. Y. Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

# CONTROLS—Chemical

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. Niagara Electron Laboratorties, Andover, N. Y. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.

# **CONTROLS—Counting & Sorting**

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Brinnell Company, The, Simsbury, Conn.
Bristol Co., The, Waterbury 20, Conn.
Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.

De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta De-lec-Ironic Laboratories, 100., Place, Chicago 14, III.
Dietz Co., S. J., 38 River Edge Rd., River Edge, N. J.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia
33, Pa. ADV. PG. 451.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Haledy Electronics Co., 57 William St., New York 5,
N. Y.

N.Y.
Industrial Electronics Co., Inc., Hanover, Mass.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler
St., Detroit 10, Mich. ADV. PG. 122, 123.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.
Standard Electronics Research Corp., 2 East End Ave.,

New York 21, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Worner Electronic Devices, Rankin, III.

# CONTROLS—Density

See Controls, Specific Gravity

# CONTROLS—Dimension

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England. 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. 1-23.
Industrial Electronics Co., Inc., Hanover, Mass.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# CONTROLS-Door

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Industrial Electronics Co., Inc., Hanover, Mass.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Photobell Company, 116 Nassau St., New York 7, N. Y. Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y. N. Y.
Stanley Tools Div., The Stanley Works, Elm St., New
Britain, Conn.
TELETRONICS LABORATORY, INC., 352 Maple Ave.,
Westbury, N. Y. ADV. PG. 464, 529.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### CONTROLS—Electric Motor

Allen-Bradley Co., 136 W. Greenfield L.ve., Milwaukee 4, Wis. Allis-Chalmers Mfg. Co., 935 S. 76th St., Milwaukee 1, Arrow-Hart & Hegeman Electric Co., 100 Hawthorne St., Hartford 6, Conn. BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153. CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 162, 163. Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis. Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, VIS.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP.,
Teterboro, N. J. ADV. PG. 127, 128.
Federal Electric Products Co., 50 Paris St., Newark 5, N. J. Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.

Industrial Electronics Co., Inc., Hanover, Mass.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
R. B. M. Div., Essex Wire Corp., Logansport, Ind. Redmond Co., Owosso, Mich.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill. Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill. Forest St., Attleboro, Mass.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34, WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 173, 174.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

# CONTROLS—Electronic Motor

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. ADV. PG. 153.
Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio. Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., LaJolla, Calif. ADV. PG. 378.
Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP.,
Teterboro, N. J. ADV. PG. 127, 128.
Electric Machinery Mfg. Co., 1331 N. E. Tyler St.,
Minneapolis 13, Minn.
Federal Electric Products Co., 50 Paris St., Newark,
5, N. Y.
Flader, Inc., Frederic, 1330 Laskey Rd., Toledo 12,
Ohio. Ohio.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
Industrial Electronics Co., Inc., Hanover, Mass.
Machine-O-Matic, Inc., P. O. Box 238, Ashley, Ohio.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337. ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 308, 309.

SERVO-TEK PRODUCTS CO., 4 Godwin Ave., Paterson, N. J. ADV. PG. 230.

Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.

SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347.

Thermo Instruments Co., Box 336, Belmont, Calif. Weltronic Co., 19500 W. Eight Mile Rd., Detrolt 19, Mich. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

#### **CONTROLS**—Elevator Leveling

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, BUGUE ELECTRIC MFG. CU., 52 lowa Ave., Paterson 3, N. J. ADV. PG. 153.

BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J. ADV. PG. 259.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

#### CONTROLS—Film Thickness

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. Tracerlab, Inc., 130 High St., Boston 10, Mass.

#### **CONTROLS**—Flame Failure

Bristol Co., The, Waterbury 20, Conn. Combustion Control Corp., 720 Beacon St., Boston 15, Mass. --Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, ESS Specialty Corp., 90 S. Washington Ave., Desgenner, N. J.

N. J.

General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 304, 305.

Spencer Thermostat Div., Metals & Controls Corp., 34
Forest St., Attleboro, Mass.

Wheelco Instruments Div., Barber-Colman Co., Rockford,
III. White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, CONTROLS—Fluid Conductivity

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Ess Specialty Corp., 96 S. Washington Ave., Bergenfield,
N. J.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Industrial Electronics Co., Inc., Hanover, Mass.
Industrial Instruments, Inc., 17 Pollack Ave., Jersey
City 5, N. J.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa. Limente Electric 60.7 407. \$ Deabsorn St., Chicago 57 CONTROLS—Heat Treating MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.

CONTROLS-Fluid Flow Adel Div. of General Metals Corp., 10777 Van Owen St., Burbank, Calif. Askania Regulator Co., 240 E. Ontarlo St., Chicago 11, Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
Bristol Co., The, Waterbury 20, Conn.
Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
Fischer & Porter Co., 476 County Line Road, Hatboro, Pa.
Foxboro Co., The, Foxboro, Mass.
Gaveco Labs., Inc., Sub. of General Aviation Equipment
Co., Inc., 2 East End Ave., New York 21, N. Y.
General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III.
ROBINETTE CO., W. C. 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.
Spencer Thermostat Div., Metals & Controls Corp., 34
Forest St., Attleboro, Mass.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### CONTROLS—Food Processing

Askania Regulator Co., 240 E. Ontario St., Chicago 11, III.
Bristol Co., The, Waterbury 20, Conn.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E.
26, England.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, MERCOID CORP., 4201 Belmont Ave., Chicago 41, III. 246 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn. MinneAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

CONTROLS—Frequency BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Bassett, Inc., Rex, 307-11 N. W. First Ave., Fort Lauderdale, Fla. Bassett, Inc., Rex, 307-11 N. W. First Ave., Fort Lauderdale, Fla.
Burlington Instrument Co., Burlington, Iowa.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbaile, Calif.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass. Electric Regulator Corp., 50 Day St., South Norwalk, Conn.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver Hathaway Instrument Co., 1919 3. Charles Color 10, Colo.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 308, 309.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# CONTROLS-Gain See Attenuators

# Askania Regulator Co., 240 E. Ontario St., Chicago 11,

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Bristol Co., The, Waterbury 20, Conn.
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. 1-23.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, III. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.

Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Wheelco Instruments Div., Barber-Colman Co., Rockford, III. Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

# CONTROLS—Humidity

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
Barber-Colman Co., Rockford, III.

Bristol Co., The, Waterbury 20, Conn.
Foxboro Co., The, Foxboro, Mass.
General Controls Co., Glendale 1, Calif.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphla
44, Pa. 44, 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. 304, 305.
Serdex, Inc., 91 Cambridge St., Boston, Mass. Serdex, Inc., 91 Campridge St., Bostoli, Mass.
Thermo Instruments Co., Box 336, Belmont, Calif.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

#### CONTROLS—Illumination

Deitz Co., S. J. 38 River Edge Rd., River Edge, N. J.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place,
Chicago 14, III.
Electronic Control Corp., 1573 E. Forest St., Detrolt, Mich.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Industrial Electronics Co., Inc., Hanover, Mass.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Photobell Company, 116 Nassau St., New York 7, N. Y.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256. Worner Electronic Devices, Rankin, Ill.

# CONTROLS—Inspection

Arma Corp., 254 36th St., Brooklyn 32, N. Y. Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass. De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Haledy Electronics Co., 57 William St., New York 5, N. Y. N. Y.
Industrial Electronics Co., Inc., Hanover Mass.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Standard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y. New York 21, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Worner Electronic Devices, Rankin, III.

# CONTROLS—Liquid Level AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

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.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.

Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.
Fielden Instrument Corp., 2920 N. 4th St., Philadelphia 33, Pa.

Fischer & Porter Co., 476 County Line Road, Hatboro, Pa Foxboro Co., The, Foxboro, Mass.
Fulton Sylphon 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. 1-23.
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, MERCOID CORP., 4201 Belmont Ave., Chicago 41, Ill. MERCOID CORP., 4201 Belmont Ave., Chicago 41, III. ADV. PG. 246.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
Soreng Mfg. Corp., 9555 Eden Ave., Schiller Park, III.
Thermo Instruments Co., Box 336, Belmont, Calif.
United Electric Controls Co., 85 School St., Watertown 72, Mass.

United Electric Controls Co., 72, Mass.
72, Mass.
Vapor Recovery Systems Co., P. O. Box 231, 2820 N.
Alameda, Compton, Calif.
Warrick Co., Charles F., 16251 Hamilton Ave., Detrolt
3 Mich

STINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

#### NTROLS—Loop Regulation

rk Controller Co., 1146 E. 152nd St., Cleveland 10, CAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. ARUSTAL THE CO., Apparatus Sales Div., 1 River 2d., Schenectady 5, N. Y. ADV. PG. 1-23.

Weral Magnetics, Inc., 135 Bloomfield Ave., Bloomfiel geld, N. J.

Ristrial Electronics Co., Inc., Hanover, Mass.

VSTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, rittsburgh 30, Pa. ADV. PG. 109-115.

## NTROLS—Machine Safety

FUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, J. J. ADV. PG. 153. Iz Co., S. J., 38 River Edge Rd., River Edge, N. J. Fectionic Laboratories, Inc., 1711 Terra Cotta Place, chicago 14, III. Etronic Control Corp., 1573 E. Forest St., Detroit, Dorothea Mechanisms, 81-01 Broadway, Elmhurst, JERAL ELECTRIC CO., Apparatus Sales Div., 1 River Id., Schenectady 5, N. Y. ADV. PG. 1-23.
Gett Corp., M. A., 724 W. Winnebago St., Milwaukee

Wis.

Jastrial Electronics Co., Inc., Hanover, Mass.

Switch Div., Minneapolis-Honeywell Regulator Co.,

W. Spring St., Freeport, III.

Poswitch, Inc., 77 Broadway, Cambridge 42, Mass.

RSELL & STOLL CO., INC., 125-6 Barclay St., New

Prk 7, N. Y. ADV. PG. 387.

Sacer Thermostat Div., Metals & Controls Corp., 34

Jurest St., Attleboro, Mass.

Jard Telephones & Cables Ltd., Connaught House,

John M. C. 2, England.

WITINGHOUSE ELECTRIC CORP., P. O. Box 5578,

Ittsburgh 30, Pa. ADV. PG. 109-115.

#### TROLS—Materials Thickness

ec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, icago 14, III. cric Eye Equipment Co., 16 W. Fairchild St., Dan-le, III. Seconic Control Corp., 1573 E. Forest St., Detroit, Sch.

oro Co., The, Foxboro, Mass. ner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14,

1. Gt Corp., M. A., 724 W. Winnebago St., Milwaukee 5,

Instrial Electronics Co., Inc., Hanover, Mass.
Instrial Electronics, INC., 8060 Wheeler St., itroit 10, Mich. ADV. PG. 122, 123.
Magflux Corp., 5900 Northwest Hwy., Chicago 31, III.
Stdard Electronics Research Corp., 2 East End Ave., ww York 21, N. Y.
Terlab, Inc., 130 High St., Boston 10, Mass.
M.TINGHOUSE ELECTRIC CORP., P. 0. Box 5578, attsburgh 30, Pa. ADV. PG. 109-115.

# TROLS—Mechanical Overload

Briell Company, The, Simsbury, Conn. Car-Hammer, Inc., 41 N. 12th St., Milwaukee 1,

Olan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y. ISTRIAL ELECTRONICS, INC., 8060 Wheeler St., troit 10, Mich. ADV. PG. 122, 123. Speer Thermostat Div., Metals & Controls Corp., 34 rest St., Attleboro, Mass.

# GETROLS—Mechanical Switch

ALASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Auhatic Signal Division, Eastern Industries, Inc., 100
gent St., East Norwalk, Conn.
Brist Co., The, Waterbury 20, Conn.
CE:RALAB DIV., OF GLOBE-UNION, INC., 914 E. Keefe
p., Milwaukee 1, Wis. ADV. PG. 71-74.
Coler and Control Corp., 5225 W. Electric Ave., Miltukee 14, Wis.
Cut-Hammer, Inc., 411 N. 12th St., Milwaukee 1, 5.

GERAL ELECTRIC CO., Apparatus Sales Div., 1 River ME COLORD, Apparatus Sales Div., 1 River, Schenectady 5, N. Y. ADV. PG. 1-23.

ME OID CORP., 4201 Belmont Ave., Chicago 41, III.

V. PG. 246.

MI Switch Div., Minneapolis-Honeywell Regulator Co.,

W. Spring St., Freeport, III.

Path & Co., Inc., Ltd., 366 Madison Ave., New York

N. Y.

Spring They are the state of t

Speer Thermostat Div., Metals & Controls Corp., 34 lest St., Attleboro, Mass.
Tec.aboratories, Inc., Bergen & Edsall Blvds., Palisades

Weipnic Co., 19500 W. Eight Mile Rd., Detroit 19,

WETNGHOUSE ELECTRIC CORP., P. O. Box 5578, ktsburgh 30, Pa. ADV. PG. 109-115.

# CONTROLS—Moisture

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. alden Instrument Corp., 2920 N. 4th St., Philadelphia Spring, Mig.
Fielden Instrument Corp., 2920 N. 4th St., Philadelphia 33, Pa.
Foxboro Co., The, Foxboro, Mass.
Industrial Electronics Co., Inc., Hanover, Mass.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.

# CONTROLS—Oxygen

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

# CONTROLS—Package Wrapping

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J. De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, De-lec-Ironic Laboratories, inc., 1711 Terra Cotta Place, Chicago 14, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Industrial Electronics Co., Inc., Hanover, Mass.
Machine-O-Matic, Inc., P. O. Box 238, Ashley, Ohio.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# CONTROLS-PH

Beckman Instruments, Inc., 820 Mission St., South Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Foxboro Co., The, Foxboro, Mass.
LaMotte Chemical Products Co., Towson 4, Baltimore, Md

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Menlo Research Laboratory, Menlo Park, Calif.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

#### CONTROLS—Photoelectric

Airmec Laboratories; Ltd., High Wycombe, Buckingham-

shire, England.
Autotron Co., The, Danville, III.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. ADV. PG. 153.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

Deitz Co., S. J., 38 River Edge Rd. River Edge, N. J.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place,
Chicago 14, III.
Electrodyne Co., 32 Oliver St., Boston, Mass.
Electronic Control Corp., 1573 E. Forest St., Detroit,
Mich.
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. 1-23.
Haledy Electronics Co., 57 William St., New York 5,
N. Y.

Industrial Ejectronics Co., Inc., Hanover, Mass. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

Machine-O-Matic, Inc., P. O. Box 238, Ashley, Ohio.
McElroy Mfg. Co., Littleton, Mass.
Pedersen Electronics Co., Mount Diablo Blvd., Lafayette,

Photobell Company, 116 Nassau St., New York 7, N. Y.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6,
N. Y.

Standard Electronics Research Corp., 2 East End Ave.,

New York 21, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. Pg. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Worner Electronic Devices, Rankin, III.

# CONTROLS—Photographic Exposure

Industrial Electronics Co., Inc., Hanover, Mass. Pederson Electronics Co., Mount Diablo Blvd., Lafayette, Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Fre-linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# CONTROLS—Positioning

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.

Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee Askania Regulator Co., 240 E. Ontario St., Chicago 11,

Til. Avion Instrument Corp., Paramus, N. J.
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10,
Ohio.

Onio.

Barber-Colman Co., Rockford, III.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,

BUGUE ELECTRIC WIFG. CO., 32 John N. J. ADV. PG. 153.

BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J. ADV. PG. 259.

Bristol Co., The, Waterbury 20, Conn.

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

86, 87. Cubic Corp., 2841 Canon St., San Diego 6, Calif. Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,

Doelcam Corp., 56 Elmwood St., Newton 58, Mass. Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7,

N. Y.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. General Controls Co., Glendale 1, Calif. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield,

Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee Wis

5, Wis.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Industrial Electronics Co., Inc., Hanover, Mass.

MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 361.

Micro Switch Div., Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, III.

Minnesota Electronics Corp., 47 W. Water St., St. Paul 1. Minn.

1, Minn.
Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16,

III.
ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.
SERVO-CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 308, 309.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.
Synchro Start Products, Inc., 1046 W. Fullerton Ave., Chicago 14, III.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34, III.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG, 109-115.
Wörner Electronic Devices, Rankin, III.

# CONTROLS—Power Level

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. Painton & Co., Inc., Ltd., 366 Madison Ave., New York SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

# CONTROLS—Pressure

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. Allen-Bradley Co. 136 W. Greenfield Ave., Milwaukee Askania Regulator Co., 240 E. Ontario St., Chicago 11,

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. 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 Bivd., Long Island City 2, N. Y. Cutler-Hammer, Inc., 411 Nr. 12th St., Milwaukee 1, Wis. Fischer & Porter Co., 476 County Line Road, Hatboro, Pa.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. Foxboro Co., The, Foxboro, Mass.
Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
General Controls Co., Glendalg 1, Calif.

Fulton Sylphon Div., Roberts, Knowille 4, Tenn.
General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Giannini & Co., Inc., G. M., 254 W. Colorado St.,
Pasadena 1, Calif.
FIFCTRONICS, INC., 8060 Wheeler St.,

Pasadena 1, Calif.

INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.

MERCOID CORP., 4201 Belmont Ave., Chicago 41, III. ADV. PG. 246.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S.. Minneapolis Minn.

S., Minneapolis-Honeywell Regulator Co., 2735 Fourth Ave., S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44. Pa. ADV. PG. 304, 305.
ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.
United Electric Controls Co., 85 School St., Watertown 72. Mass.

72, Mass.

Wallace & Tiernan Products, Inc., Belleville 9, N. J. WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Freiinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis

#### CONTROLS—Printing

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, 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, III.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Machine-O-Matic, Inc., P. O. Box 238, Ashley, Ohio.
ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578
Pittsburgh 30. Pa. ADV. PG. 109-115. Pittsburgh 30, Pa. ADV. PG. 109-115.

CONTROLS—Radio Remote ARF Products, Inc., 7627 Lake St., River Forest, III. Aeronautical Communications Equipment, Inc., 3090 Aeronautical Communications Equipment, 100, 200 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. Avion Instrument Corp., Paramus, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.
Bendix Radio Division, Bendix Aviation Corp., Baltimore Breico Electronics Corp., 55 Vandam St., New York 13 N. Y.
Bristol Co., The, Waterbury 20, Conn.
C. G. S. LABORATORIES, INC., 391 Ludlow St.,
Stamford, Conn. ADV. PG. 454.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Erco Radio Labs., Inc., East Stewart Ave., Garden
City, N. Y. HAMMARIUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 215-217. KUPFRIAN MFG. CO., 398 State St., Binghamton, N. Y. ADV. PG. 476.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada. onarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Monarch Brooklyn 8, N. Y.

Northeastern Engineering, Inc., Manchester, N. H.

Radiomarine Corp. of America, 75 Varick St., New
York 13, N. Y. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

STEWART MFG. CORP., F. W., 4311 Ravenswood Ave., Chicago 13, III. ADV. PG. 514.

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. ADV. PG. 464, 529.

Televiso Corp., 7466 W. Irving Park Road, Chicago 34, III.

# CONTROLS—Register

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J. Electric Eye Equipment Co., 16 W. Fairchild St., Danville, III. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Industrial Electronics Co., Inc., Hanover, Mass.
Machine-O-Matic, Inc., P. O. Box 238, Ashley, Ohio.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. ADV. PG. 391. White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6,

Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

# CONTROLS—Register Cutter

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Industrial Electronics Co., Inc., Hanover, Mass. Machine-0-Matic, Inc., P. O. Box 238, Ashley, Ohio. Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass. RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490. WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

#### CONTROLS—Servo

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. P Arma Corp., 254 36th St., Brooklyn 32, N. Y Askania kegulator Co., 240 E. Ontario St., ADV. PG. 263. Askania ł 11, III.
Avion Instrument Corp., Paramus, N. J.
Belock Instrument Corp., 13-11 111th St., College
Point, N. Y.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

BOWMAR INSTRUMENT CORP., 4214 Leo Rd., Fort Wayne, Ind. ADV. PG. 498.

C. G. S. LABDRATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

Cubic Corp., 2841 Canon St., San Diego 6, Calif.

DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., LaJolla, Calif. ADV. PG. 378.

Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y.

ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 127, 128.

Electric Regulator Corp., 50 Day St., South Norwalk, Conn.

Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.

Conn.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.
FORD INSTRUMENT DIV., The Sperry Corp., 31-10
Thompson Ave., Long Island City, N. Y. ADV. PG. 486.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

Industries, Inc., 125 Sunrise Place, Dayton 7,

Ohio.
Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
Industrial Electronics Co., Inc., Hanover, Mass.
Kearfott Co., Inc., 1150 McBride Ave., Little Falls, N. J.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 361.
Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.

Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.

Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.

Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y. Northeastern Engineering, Inc., Manchester, N. H. Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, III. ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. ADV. PG. 509.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 308, 309.

SPERRY GYROSCOPE Co., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

New York 21, N. Y. Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

TRANSICOIL CORP., 107 Grand St., New York 13, N. Y. ADV. PG. 37.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,

New York 14. N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6,

Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

# CONTROLS-Skew

Avion Instrument Corp., Paramus, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1
River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Industrial Electronics Co., Inc., Hanover, Mass.

# CONTROLS—Smoke & Combustion, Electronic

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland, Ohio. Bristol Co., The, Waterbury 20, Conn. Combustion Control Corp., 720 Beacon St., Boston 15, Mass.

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.

De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, III. Electronic Control Corp., 1573 E. Forest St., Detroit, Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Haledy Electronics Co., 57 William St., New York 5, N. Y. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
RIPLEY Co., INC., Middletown, Conn. ADV. PG. 490.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.

Worner Electronic Devices, Rankin, III.

# **CONTROLS—Sound System**

CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 162, 163. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Wheelco Instruments Div., Barber-Colman Co., Rockford,

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind. Painton & Co., Inc., Ltd., 366 Madison Ave., New York

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Stromberg-Carlson Co., Rochester 13, N. Y.

#### CONTROLS—Specific Gravity

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Bristol Co., The, Waterbury 20, Conn.
Fischer & Porter Co., 476 County Line Road, Hatboro,

Pa.
Foxboro Co., The, Foxboro, Mass.
Gaveco Labs., Inc., Sub. of General Aviation Equipment
Co., Inc., 2 East End Ave., New York 21, N. Y.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

#### CONTROLS—Strain

Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 4, Wis.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.
POLYPHASE INSTRUMENT CO., 705 Haverford Rd.,
Bryn Mawr, Pa. ADV. PG. 519.

#### CONTROLS—Temperature, Electronic

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. American General Thermostat Corp., 2060 Bronx St., New York 60, N. Y. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio Barber-Colman Co., Rockford, III. Bar-Ray Products, Inc., 209 25th St., Brooklyn 32,

Bristol Co., The, Waterbury 20, Conn.
Electronic Control Corp., 1573 E. Forest St., Detrolt,
Mich.

Foxboro Co., The, Foxboro, Mass. G-V Controls Inc., 28 Hollywood Plaza, East Orange, N. J. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chin cago 10, III.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.

MACDONALD & CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200. MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.

Neomatic Inc., 879 Welfesley Ave., Los Angeles 49. Calif.

Calif.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Precision Scientific Co., 3737 W. Cortland St., Chicago

47, III.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,

N. Y. SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 308, 309.

Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.

Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

Standard Electronics Research Corp., 2 East and Aver New York 21, N. Y.

ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. ADV. PG. 410.

VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 204.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Wheelco Instruments Div., Barber-Colman Co., Rockford, III. White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6,

# CONTROLS—Tentering

Electrodyne Co., 32 Oliver St., Boston, Mass.
Industrial Electronics Co., Inc., Hanover, Mass.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box
Pittsburgh 30, Pa. ADV. PG. 109-115.

# CONTROLS—Timing

A'G'A DIVISION OF ELASTIC STOP NUT CORP. OF AMERICA, 1029 Newark Ave., Elizabeth 3, N. J. ADV. PG. 378, 379.

DAMS & WESTLAKE CO., Michigan St., Elkhart, Ind. ADV. PG. 103-106. lirborne Electronics Co., Metropolitan Airport; Hangar No. 3, Van Nuys, Calif. lirmec Laboratories, Ltd., High Wycombe, Buckingham-shive England

shire, England. Ilen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4,

Wis.

Lutomatic Signal Division, Eastern Industries, Inc., 100
Regent St., East Norwalk, Conn.

Lutomatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.

OWMAR INSTRUMENT CORP., 4214 Leo Rd., Fort
Wayne, Ind. ADV. PG. 498.

Listol Co., The, Waterbury 20, Cnon.

Linema-Television Ltd., Worsley Bridge Rd., London,
S. E. 26, England.

Loral Designs Div., Henry G. Dietz Co., 12-16 Astoria
Blvd., Long Island City 2, N. Y.

RAMER CO., NC., R. W., Box 13, Centerbrook, Conn.

ADV. PG. 400.

Liter-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

Limco-Gray Co., 207 E. Sixth St., Dayton, Ohio.

Lirakool, Inc., 1010 N. Main St., Elkhart, Ind.

Ligle Signal Corp., Moline, Illinois.

DISON INC., THOMAS A., Instrument Div., 81 Lake
side Ave., West Orange, N. J. ADV. PG. 88, 89.

Lectronic Control Corp., 1573 E. Forest St., Detroit,
Mich.

armer Electric Co., 21 Mossfield Rd., Waban 68, Mass oxboro Co., The, Foxboro, Mass. ale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

N. Y.

neral Control Company, 1200 Soldiers Field Rd.,

Boston 34, Mass.
ENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. rett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis. waukee 5, Wis. ASER-STEERS CORP., 2 Main St., Belleville 9, N. J.

ADV. PG. 745.

Irrell & Gorrell, Haworth, N. J.

V Controls Inc., 28 Hollywood Plaza, East Orange,

ledy Electronics Co., 57 William St., New York 5, N. Y.

YDON CO., A. W., The, 232 N. Elm St., Waterbury
20, Conn. ADV. PG. 198.

YDON MFG. CO., INC., 584 E. Elm St., Torrington,
Conn. ADV. PG. 226, 227.

Justrial Electronics Co., Inc., Hanover, Mass.

Juraham Co., E., Bristol, Conn.

Juraham Co., E., Bristol, Conn.

Juraham Co., E., Conn.

Juraham Co., E., Bristol, Conn.

III.
Ilory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Intgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
Omatic Inc., 879 Welleslev Ave., Los Angeles 49, Calif.
'agon Electric Co., Two kivers, Wisconsin.
Otoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
'molds Electric Co., 3000 River Rd., River Grove, III.
Ddes, Inc., M. H., 30 Bartholomew Ave., Hartford,
Conn.

Conn.
PLEY CO., INC., Middletown, Conn. ADV. PG. 490.
ANDARD ELECTRIC TIME CO., 89 Logan St.,
Springfield, Mass. ADV. PG. 494.
ectro Industries Corp., 35-18 37th St., Long Island

Jectro Industries Corp., 35-10 27th 36., 2015 City 1, N. Y. K Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y. Mace & Tiernan Products, Inc., Belleville, N. J. Stronic Co., 19500 W. Eight Mile Rd., Detroit 19,

Fith Pittsburgh 30, Pa. ADV. PG. 109-115.

Son & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.

Son & Co., Co., 152 W. Walton St., Chicago 10,

# NTROLS—Torque, Electronic

ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.

Apr Instrument Corp., Paramus, N. J.

Lean & Bayley, Inc., 785 Hertel Ave., Buffalo 7. N. Y.

IPSE-PIONEER DIV. BENDIX AVIATION CORP., eterboro, N. J. ADV. PG. 127, 128.

Etronic Control Corp., 1573 E. Forest St., Detroit, lich.

Specialty Corp., 96 S. Washington Ave., Begen-feld, N. J. Fooro Co., The, Foxboro, Mass. Haway Instrument Co., 1315 S. Clarkson St., Denver

haway Instrument Co., 1315 S. Clarkson St., Denver O, Colo.

INUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., etroit 10, Mich. ADV. PG. 122, 123.

Iraham Co., E., Bristol, Conn.

# ENTROLS—Turbidity

Etric Eye Equipment Co., 16 W. Fairchild St.,

# CATROLS-Ultrasonic

B UE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, J. J. ADV. PG. 153.
C.A. S. LABORATORIES, INC., 391 Ludlow St., famford, Conn. ADV. PG. 454.
R. Roth Laboratories, East Hartford, Conn.
Liviso Corp., 7466 W. Irving Park Road, Chicago 34, Co., 7400 E. 12th St., Kansas City 8, Mo.

# CONTROLS-Vacuum

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Bristol Co., The, Waterbury 20, Conn. CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,

Wis.
Distillation Products Div. of Eastman Kodak Co., 753
Ridge Rd. W., Rochester 3, N. Y.
Foxooro Cc., 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. 1-23.
Hastings Instrument Co., Inc., Hampton 9, Va.
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
MERCOID CORP., 4201 Belmont Ave. Chicago 41, III.

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

MERCOID CORP., 4201 Belmont Ave., Chicago 41, III.

ADV. PG. 246.
National Research Corp., 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., Chlcago 47, III.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 20, N. Y.

N. Y.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney
P. O., Philadelphia 20, Pa.
United Electric Controls Co., 85 School St., Watertown
72, Mass.

WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# CONTROLS—Ventilating Control System

Bristol Co., The, Waterbury 20, Con.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria
Blvd., Long Island City 2, N. Y.
De-Tee-Tronic Laboratories, Inc., 1711 Terra Cotta
Place, Chicago 14, III.
Foxboro Co., The, Foxboro, Mass.
MERCOID CORP., 4201 Belmont Ave., Chicago, III.
ADV. PG. 246.

MERCOID CURP., 4201 Belmont Ave., Chicago, 11.
ADV. PG. 246.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,

S. Minneapolis, Minn.
United Electric Controls Co., 85 School St., Watertown 72, Mass. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# CONTROLS—Volume & Tone

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee CENTRALAB DIV. OF GLOBE UNION, INC. 914 F. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 42, 43.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121. ternational Resistance Co., 401 N Broad St., Phila-International Resistance Co., 401 N Broad St., Philadelphia 8, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 79.
Painton & Co., Inc., Ltd., 366 Madison Ave., New York 17, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Precision Electronic Components Ltd., 560 King St. W., Toronto, Ont.. Canada. Precision Electronic Components Ltd., 300 King St. H.,
Toronto, Ont., Canada.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 320.
STACKPOLE CARBON CO., St Marys Pa. ADV. PG. 154,

CONTROLS-Weight

Foxboro Co., The, Foxboro, Mass.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades

# CONTROLS—Welding

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.
Federal Tool Engineering Co., 532 Mulberry St., Newark 5, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44,
III. ADV. PG. 79.
Peschel Electronics, Inc., 13 Garden St., New Rochelle,
N. Y. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill. Weltronic Co., 19500 W. Eight Mile Rd., Detrolt 19, Mich WESTINGHOUSE ELECTRIC CORP., P. 0
Pittsburgh 30, Pa. ADV. PG. 109-115. 0. Box 5578,

# CONVERTERS

1. AC-DC
2. DC-AC
3. F-M
4. Frequency
5. Frequency Shift
6. High Frequency
7. Low Frequency 8. Magnetic
9. Microwave
10. Rotary
11. Static, Electronic
12. Vibrator Type
13. Voltage
14. Waveform

ABC Radio Laboratories, 3334 N. New Jersey St., Indianapolis 5. Ind. 3.

Acme leiectronix Div., NEA Service. Inc., W. Third & Lakeside, Cleveland 13, Ohio. 4.

AIR ASSOCIATES, INC., Teterboro, N. J. 5-6. ADV. PG. 243

263.

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-2-12. ADV. PG. 343.

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul I, Minn. 1-2-12-13. ADV. PG. 334.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 4-5-6-7. ADV. PG. 397.

Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. 10.

Boehme, Inc., H. O., 915 Broadway, New York 10, N. Y. 5.

5.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. 1-2-10. ADV. PG. 153.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co.,
52 Iowa Ave., Paterson 3, N. J. 4-10.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG.

49.
BRADLEY LABS., INC., 82 Meadow St., New Haven 10, Conn. 1. ADV. PG. 254.
Bristol Co., The, Waterbury 20, Conn. 1-2-12.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. 4-5-8. ADV. PG. 454.
CARTER MOTOR Co., 2644 N. Maplewood Ave., Chicago 47, III. 2. ADV. PG. 511.
CLARK CRYSTAL CO., 2 Farm Rd., Mariboro, Mass. 6. ADV. PG. 481.

ADV. PG. 481. COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III. 7. ADV. PG. 506. COLLINS RADIO CO., Cedar Rapids, Iowa. 5. ADV. PG.

86, 87.

COMMUNICATION MEASUREMENTS LAB., INC., 120
Greenwich St., New York 6, N. Y. 11. ADV. PG. 468.

Continental Electric Co., Inc., 334 Ferry St., Newark 5,
N. J. 7-10. N. J. 7-10. Cornell-Dubilier Electric Corp., South Plainfield, N. J.

9-12.

DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, III. 13. ADV. PG. 294.

Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md. 1-2.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. 9.

Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y. 10. Ecco High Frequency Corp., 7020 Hudson Blvd., North

Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J. 6.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. 6.
EICOR, INC., 1501 W. Congress St., Chicago 7, III. 2-10-13. ADV. PG. 314.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. 12. ADV. PG. 413.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. 4-5-6-7-13. ADV. PG. 488.

4-5-6-7-13. ADV. PG. 488. Electronic Processes Corp., 328 N. Market St., San Jose

18, Calif. 6.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61,
N. Y. 6-9. ADV. PG. 503.
Erro Radio Labs, Inc., East Stewart Ave., Garden City,
N. Y. 5.

Erco Radio Labs, Inc., East Stewart Ave., Garden City, N. Y. 5.
Gaveco Labs., Inc., Sub. of General Avlation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y. 4-11.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 4-8-10. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J. 2-8.
Georator Corp., 1820 N. Nash St., Arlington, Va. 1-2-7.
Gonset Co., 801 S. Main St., Burbank, Calif. 3-6.
Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, II).
10.
Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, III. 10.
Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif. 5.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. 1-2-8.

Inet, Inc., 8655 S. Main 1-2-8.
Janette Mfg. Co., Morton Grove, Illinols. 10.
Kato Engineering Co., 1415 First Ave., Mankato, Minn.
2-4-10.

ARS.. INC., 131-38 Sanford Ave., Flushing 55,
236, 237.

Oblo. 2.

2.4-10.
KEPCO LABS., INC., 131-38 Sanford Ave., Flushing 55, N. Y. 1-2-13. ADV. PG. 236, 237.
Leland Electric Co., 1501 Webster St., Dayton 1, Ohio. 2.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. 2. ADV. PG. 180.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21 Pa. 6.

21, Pa. 6. McColpin-Christie Corp., 3410 W. 67th St., Los Angeles

McElroy Mfg. Corp., Littleton, Mass. 5.

MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass. 5.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind. 1-6-12.
MEASUREMENTS CORP., Boonton, N. J. 3. ADV. PG. 158, 159.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, III. 3.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. 2-12, ADV. PG. 304, 305.

MODEL RECTIFIER CORP., 557 Roggers Ave., Brooklyn 25, N. Y. 1. ADV. PG. 523.

Worth Electric Mfg. Co., 501 S. Market St., Galion, Ohio. 2-12 2-12.

NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. 5. ADV. PG. 50, 51.
Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, III. 12.
DPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y.
1. ADV. PG. 520.
Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio. Radio Mfg. Engineers, Inc., 300-302 First Ave., Peorla 6, III. 5.
Radio Transceiver Laboratories, 116-23 Jamaica Ave.,
Richmond Hill 18, N. Y. 4.
Radiomarine Corp. of America, 75 Varick St., New York
13, N. Y. 5. 13, N. Y. 5.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. 13. ADV. PG. 336, 337.
RED BANK DIVISION, BENDIX AVIATION CORP., Red Bank N. J. 2-10. ADV. PG. 125, 126.
Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio. 4-6.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 1-2-13. ADV. PG. 168, 169.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. 9. ADV. PG. 139, 140.
STELMA, INC., 389 Ludlow St., Stamford, Conn. 5. ADV. PG. 164. Neck, N. Y. 9. ADV. PG. 139, 140.

STELMA, INC., 389 Ludlow St., Stamford, Conn. 5.
ADV. PG. 164.

STEVENS-ARNOLD INC., 22 Elkins St., South Boston,
Mass. 12. ADV. PG. 46.
Sylvan Electronic Labs., Inc., Broadalbin, N. Y. 4-6.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. 9. ADV. PG. 522-558.

T. L. G. ELECTRIC CORP., 31 W. 27th St., New York
1, N. Y. 8. ADV. PG. 499.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. 6.
ADV. PG. 448.
Technical Materiel Corp., P. 0. Box 142, 121 Spencer
Place, Mamaroneck, N. Y. 5.
Ther Electric & Machine Works, 15 S. Jefferson St.,
Chicago, III. 1.
IIMES FACSIMILE CORP., 540 W. 58th St., New York
19, N. Y. 5. ADV. PG. 526.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,
N. J. 5. ADV. PG. 262.
Varo Mfg. Co., Box 638, Garland, Texas. 1-2-4-7-11.
Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind. 3-6.
Walkirt Co., 145 W. Hazel, Inglewood, Calif. 4.
Weltronic Co., 19500 W Eight Mile Rd., Detroit 19,
Mich. 1-2-4-7.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. 1-2-13. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 FreInghuysen Ave., Newark 5, N. J. 1. ADV. PG. 256.
Wheeler Laboratorles, Inc., Great Neck, N. Y. 9.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.
1-2-3-12.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y. 3.

# COOKERS---Electronic

Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill. Sierra Electronic Corp., San Carlos, Calif. Weltronic Co., 19500 W. Eight Mile Rd., Detrolt 9, Mich.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y. 3.

# CORD SETS

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
American Electric Cable Co., 181 Appleton St., Holyoke,

Mass.

Merican Radio Hardware Co., Inc., 152 MacQueston
Pkwy., Mt. Vernon, N. Y.

Jelden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

III.

8IRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.

Blake Co., Whitney, Dept. E, New Haven 14, Conn. Cable Electric Products Co., Providence, R. I.

CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 277

CHESTER CABLE CURP., Phil Sci., Shedding, Pg. 277.

Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ili.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

CORNISH WIRE Co., 50 Church St., New York 7, N. Y. ADV PG. 138.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 138.

Diamond Wire & Cable Co., Sycamore, III.

Dyna Labs., Inc., 132 Lafayette St., New York 13, N. Y. Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Insulated Wire works, Inc., 69 Gordon Ave., Providence 5, R. I.
Koiled Kords, Inc., Box K, New Haven 14, Conn.
Kulka Electric Mfg. Co., Inc., 30 South St., Mount Vernon, N. Y.
Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

MONOWATT DEPT., GENERAL ELECTRIC CO., 66 Bis-

NONOWALL DEPT., GENERAL ELECTRIC CO., 66 Bissell St., Providence, R. I. ADV. PG. 22.
Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 175.
Phoenix Electronics, Inc., 50 Island St., Lawrence,

Mass. Remler Co., Ltd., 2101 Bryant St., San Francisco 10,

Calif.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Riverside Electrical Mfg. Co., 10221 Michigan Ave.,
Dearborn, Mich.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y.
ADV. PG. 306.
Roflan Co., Everett, Mass.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Sheldon Electric Co., Div. of Allied Electric Products

18, Calif.
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.
Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn,
N.Y.

N. Y.
UNITED MFG. & SERVICE CO., 405 S. Sixth St., Milwaukee 4, Wis. ADV. PG. 417.
U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
Winslow Cox, Inc., 9 Liberty St., Newark 5, N. J.

#### CORDS—Dial Cords & Cables

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Blake Co., Whitney, Dept. E, New Haven 14, Conn. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Cifton, N. J. ADV. PG. 189-193.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
MONOWATT DEPT., GENERAL ELECTRIC CO., 66 Bissell St., Providence, R. I. ADV. PG. 22.
Philico Corp., Tioga & C Sts., Philadelphia 34, Pa. Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W. C. 2, England.
Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn, N. Y.

# CORDS—Lacing

Columbian Rope Co., Auburn, N. Y.
HEMINWAY & BARTLETT MFG. Co., 500 Fifth Ave.,
New York 36, N. Y. ADV. PG. 246.

# CORDS-Line

ADVANCE INSULATED WIRE & CABLE CO., INC., 72
Woolsey St., Irvington, N. J. ADV. PG. 460.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
Mass. ADV. PG. 24.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
American Electric Cable Co., 181 Appleton St., Holyoke,
Mass.

American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio. Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

III.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.

Blake Co., Whitney, Dept. E, New Haven 14, Conn. CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 277

Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 138.

Diamond Wire & Cable Co., Sycamore, III.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

Koiled Kords, Inc., Box K, New Haven 14, Conn.

Modelectric Products Corp., 1500 Bangs Ave., Asbury

Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J.
MONOWATT DEPT., GENERAL ELECTRIC CO., 66
Bissell St., Providence, R. I. ADV. PG. 22.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4,
N. J. ADV. PG. 258.
Pacific Electricord Co., P. O. Box 15805. Crenshaw Sta.,
Los Angeles 8, Calif.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8,
Mass. ADV. PG. 175.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Plastic Wire & Cable Corp., Jewett City, Conn.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn,
N. Y.

Walkee 4, Wis. ADV. PG. 417.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### CORDS-Line Resistance

American Electric Cable Co., 181 Appleton St., Holyoke, Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342. CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. CHESTER CABLE CURP., Hill St., Chester, N. PG. 277.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Holyoke Wire & Cable Co., Holyoke, Mass.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
J F D MFG. Co., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

# CORDS—Patch

AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minne-apolis 7, Mich. ADV. PG. 368. Audio Equipment Sales, 153 W. 33rd St., New York 1,

Automatic Electric Sales Corp., 1033 W. Van Buren St.,

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III.
Buggie & Co., H. H., 726 Stanton St., Toledo, Ohio.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 386.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Britannia St., Meriden, Conn. ADV. PG. 292.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. 1. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83. KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274. KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145. Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, III. Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III. TRIMM INC., 400 W. Lake St., Libertyville, III. ADV. PG. 180.

**CORES**—Ceramic AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.
CENTRALAB DIV. OF GLOBE UNION INC., 914 E. Keefe Ave., Milwaukee, Wis. ADV. PG. 71-74.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.
Edison Swan Electric Co., Ltd., (Clix Div.) 366 Madison Ave., New York 17, N. Y.
Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
Ferricore Inc., 15 School St., Yonkers 2, N. Y.
Ferroxcube Corp. of America, 50 E. 41st St., New York, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
KIRCHBERGER & CO., INC., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.
Powdered Metal Products Corp., Franklin Park, Ill. Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J. Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.

THOR CERAMICS, INC., 225 Belleville Ave., Bloom-field, N. J. ADV. PG. 510. Wisconsin Porcelain Co., Sun Prairie, Wis.

#### CORES—Ferrite

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.
Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
For York, N. Y.
Frayburne Corp., 15 School St., Yonkers 2, N. Y.
Frayburne Corp., 103 Lafayette St., New York 13, N. Y.

MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y.

ADV. PG. 506.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
Powdered Metal Products Corp., Franklin Park, III.
Speer Resistor—Gorp., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG.
154, 155.

# ORES—High Permeability Magnetic

rnold Engineering Co., Marengo, III.

ROWLEY CO., INC., HENRY L., 1 Central Ave., West
Orange, N. J. ADV. PG. 214.

Pelco Radio Div., General Motors Corp., Kokomo, Ind.

Ferricore Inc., 15 School St., Yonkers 2, N. Y.

Ferroxcube Corp. of America, 50 E. 41st St., New
York, N. Y.

ENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.

MAGNETIC CORE, CORP., 2 Croton Ave., Ossining, N. Y.

ADV. PG. 506. ADV. PG. 506.

Aagnetic Metals Co., Hayes Ave. at 21st St., Camden,

Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.
Agnetics, Inc., Box 230-A, Butler, Pa.
Iullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
HATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 450.
ERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
owdered Metal Products Corp., Franklin Park, III.
YROFERRIC Co., 621 E. 216th .St ,New York 67,
N. Y. ADV. PG. 28.
ADIO CORES, INC., 9540 Tulley Ave., Oak Lawn, III.
ADV. PG. 220.
peer Resistor Corp., St. Marys, Pa.
TACKPOLE CARBON CO., St. Marys, Pa. ADV. PG.
154, 155.

TACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155.
Itandard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
elegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England. HOMAS & SKINNER STEEL PRODUCTS CO., 122 E. 23rd St., Indianapolis, Ind. ADV. PG. 434.
// Ang Laboratories, 296 Columbus Ave., Boston 16, Mass. VESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# ORES-Iron

ROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.
elco Radio Div., General Motors Corp., Kokomo, Ind. erricore, Inc., 15 School St., Yonkers 2, N. Y. AGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 506. AGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 506.

ATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5. N. J. ADV. PG. 450.

ERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.

Dwdered Metal Products Corp., Franklin Park, III. YROFERRIC CO., 621 E. 216th St., New York 67, N. Y. ADV. PG. 28.

ADIO CORES, INC., 9540 Tufley Ave., Oak Lawn, III. ADV. PG. 220.

Deer Resistor Corp. St. Marys. Pa. peer Resistor Corp., St. Marys, Pa. TACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155. tandard Telephones & Cables Ltd., Connaught House Aldwych, London, W. C. 2, England. Tilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

# ORES—Powdered Iron

Atomatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. ROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.

alco Radio Div., General Motors Corp., Kokomo, Ind. erricore Inc., 15 School St., Yonkers 2, N. Y. boratoire Industriel de Physique Applique, 67 Rue M.A.-Colombier, Bagnolet (Seine), France.

enkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif. AGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. AGNETIC CURE CURP., 2 Grown A. (ADV. PG. 506. Lelpar, Inc., 452 Swann Ave., Alexandria, Va. (ATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 450. ADV. PG. 450. ADV. PG. 450. ADV. PG. 25. ADV. PG. 26. St., New York 67, N. Y. ADV. PG. 28. RADIO CORES, INC., 9540 Tulley Ave., Oak Lawn, III. ADV. PG. 220. Speer Resistor Corp., St. Marys, Pa. STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154 155 154, 155.
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. Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

# CORES—Slug Tuning Units

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214. Delco Radio Div., General Motors Corp., Kokomo, Ind. Ferricore Inc., 15 School St., Yonkers 2, N. Y. Ferroxcube Corp. of America, 50 E. 41st St., New York. N. Y. N. GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197. Gries Reproducer Corp., 100 Willow Ave., New York N. Y. Electric Co., Inc., 1113 County Road, San Carlos, Calif. onroe Coil Co., 2839 N. Narragansett Ave., Chicago MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 130, 131.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside
5, N. J. ADV. PG. 450.

NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 450.

Powdered Metal Products Corp., Franklin Park, III.

PYROFERRIC CO., 621 E. 216th St., New York 67, N. Y. ADV. PG. 28.

Quality Components Inc., St. Marys, Pa.

RADIO CORES INC., 9540 Tulley Ave., Oak Lawn, III.

ADV. PG. 220.

Speer Resistor Corp., St. Marys, Pa. STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

#### CORTICAL STIMULATORS

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Tektronix, Inc., P. O. Box 831, Portland 7, Ore. Wappler, Inc., 27 W. 24th St., New York 10, N. Y.

# COUNTERS, ELECTRON AND NUCLEAR See Counters, Geiger or Counters, Radiation

# COUNTERS—Electronic

APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 528.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
Automatic Signal Division, Eastern Industries, Inc., 100 Regent St., East Norwalk, Conn.
Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 443. Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,

Calif. Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
Electronic Control Corp., 1573 E. Forest Ave., Detroit, Mich.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y.
General Control Company, 1200 Soldiers Field Rd.,

Boston 34, Mass. Gorrell & Gorrell, Haworth, N. J. Haledy Electronics Co., 57 William St., New York 5, N. Y. Sharon Hill, Pa.

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.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

III.
Menio Research Laboratory, Menio Park, Calif.
Minnesota Electronics Corp., 47 W. Water St., St.
Paul 1, Minn.
Nuclear Instrument & Chemical Corp., 223 W. Erie St.,

Chicago 10, III. Nucleonic Corp. of America, 497 Union St., Brooklyn 31,

N. Y.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd.,
Great Neck, N. Y. ADV. PG. 278.

Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III. Resdel Engineering, 2309 Riverside Drive, Los Angeles

Resdel Engineering, 2309 Kiverside Citic, 39, Calif.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
Rutherford Electronics Corp., 3707 S. Robertson Blvd.,
Culver City, Calif.
Tracerlab, Inc., 130 High St., Boston 10, Mass.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,
Mich.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

#### COUNTERS—Frequency

PG. 443. Cinema-Television Ltd., Worsley Bridge Rd., London, Cinema-Television Ltd., worsiey bridge Rd., Edison, S. E. 26, England.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 330

BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV.

339.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 278.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

# COUNTERS—Geiger

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 303.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.
BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV.

PG. 443.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E.
Popland. 26, England. Clarkstan Corp., 11921 SW Pico Blvd., Los Angeles 64,

Instrument Co., 1320 S. Grand Ave., Los Angeles

Cole Instrument Co., 1320 S. Grand Co., 15, Calif.
Consolidated Engineering Corp., 300 N. Sierra Madr.
Villa, Pasadena 8, Calif.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphik
33, Pa. ADV. PG. 451.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12
Ohio

Ohio.
Forty Niner Corp., 5245 Grand River, Detroit 8, MIch.
Forty Niner Corp., 5245 Grand River, Detroit 8, MIch.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge
39, Mass. ADV. PG. 82, 83.
Georator Corp., 1820 N. Nash St., Arlington, Va.
MACDONALD CO., INC., W. S., 33 University Rd.,
Cambridge 38, Mass. ADV. PG. 200.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
Menio Research Laboratory, Menio Park, Calif.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 304, 305.
Morgan Instruments Co., 21240 Valerio St., Canoga Park,
Calif.
Nuclear Development Lab., Box 7034, Kansas City, Mo.

Morgan Instruments Co., 21240 valents St., Califs.
Nuclear Development Lab., Box 7034, Kansas City, Mo.
Nuclear Instrument & Chemical Corp., 223 W. Erle
St., Chicago 10, Ill.
Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
Nuclear Research & Development, Inc., 1094 Sutter Ave.,
St. Louis 5, Mo.
Nucleonic Corp. of America, 497 Union St., Brooklyn
31, N. Y.
Precision Radiation Instruments, Inc., 4113EL W. Jefferson Blvd., Los Angeles 16, Calif.
R-C Scientific Instrument Co., 335 Culver Blvd., Playa
Del Rey, Calif.
Radiation Counter Laboratorles, Inc., 5122 W. Grove St.,
Skokle, Ill.

Skokle, III.
Radioactive Products, Inc., 443 W. Congress Ave.,
Detroit 26, Mich.
Special Instruments Laboratory, Inc., 1003 Highland
Ave., KnoxvIIIe, Tenn.
Technical Associates, 140 W. Providencia Ave., Burbank,

Calif.
Tracerlab, Inc., 130 High St., Boston 10, Mass.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

# COUNTERS—Mechanical

Automatic Signal Division, Eastern Industries, Inc., 100
Regent St., East Norwalk, Conn.
Automatic Temperature Control Co., Inc., 5212 Pulaskl
Ave., Philadelphia 44, Pa.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York
1, N. Y. ADV. PG. 471.
Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1,
Wis.

Wis.

Eagle Signal Corp., Moline, III.

Engineering Research Associates, Inc., 1902 W. Minnehaha

Ave., St. Paul, Minn.

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.
Production Instrument Co., 710 W. Jackson Blvd., Chicago

6, III. Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago Veeder-Root, Inc., 20 Sergeant St., Hartford 2, Conn.

# COUNTERS-Proportional

Nuclear Measurements Corp., 2460 N. Arlington Ave., Inidanapolis 5, Ind.

#### COUNTERS-Radiation

ANTON ELECTRONIC LABS., INC., 1226 Fushing Ave., Brooklyn 37, N. Y. ADV. PG. 303.

Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.

BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV.

PG. 443.
Canadian Aviation Electronics, Ltd., 8280 St. Lawrence Blvd., Mentreal, P. 0.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E.

26, England Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,

Cyclotron Specialties Co., Moraga 8, Calif.
Douglas Radio Labs., 176 Norfolk Ave., Boston 19,

Mass. EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451. Fisher Research Lab., 1961 University Ave., Palo Alto,

Calif.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.

Ohio.

Forty Niner Co., 5245 Grand River, Detroit 8, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Georator Corp., 1820 N. Nash St., Arlington, Va.
MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.
Menlo Research Laboratory, Menlo Park, Calif.
Nuclear Development Lab., P. O. Box 7034, Kansas City,
Mo.

Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.
Nuclear Measurements Corp., 2460 N. Arlington Ave.,

Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
NUCLEAR RESEARCH CORP., 2563 Grays Ferry Ave., Philadelphia 46, Pa. ADV. PG. 301.
Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
Nucleonic Corp. of America, The, 497 Union St., Brooklyn 31, N. Y.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 278.
Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, III.
R-C Scientific Instrument Co., 335 Culver Blvd., Playa Del Rey, Calif.

Rey, Calif.
Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,

Technical Associates, 140 W. Providencia Ave., Burbank,

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
Wood Counter Laboratory, N., 5491 Blackstone, Chicago 37, III.

# COUNTERS—Revolution

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV.

PG. 443.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

Cole Instrument Co., 1525 V. Electric Ave., Mil-15, Calif. Counter and Control Corp., 5225 W. Electric Ave., Mil-waukee 14, Wis. Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1,

Wis.
Gorrell & Gorrell, Haworth, N. J.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,
Calif. ADV. PG. 29-34.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd.,
Great Neck, N. Y. ADV. PG. 278.
Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, III.
Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago
13. III.

Streeter-Aniel Corp., 4101 N. Naccessite 2, Conn. 13, III.
Veeder-Root, Inc., 20 Sargeant St., Hartford 2, Conn. Walkirt Co., 145 W. Hazel, Inglewood, Calif.

# COUPLERS—Directional

AIRTRON, INC., 25 E. Elizabeth Ave., Linden, N. J. ADV. PG. 360. APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 528.

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island

Budd-Stanley Co., Inc., 43-01 2210 3c., City 1, N. Y.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Gates Radio Co., Quincy, III.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 292.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
PERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
Technicraft Laboratories, Inc., Thomaston-Waterbury Rd.,

Great Neck, N. Y. ADV. PG. 139, 140.
Technicraft Laboratories, Inc., Thomaston-Waterbury Rd.,
Thomaston, Conn.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5,
N. J. ADV. PG. 399.
Wheeler Laboratories, Inc., Great Neck, N. Y.

#### COUPLINGS, SHAFT—Reducers & Extensions

Aerolite Electronics, 507 26th St., Union City, N. J. American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. BIRNBAGH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio. CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74. GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

III. ADV. PG. 120.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

Keystone Electronics Corp., 423 Broome St., New York

12, N. Y.
KUPFRIAN MFG. CO., 398 State St., Binghamton, N. Y. ADV. PG. 476. Millen Mfg. Co., James, 150 Exchange St., Malden,

Mass.

MATIONAL CO., INC., 61 Sherman St., Malden 48,

Mass. ADV. PG. 328, 329.

Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, III.

Smith, Inc., Herman H., 436 18th St., Brooklyn 15,

#### COUPLINGS, SHAFT—Rigid & Flexible

COUPLINGS, SHAFT—Rigid & Flexible

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342

BOWMAR INSTRUMENT CORP., 4214 Leo Rd., Fort Wayne, Ind. ADV. PG. 498.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

HAMMARLUND MFG. CO., 450 W. 34th St., New York 1, N. Y. ADV. PG. 215-217.

JOHNSON CO., E. F. Waseca, Minn. ADV. PG. 248-251. Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Koppers Co., Inc., Chemical Div., Kopper Bldg., Pittsburgh 19, Pa.

KUPFRIAN MFG. CO. 398 State St., Binghamton, N. Y.

burgh 19, Pa.
KUPFRIAN MFG. CO., 398 State St., Binghamton, N. Y.

ADV. PG. 476. LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 269.

Mallory & Co., Inc., P. R. 3029 E. Washington St.,
Indianapolis 6, Ind
Millen Mfg. Co., James, 150 Exchange St., Malden,

Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48. Mass. ADV. PG. 328, 329.

Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, III.

Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WHITE DENTAL MFG. CO., S. S. Industrial Div., 10
E. 40th St., New York, N. Y. ADV. PG. 391.

# CRYSTAL ANALYSIS EQUIPMENT

Airborne Instruments Lab., 160 Old Country Rd., Mineola, N. Y.
Bassett, Inc., Rex, 307-11 N. W. First Ave., Fort Lauderdale, Fla. Lauderdale, Fla.
BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass.
North American Philips Co., Inc., 100 E. 42nd St.,
New York 17, N. Y.

# CRYSTAL CARTRIDGES

Astatic Corp., The, Conneaut, Ohio.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
Molded Insulation Co., 335 E. Price St., Philadelphia Moloed Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers. Covers.

SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, III. ADV. PG. 414.

Webster Electric Co., 1900 Clark St., Racine, Wis.

# CRYSTAL DIODES

See Crystals, Germanium-Crystals, Silicon

#### CRYSTALS—Barium Titanate-Transducer

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

HANSELL, INC., U., THE Westerly, F. I., ADV. PG.

406.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.

# CRYS' ALS—Germanium-Rectifying & Amplifying

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass.
BOMAC LABORATORIES INC., Salem Rd., Beverly, Mass. ADV. PG. 60, 61. E am Chemical Co., 820 65th Ave., Philadelphia 26,

Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Kemtron Electron Products, Inc., 23 Brown St., Salem,
Mass.

Mass.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.
RAYTHEON MFG. CO., Receiving Tube Div., 55 Chapel St., Newton 58, Mass. ADV. PG. 336, 337.
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. 552-558.

#### CRYSTALS—Quartz-Frequency Control

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C. Bassett, Inc., Rex, 307-11 N. W. First Ave., Fort Lauderdale, Fla. BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pat

ADV. PG. 283.

BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 402.

Breon Laboratories, 1520 Evergreen Rd., Williamsport,

CLARK CRYSTAL CO., 2 Farm Rd., Marbloro, Mass. ADV. PG. 481. Crystal Laboratories, Inc., 640 N. Main St., Wichita 5,

Kans.

DX RADIO PRODUCTS CO., INC., 2300 W. Armitage
Ave., Chicago 47, III. ADV. PG. 294.

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles,

Calif.

Eidson Electronics Co., 1802 N. Third St., Temple, Texas.

GENERAL ELECTRIC CO, Electronics Div., Electronics

Park, Syracuse, N. Y. ADV. PG. 1-23.

HUNT CORP., 453 Lincoln St., Carlisle, Pa. ADV. PG.

HUNI CORF., 493 Ellicon St., Valled Rd., P. O. Box 516.

Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 161.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.

Bergen, N. J.
Monitor Products Co., 815 Fremont Ave., South Pasadena,

Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
Pacific Electronics, Saticoy, Calif.
PAN AMERICAN TRADE DEVELOPMENT CORP., 2 Park
Ave., New York 16, N. Y. ADV. PG. 156.
Piezo Products Co., Whitney St., Framingham, Mass.
Polytech Devices, Inc., 1180 E. Grand St., Elizabeth,
N. J.
Presision Piezo C.

N. J.
Precision Piezo Service, 427 Mayflower St., Baton Rouge,

Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore. REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa.

REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle Pa.

ADV. PG. 473.
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 Crystal Co., 400 Armstrong Ave., Kansas City
1, Kans.

Standard Crystal Co., 400 Armstrong Ave., Kansas Cly 1, Kans. Standard Piezo Co., 127 Cedar St., Carlisle, Pa. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W. C. 2, England. Valpey Crystals, Highland St., Holliston, Mass. Westline Electronic Co., 11656 Olympic Blvd., Los Angeles 25, Calif.

# CRYSTALS—Quartz-Transducer

BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa ADV. PG. 283.

RK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. DV. PG. 481.

ons Labs., 5066 Santa Monica Blvd., Los Angeles,

allf.

GHTS CO., JAMES, 131 S. Wells St., Sandwich, III.

DV. PG. 161.

Her Labs., August E., 9226 Hudson Blvd., North
Gergen, N. J.

All Products Co., 815 Fremont Ave., South Pasalena, Calif.

Hard Overseas Ltd., Century House, Shaftesbury Ave.,
ondon, W. C. 2, England.

Products Co., Whitney St., Framingham, Mass.

Prech Devices, Inc., 1180 E. Grand St., Elizabeth,

L. J.

J. J. Sold Crystals, Inc., 1401 Fairfax Trafficway, Kansas ard Crystal Co., 400 Armstrong Ave., Kansas City

, Kans. Sidard Telephones & Cables Ltd., Connaught House, Idwych, London, W. C. 2, England. Voey Crystals, Highland St., Holliston, Mass.

# CYSTALS—Rochelle Salts, Transducer

EISH DEVELOPMENT CO., 3405 Perkins Ave., Clevend 14, Ohio. ADV. PG. 312, 313.
Coc Corp., Metuchen, N. J.
Con Mfg. Corp., Metuchen, N. J.
R'THEON MFG. CO., Equipment Sales Div., Waltham 4, Mass. ADV. PG. 336, 337.

# YSTALS—Scintillation Counter

AIMIC INSTRUMENT CO., 84 Massachusetts Ave., ambridge 39, Mass. ADV. PG. 461.
CDONALD CO., INC., W. S., 33 University Rd., Camridge 38, Mass. ADV. PG. 200.
LEAR RESEARCH CORP., 2563 Grays Ferry Ave., hiladelphia 46, Pa. ADV. PG. 301.
Chemicals, Inc., 47 Felton St., Waltham 54, Mass. ation Counter Laboratories, Inc., 5122 W. Grove St., kokie, III.

kokie, III. Sidard Electronics Research Corp., 2 East End Ave.,

nical Associates, 140 W. Providencia Ave., Burbank,

erlab, Inc., 130 High St., Boston 10, Mass.

# **STALS—Silicon-Rectifying & Amplifying**

AC LABORATORIES INC., Salem Rd., Beverly, Mass. DV. PG. 60, 61.

In Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.

Kitron Electron Products, Inc., 23 Brown St., Salem,

iass.
ROWAVE ASSOCIATES, INC., 22 Cummington St., oston, Mass. ADV. PG. 447.
VANIA ELECTRIC PRODUCTS, INC., 1740 Broaday, New York 9, N. Y. ADV. PG. 552-558.

# STALS—Tourmaline-Frequency Control

CRK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. DV. PG. 481.
IGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill.
DV. PG. 161.
For Labs., August E., 9226 Hudson Blvd., North
lergen, N. J.
Rtech Devices, Inc., 1180 E. Grand Ave., Elizabeth, old Crystals, Inc., 1401 Fairfax Trafficway, Kansas ty, Kan. ey Crystals, Highland St., Holliston, Mass.

# LOTRONS

By Dept. of General Electric Co., 4855 Electric Ave., ilwaukee 14, Wis.

# D:ADE BOXES—Capacitance

Cell-Dubilier Electric Corp., South Plainfield, N. J. FIED TRANSFORMER CO., INC., 1736 Weirfield St., rooklyn 27, N. Y. ADV. PG. 297.

GERAL RADIO CO., 275 Massachusetts Ave., Cambridge 7, Mass. ADV. PG. 82, 83 Wistrial Instruments, Inc., 17 Pollack Ave., Jersey 149 5, N. J. ty 5, N. J. K Transformer Corp., 4414 Park Ave., New York 57, 🗽 & Northrup Co., 4970 Stenton Ave., Philadelphia Wilow Co., Inc., 9 Liberty St., Newark 5, N. J.

# ADE BOXES—Inductance

Bell-Burns Mfg. Co., 40 E. Second St., Mineola, P.T. TRANSFORMER CO., INC., 1736 Weirfield St., rooklyn 27, N. Y. ADV. PG. 297.
GERAL RADIO CO., 275 Massachusetts Ave., Cambridge b, Mass. ADV. PG. 82, 83. HYCOR CO., INC., 11423 Vanowen St., North Holly-wood, Calif. ADV. PG. 172. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif. Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y. Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

DECADE BOXES-Resistance

Brown Electro-Measurement Corp., 4637 SE Hawthorne BIVID. Portland 15, Oregon.

CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
Burbank, Calif. ADV. PG. 386.

CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 162, 163.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 149.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver Hatnaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

HEATH CO., Benton Harbor, Mich. ADV. PG. 492.

HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 172.

Industrial Instruments, Inc., 17 Pollack Ave., Jersey City 5, N. J.

K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. N. Y.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.
Marma Electronic Co., 703 Willow St., Chicago 14, III.
Metropolitan Electronics & Instrument Co., 106 Fifth
Ave., New York 11, N. Y.
OHMITE MFG. Co., 4835 W. Flournoy St., Chicago 44,
III. ADV. PG. 79.
Painton & Co., Ltd., 366 Madison Ave., New York 17,
N. Y. N. Y. Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 320.
STICHT CO., INC., HERMAN H., 27 Park Place, New
York 7, N. Y. ADV. PG. 502.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
TECHNOLOGY INSTRUMENT CORP., 531 Main St.,
Acton, Mass. ADV. PG. 394, 395.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

# DEFLECTION YOKES

See Yokes, Deflection

# **DEHYDRATORS**—Automatic

Andrew Corp., 363 E. 75th St., Chicago 19, III.
Dielectric Products Co., Inc., 125 Virginia Ave., Jersey
City 5, N. J.
PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave.,
Kearney, N. J. ADV. PG. 515.

cago 10, III. Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

# DELAY LINES

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 496.
ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 403.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
Amersil Co., Inc., Hillside, N. J.
ANDERSEN LABORATORIES, INC., 39 Talcott Road, West Hartford 10, Conn. ADV. PG. 172. West Hartford 10, Conn. ADV. PG. 172.

Arenberg Ultrasonic Laboratory, 94 Green St., Jamaica Plain 30, Mass.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 283.

BREW & CO., INC., RICHARD D., 106 Concord Ave., Belmont 78, Mass. ADV. PG. 380.

BRIBAKER MFG. CO., INC., 9151 Exposition Drive, Los Angeles 34, Calif. ADV. PG. 529.

C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III. ADV. PG. 506.

COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.

Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.

Corning Glass Works, Corning, N. Y.

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif. Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.
DEUTSCHMANN CORP., TOBE, 921 Providence Hwy.,
Norwood, Mass. ADV. PG. 280.
ELECTRONIC COMPUTER CORP., 160 Avenue of the
Americas, New York 13, N. Y. ADV. PG. 298.
Electronic Systems Co., 578 E. 161st St., New York 56,

EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 484.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.

ESSEX Electronics, Berkeley Heights, N. J.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

Gulton Mfg EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Lenkurt Electric Co., Inc., 113 County Road, San Carios, Calif.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.
RAYTHEON MFG. Co., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 152.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 320.
TECHNITROL ENGINEERING CO., 2751 N. 4th St.,
Philadelphia 33, Pa. ADV. PG. 509.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525.
Transradio, Ltd., 138A Cromwell Rd., London SW 7,
England. England.
S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.
West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.

# DEMODULATORS—Electronic

Automatic Temperature Control Go., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md. Doelcam Inc., 56 Elmwood St., Newton 58, Mass. Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J. N. J.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 50, 51.
Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y. Schuttig & Co., Inc., Ninth & Kearney Sts. N.E., Washington 17, D. C.
STELMA, INC., 389 Ludlow St., Stamford Conn. ADV. PG. 164. PG. 164.
T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 499.
Technical Materiel Corp., P. O. Box 142, 121 Spencer Place, Mamaroneck, N. Y.

# DENSITOMETERS—Electronic

dale 4, Calif.
Bausch & Lomb Optical Co., 635 St. Paul St., Rochester
2, N. Y. 2, N. Y. Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
Jarrel-Ash Co., 165 Newberry St., Boston 16, Mass.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

Applied Research Labs., 4336 San Fernando Rd., Glen-

# DEPTH SOUNDERS

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. ADV. PG. 153.
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. 336, 337.

# DETECTORS—Crystal

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass.

Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 Monticello Ave., Skokie, III.

KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.

Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.

Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York, 19, N. Y. ADV. PG. 552-558. Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln,

# **DETECTORS—Crystal Germanium** See Crystals, Germanium

DETECTORS—Crystal Silicon See Crystals, Silicon

#### DETECTORS—Explosive Gas

HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.

Johnson-Williams, Ltd., 2526 3rd St., Palo Alto, Calif.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley
Ave., Stamford, Conn. ADV. PG. 180.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141. Pa. ADV. PG. 141.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 204.

# DETECTORS—Fire, Electronic

C-O-Two Fire Equipment Co., P. O. Box 390, U. S. Highway 1, Newark 1, N. J. Cooper Co., Clark, 379 N. Market St., Palmyra, N. J. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich. Mich.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Kidde & Co., Walter, 675 Main St., Belleville, N. J. Phillips Petroleum Co., Instruments Div., Bartlesville, Okla. Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.
Worner Electronic Devices, Rankin, Ill.

# DETECTORS—Flaw & Defect, Electronic

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 436.
Dice Co., J. W., Englewood, N. J.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Magnetic Analysis Corp., 42-44 12th St., Long Island City 1, N. Y.

Menlo Research Laboratory, Menlo Park, Calif.
Photocon Research Products, 421 N. Foothill Blvd.,
Pasadena, Calif.
Sperry Products, Inc., Danbury, Conn.

#### DETECTORS—Galena

Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y. N. Y. Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

# DETECTORS—Impedance

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 403.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y. City 1, N. Y.
Engineering Research Associates, Inc., 1902 W. Minne-Engineering research associates, Inc., 1902 W. Winnehaha Ave., St. Paul, Minn.
KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

# DETECTORS—Leak

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif. Distillation Products Div. of Eastman Kodak Co., 755 Ridge Rd., W., Rochester 3, N. Y.
EISLER ENGINEERING CO., 1NC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362.
Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
Globe Phone Mfg. Co., 2 Linden St., Reading, Mass. Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, Ill. Menlo Research Laboratory, Menlo Park, Calif. Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa.

Roslyn, Pa.
Vacuum-Electronic Engineering Co., 756 Third Ave., Brook-

lyn 32, N. Y.

# DETECTORS—Metal, Electronic

Brilmayer Labs., Inc., E. W., 86 Fulton St., New York 38, N. Y. Cinema-Television, Ltd., Worsley Bridge Rd., London, S.E. 26, England. Electronic Control Corp., 1573 E. Forest St., Detroit,

# DETECTORS-Null

Airmec Laboratories, Ltd., High Wycombe, Buckingham-Armee Laboratories, Etc., High Wyconioc, Beckingham-shire, England.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Ore. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

Doelcam Corp., 56 Elmwood St., Newton 58, Mass. FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.
GENERAL RADIO CO., 275 Massachusets Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
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. 260, 505.
Industrial Transformer Co., Gouldsboro, Pa. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

44, Pa.

MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

158, 159.
Millivac Instrument Corp., 444 Second St., Box 997,
Schenectady, N. Y. Schenectady, N. Y. Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.

# DETECTORS--Null-r-f

Airmec Laboratories, Ltd., High Wycombe, Buckingham-Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.

#### DETECTORS-Null-VTVM

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, Ill.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
Industrial Transformer Co., Gouldsboro, Pa.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

ADV, PG, 262,

# DETECTORS—Radiation See Counters, Geiger

# **DETECTORS**—Reactance

Engineering Research Associates, Inc., 1902 W. Minne haha Ave., St. Paul, Minn.

# DETECTORS—Smoke, Electronic

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Bristol Co., The, Waterbury 20, Conn.
C-0-Two Fire Equipment Co., P. O. Box 390, U. S. Highway 1, Newark 1, N. J.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich. Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.
Waters Mfg. Co., Waltham, Mass.
Worner Electronic Devices, Rankin, III.

# DETECTORS—Standing Wave

Andrew Corp., 363 E. 75th St., Chicago 19, III.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 433.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol. Conn. ADV. PG. 292.

KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.

Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn. GENERAL RADIO CO., Thomaston, Conn.
VECTRON, INC., 235 High St., Waltham, Mass. ADV.
PG. 384.
Weymouth Instrument Co., 1440 Commercial St., East

# **DETECTORS**—Vibration

Aircraft Electronics Associates, Inc., 94 Silas Deane Highway, Rocky Hill, Conn. Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Okla.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.
Flader, Inc., Frederlc, 1330 Laskey Rd., Toledo 12, Ohlo. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.

JOHN DESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.

INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Televiso Corp., 7466 W. Irving Park Road, Chicago 34, III.

34, III.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

#### DETECTORS—Water Leak

Fisher Research Lab., 1961 University Ave., Palo Alto. Globe Phone Mfg. Co., 2 Linden St., Reading, Mass. Menlo Research Laboratory, Menlo Park, Calif.

#### DIAL CRYSTALS

EMELOID CO., INC., THE, 1239 Central Ave., Hillside 5, N. J. ADV. PG. 405.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
Parisian Novelty Co., 3510 South Western Ave., Chicago 9, III.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Calif.
Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J. Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.

#### DIALS-Instrument

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J. Anderson & Sons, Inc., N. Elm & Notre Dame Sts., Westfield, Mass. Associated Research, Inc., 3788 W. Belmont, Chicago 18, III.

Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.

Belock Instrument Corp., 13-11 111th St., College Point,
N. Y.

N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New
York 13, N. Y. ADV. PG. 342.
BORG EQUIPMENT DIVISION, The George W. Borg Corp.,
Janesville, Wis. ADV. PG. 492, 493.
Canadian Radium & Uranium Corp., 630 Fifth Ave.,
New York 20, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Cottland, Industries Inc., 4545 Cortland St. Chicago

Industries, Inc., 4545 Cortland St., Chicago

39, III.
Croname, Inc., 3701 Ravenswood Ave., Chicago, III.
EMELOID CO., INC., THE, 1239 Central Ave., Hillside
5, N. J. ADV. PG. 405.
Etched Products Corp., 39-01 Queens Blvd., Long Island
City 4, N. Y.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, III.

III.

HELIPOT CO., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 67-70.

Hopp Press, Inc., 460 W. 34th St., New York, N. Y. Instrument Laboratories, 315 W. Walton Place, Chicago 10, III.

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. 477.

JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.

Lansky Die Cutting Co., 192½ Greene St., New York 12, N. Y. Millen Mfg. Co., James, 150 Exchange St., Malden,

Molded Insulation Co., 335 E. Price St., Philadelphia 44,

Pa.

Muirhead & Co., Ltd., Beckenham, Kent, England.

NATIONAL CO., INC., 61 Sherman St., Malden 48,

Mass. ADV. PG. 328, 329.

New England Etching & Plating Co., 25 Spring St.,

Holyake Mass.

Holyoke, Mass.
Painton & Co., Inc., Ltd., 366 Madison Ave., New York
17, N. Y.
Parisian Novelty Co., 3510 S. Western Ave., Chicago 9,

III.
PRECISE MEASUREMENTS CO., 942 Kings Highway,
Brooklyn 23, N. Y. ADV. PG. 220.
Radiocrafters Division of Technicraft Supply Co., 1156
Commonwealth Ave., Boston 34, Mass.
Roflan Co., Everett, Mass.
Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange,
M. J.

N. J.
Tablet & Ticket Co., 1021 W. Adams St., Chicago 7, Ill.
TECHNOLOGY INSTRUMENT CORP., 531 Main St.,
Acton, Mass. ADV. PG. 394, 395.
Trans-Gel Products, Inc., 212-40 Jamaica Ave., Queens

Tosradio, Ltd., 138A Cromwell Rd., London SW 7, y. ADV. PG. 272.
Witzer Co., Rudolph, North Tonawanda, N. Y.

### DLS-Precision

Armark Co., The, 9-13 Morrell St., Elizabeth 4, N. J. Arrson & Sons, Inc., N. Elm & Notre Dame Sts., West-ld, Mass.

At n Co., Inc., O., 335 Throop Ave., Brooklyn 21, N. Y. BikKER & WILLIAMSON, 235 Fairfield Ave., Upper trby, Pa. ADV. PG. 397.

8G EQUIPMENT DIVISION, The George W. Borg Corp., elavan, Wis. ADV. PG. 492, 493.

Galdian Radium & Uranium Corp., 630 Fifth Ave., New rk 20, N. Y.

Co Instrument Co., 1320 S. Grand Ave., Los Angeles

Came, Inc., 3701 Ravenswood Ave., Chicago, III.
ENLOID CO., INC., THE, 1239 Central Ave., Hillside
N. J. ADV. PG. 405.
Sled Products Corp., 39-01 Queens Blvd., Long Island
by 4, N. Y.
Faithal & Sons, Inc., G., 4100 W. Grand Ave., Chi-

co 51, III. Ganer Scientific Corp., 1239 Wrightwood Ave., Chi-

Gener Scientific Corp., 1237 Wilgittions Arc., only 50 14, 111.

GEERAL RADIO CO., 275 Massachusetts Ave., Cambridge Mass. ADV. PG. 82, 83.

HEPOT CORP., 916 Meridian Ave., South Pasadena, 1if. ADV. PG. 67-70.

1a Press, Inc., 460 W. 34th St., New York, N. Y. Insument Laboratories, 315 W. Walton Place, Chicago III.

Mfg. Co., James, 150 Exchange St., Malden,

Minead & Co., Ltd., Beckenham, Kent, England.
Minead & Co., INC., 61 Sherman St., Malden 48, Mass.
V. PG. 328, 329.
Me England Etching & Plating Co., 25 Spring St.,

tyoke, Mass. Gel Products, Inc., 212-40 Jamaica Ave., Queens

lage, N. Y.
L RADIUM CORP., 535 Pearl St., New York 7,
Y. ADV. PG. 272.
W NAD GLASS CO., INC., Landisville, N. J. ADV.

## HRAGMS

Lansing Corp., 9356 Santa Monica Blvd., Beverly Is, Calif. INENTAL-DIAMOND FIBRE CO., Newark 100, Del.

V. P.G. 222, 223.
Cor Co., Clark, 379 Market St., Palmyra, N. J.
Sylphon Div., Robertshaw-Fulton Control Co.,
Oxville 4, Tenn.
E MFG. CO., 588 Eddy St., Providence 3, R. I.
W. P.G. 507.

away Instrument Co., 1315 S. Clarkson St., Denver

Products Co., St. Charles, III.

Visid Insulation Co., 335 E. Price St., Philadelphia

Pa.
GASKET CO., Fluorocarbon Products Div., P. O.
F. 93, Camden, N. J. ADV. PG. 472.
Lins Products Inc., 86-88 Main St., East Orange,

MUNCHOUSE ELECTRIC CORP., P. 0. Box 5578, stsburgh 30, Pa. ADV. PG. 109-115.
Mun Co., H. A., 105 Chestnut St., Newark 5, N. J.

## HERMY

can Diathermy Products, Inc., 11858 Mississippi, Los Angeles 25, Calif.
as Labs. 5066 Santa Monica Blvd., Los Angeles,

f. Chemical & Mfg. Co., 233 N. J. RR Ave., vark, N. J.

E-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37,

Electronics Co., 9810 Anza Ave., P. O. Box 338,

ewood, Calif.

Jordian High Frequency Labs., 13 E. Fort Lee Rd.,

inota, N. J.

AMHEON MFG. CO., Power Tube Div., Waltham 54,

Ms. ADV. PG. 336, 337.

Yaler, Inc., 27 W. 24th St., New York 10, N. Y.

- Dept. of General Electric Co., 4855 Electric Ave.,

Maukee 14, Wis.

## HERMY ACCESSORIES

Amutan Diathermy Products, Inc., 11858 Mississippi Å, Los Angeles 25, Calif. 183ACH RADIO CO., INC., 145 Hudson St., New Y (13, N. Y. ADV. PG. 342. 1010 & Wilkens, Inc., 89 Adams St., Hoboken, N. J. 1517 & Commercial St., Glendale 3,

Tay Electronics Co., 9810 Anza Arc., lewood, Calif.

EL TEXTILE CORP., 647 E. First Ave., Roselle, b.J. ADV. PG. 180.

Wappler, Inc., 27 W. 24th St., New York 10, N. Y. X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

## DIELECTRIC HEATING

See Heating, Dielectric

### DIELECTRICS-Gas

GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 453.

### DIELECTRICS-Liquid

Dow Chemical Co., Midland, Mich.
DOW CORNING CORP., Midland, Mich. ADV. PG. 382.
EMERSON & CUMING CO., 126 Massachusetts Ave.,
Boston 15, Mass. ADV. PG. 35.
General Electric Co., Chemical Div., 1 Plastics Ave.,
Pittsfield, Mass.
Halowax Products Division, Union Carbide & Carbon
Corp., 30 E. 42nd St., New York 17, N. Y.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472.

### DIELECTRICS-Solid

AIRCRAFT MARINE PRODUCTS, INC., 2100 Paxton St., Harrisburg 10, Pa. ADV. PG. 469.
CENTRALAB DIV. OF GLOBE-UNION INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.
Dow Chemical Co., Midland, Mich.
DOW CORNING CORP., Midland, Mich. ADV. PG. 382.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
Halowax Products Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Liberty Mirror Div., Libbey-Owens-Ford Glass Co., Tarentum, Pa. LOUTHAN MFG. CO., East Liverpool, Ohio. ADV. PG.

NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258. Schweitzer, Inc., Peter J., 405 Lexington Ave., New York 17, N. Y. Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa. U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472. WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J. ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422. Associated Production Co., 162 N. Clinton St., Chicago

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
Barrett Bindery Co., 1332 W. Monroe St., Chicago 7,

CARBOLOY, Dept. of General Electric Co., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG.

21. CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512. Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, III. Eltran Corp., St. Anne, III.

41, 111.
Eltran Corp., St. Anne, III.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chlcago 51, III.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke,

Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, III.

JOHNSON & HOFFMAN MFG. CO., 55-65 Ongley St., Rockville Centre, N. Y. ADV. PG. 344, 345.

La Magna Mfg. Co., Inc., East Rutherford, N. J. Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J. Matthews & Co., James H., 470 Atlantic Ave., Boston

10, Mass.
MICACRAFT PRODUCTS, INC., 703 McCarter Highway,
Newark 5, N. J. ADV. PG. 526.
Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago
15, III.

15, III.
National Lead Co., 111 Broadway, New York 6, N. Y.
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. 160.

Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Romac Products Co., 112 Bleecker St., New York 12, N. Y. Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, South River Metal Products Co., Inc., 377-379 Turnpike, South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.

Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

Toman & Co., E., 2621 E. 21st Place, Chicago 8, III.

Whistler & Sons, Inc., S. B., 752 Military Rd., Buffalo 17, N. Y.

Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

### DIODES-Germanium

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln,

Mass.
Computer Research Corp., 3348 W. El Segundo Blvd.,
Hawthorne, Calif.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
RADIO RECEPTOR CO., 251 W. 19th St., New York
11, N. Y. ADV. PG. 206.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

### DIRECTION FINDERS

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Bendix Radio Division, Bendix Aviation Corp., Baltimore

4, Md.
Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
FAIRCHILD CAMERA & INSTRUMENT CORP., 88-06
Van Wyck Blvd., Jamaica 1, N. Y. ADV. PG. 416.
Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.

Fisher Research Lau., 1704
Calif.
Jarvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, III.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 308, 309.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Televiso Corp., 7466 W. Irving Park Road, Chitago 34, III.

Televiso C

### DISCS—Blank Recording

Advance Recording Products Co., 36-12 34th St., Long Island City, N. Y. Allied Recording Products Co., 21-09 43rd Ave., Long Allied Recording Products Co., 21-09 49rd Ave., Long Island City 1, N. Y.
AUDIO DEVICES, INC., 444 Madison Ave., New York 22, N. Y. ADV. PG. 289.
Duotone Co., Inc., Keyport, N. J.
Home Recording Products Corp., Freeport, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG.

Recordisc Corp., 395 Broadway, New York, N. Y.
Recoton Corp., 251 Fourth Ave., New York 10, N. Y.
Reeves Soundcraft Corp., 10 E. 52nd St., New York,
N. Y. Sonic Recording Products, Inc., 58 Mill Road, Freeport,

N. Y. Soundscriber Corp., 146 Munson St., New Haven 4, Conn. Zephyr Products Co., 129 E. 124th St., New York 35, N. Y.

### DRAFTING EQUIPMENT

DRAFTING EQUIPMENT

ANCO WOOD SPECIALTIES, INC., 71-08 80th St., Brooklyn, 27, N. Y. ADV. PG. 132.
Arkwright Finishing Co., Providence, R. I. Bruning Co., Inc., Charles, 25 North St., Teterboro, N. J. Dietzgen Co., Eugene, 2425 Sheffield Ave., Chicago, III. Eagle Pencil Co., 703 E. 13th St., New York, N. Y. Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, 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. ADV. PG. 518.
Holliston Mills Inc., Norwood, Mass. Keuffel & Esser Co., Hoboken, N. J. Koh-I-Noor Pencil Co., Bloomsbury, N. J. Paragon-Revolute Corp., 71 S. Chester Ave., Rochester 4, N. Y.

4, N. Y.
Pease Co., C. F., 2601 W. Irving Park Rd., Chicago,
III.
Post Co., Frederick, 3650 N. Avondale Ave., P. O.
Box 803, Chicago 90, III.

Aurex Corp., 1117 N. Franklin St., Chicago 10, III. Coles Corp., 3211 Woodland Ave., Philadelphia 3, Pa. Dallon Labs., 5066 Santa Monica Blvd., Los Angeles,

PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 220. Staedtler Inc., J. S., 55 Worth St., New York, N. Y. Universal Drafting Machine Corp., 7960 Lorain Ave., Cleveland 2, Ohio. Weber Co., F., 1220 Buttonwood St., Philadelphia 23,

### DRIVERS—Recording

Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, III.
Gorrell & Gorrell, Haworth, N. J.
Telectro Industries Corp., 35-18 37th St., Long Island

## DRIVES—Small Electric Drive Mechanisms

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Atlas Metal Stamping Co., Castor & Kensington Ave., Philadelphia 24, Pa.

BOWMAR INSTRUMENT CORP., 4214 Leo Rd., Fort Wayne, Ind. ADV. PG. 498.

DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill.

Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y. N. Y.

Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Gorrell & Gorrell, Haworth, N. J.
McElroy Mfg. Corp., Littleton, N. J.
Mission Electric Mfg. Co., Inc., 132-134 W. Colorado,
Pasadena 1, Calif.
Televiso Corp., 7466 W. Irving Park Road, Chicago
34. III. 34, III.
United Pressed Products Co., 741 W. Harrison St., Chicago 7, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

## DRUMS—Memory, Magnetic Recording

DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.

DRYERS, ELECTRONIC—Dehydration & Drying Electronic Processes Corp., 328 N. Market St., San Jose 18, Calif. Fostoria Pressed Steel Corp., Fostoria, Ohio. GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525. Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincin-natl 25, Ohio. natl 25, Ohio. Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Sherman Industrial Electronics Co., Inc., 505 Washington Ave.. Belleville 9, N. Y. Ave. Belleville 9, N. Y.
Short Wave Plastic Forming Co., 2921 W. Alameda St.,
Burbank, Calif.
STEINER-IVES CO., 16 Avenue L, Newark 5, N. J. ADV. PG. 390.

Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif. Young Brothers Co., 1829 Columbus Rd., Cleveland, Ohio.

### **DYNAMOMETERS**

Avion Instrument Corp., Paramus, N. J.
Dillon & Co., Inc., W. C., 1421 S. Circle Ave., Forest
Park, III.
Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
L. A. B. Corp., 31 Union Place, Summit, N. J.
Mission Electric Mfg. Co., Inc., 132-134 W. Colorado,
Pasadena 1, Calif.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt.
Vernon, N. Y.
Statham Laboratories, Inc., 12401 W. Oympic Blvd.,
Los Angeles 64, Calif.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III. cago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### **DYNAMOTORS**

CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, III. ADV. PG. 511. Continental Electric Co., Inc., 334 Ferry St., Newark 5, Continental Electric Co., Inc., 334 Ferry St., Newark 5, N. J.
ELCOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 314.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill. RED BANK DIVISION, Bendix Aviation Corp., Red Bank, N. J. ADV. PG. 125, 126.
Redmond Co., Inc., Owosso, Mich.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill. WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. Wincharger Corp., E. 7th & Division Sts., Sioux City,

### ELECTROCARDIOGRAPHS

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.

Flectro-Physical Laboratories. Inc., 65 Harvard Ave., Electro-Physical Laboratories, Inc., 65 Harvard Ave., Stamford, Conn.
Farrand Optical Co., Inc., 4401 Bronx Blvd., New York Farrand Optical Co., Inc., 4401 Bronx Blvd., New York
66, N. Y.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver
10, Colo.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass.
ADV. PG. 474.
X-Ray Dept. of General Electric Co., 4855 Electric Ave.
Milwaukee 14, Wis.

### ELECTRODES—High Frequency

Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J. LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y. Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Short Wave Plastic Forming Co., 2921 W. Alameda St., Short wave Plastic Forming Co., 2722 Burbank, Calif. SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, N. Y. 19, N. Y. ADV. PG. 552-558. Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif. X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

### **ELECTROENCEPHALOGRAPHS**

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.

Electro-Medical Lab., Inc., South Woodstock, Vt. Grass Instrument Co., 101 Old Colony Ave., Quincy, MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355. Offiner Electronics, Inc., 5320 N. Kedzie Ave., Chicago

### ELECTRO MAGNETS

See Magnets

## ELECTROMETERS

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Central Scientific Co., 1700 Irving Park Rd., Chicago 13, III.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

Land-Air, Inc., 11 W. 42nd St., New York, N. Y.

Loudon Instruments, Inc., 5644 Lake Park Ave., Chicago 37, III.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44,
Pa. ADV. PG. 304, 305.

### **ELECTROMYOGRAPHS**

EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.
Electro-Medical Lab., Inc., South Woodstock, Vt.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

## **ELECTROPLETHYSMOGRAPHS**

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
TECHNITROL ENGINEERING CO., 2751 N. 4th St.,
Philadelphia 33, Pa. ADV. PG. 509.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-

### ELECTRO-SHOCK THERAPY APPARATUS

American Scientific Co., P. O. Box 11, Highbridge Station, New York 52, N. Y.
Electrodyne Co., 32 Oliver St., Boston, Mass.
Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago
25, Ill.
Standard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y.

### **ELECTRO-SURGICAL APPARATUS**

Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37. LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley
Ave., Stamford, Conn. ADV. PG. 180.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.

Mooradian High Frequency Labs., 13 E. Fort Lee Rd.,
Bogota, N. J. Bogota, N. J. Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Wappler, Inc., 27 W. 24th St., New York 10, N. Y. X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

### **ELEMENTS**—Heating

Mass.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
Columbia Resistors, Inc., 216 Lafayette St., New York 12, N. Y. YORK 1, N. Y. ADV. PG. 471.
Columbia Resistors, Inc., 216 Lafayette St., New York 12, N. Y.
COX & CO., INC., 50 Broad St., New York 4, N. Y.
ADV. PG. 484.
Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S.,
Long Island City, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Globar Division, Carborundum Co., Niagara Falls, N. Y.
Kanthal Corp., Amelia Place, Stamford, Conn.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts.,
Racine, Wis. ADV. PG. 439.
North American Philips Co., Inc., 100 E. 42nd St., New
York 17, N. Y.
States Co., 19 New Park Ave., Hartford 6, Conn.
YULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass.
ADV. PG. 90.
Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.
Wade Electric Products Co., 400 Jacob St., Sturgis,
Mich.
WFSTINGHOUSE ELECTRIC CORP., P. O. Box 5578,

Acme Electric Heating Co., 1217 Washington St., Boston,

WESTINGHOUSE ELECTRIC CORP., P. 0
Pittsburgh 30, Pa. ADV. PG. 109-115. P. O. Box 5578,

# **ELEMENTS, HEATING—Crystal Oven**

COX & CO., INC., 50 Broad St., New York 4, Nt Y. ADV. PG. 484.
States Co., 19 New Park Ave., Hartford 6, Conn.

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne,

EMBEDDED ASSEMBLIES

N. J. ADV. PG. 497.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Audio Products Corp., 2265 Westwood Blvd., Los Angeles Addio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Brilhart Plastics Corp., Old Country Rd., Mineola, N. Y. Calresin Corp., 333 N. Santa Anita Ave., P. 0. 80% 945, Arcadia, Calif.

COLLECTRON CORP., 216 E. 45th St., New York 17, N. Y. ADV. PG. 501.

EMELOID CO., INC., THE, 1239 Central Ave., Hillside, N. J. ADV. PG. 405.

EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.

GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 507.

Glenco Corp., Metuchen, N. J.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y. Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 44, Pa.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.
Peschel Electronics, Inc., 13 Garden St., New Rochelle,

RICHARDSON CO., THE, 2767 Lake St., Melrose Park,

III. ADV. PG. 66.

SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347.

Technical Materiel Corp., P. O. Box 142, 121 Spencer Place, Mamaroneck, N. Y.

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

Walkirt Co., 145 W. Hazel, Inglewood, Calif.

### EMBEDDED COMPONENTS

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 497.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Audio Products Corp., 2265 Westwood Blvd., Los Angels
64 Calif 64, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. AD. PG. 397.

AD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 503.
ilhart Plastics Corp., Old Country Rd., Mineola, N. Y. dresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif. dresin Corp., 333 N. Santa Allita Ave., F. O. Corp., Arcadia, Calif. ECTRALAB, INC., 110 Broad St., Boston 10, Mass. DV. PG. 402. IELOID CO., INC., THE, 1239 Central Ave., Hillside 5, N. J. ADV. PG. 405. IERSCN & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35. Mustrial Devices, Inc., 22 State Rd., Edgewater, N. J. RSEY CITY TECHNICAL LABORATORY, 880 Bergen Ave., Jersey City, N. J. ADV. PG. 424. Ided Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Pa.

A, Inc., 6368 DeLongpre Ave., Hollywood 28, Callf.
CHARDSON CO., THE, 2767 Lake St., Melrose Park,
III. ADV. PG. 66.

UARE ROOT MFG CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.

SLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
Thinical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
ectro Industries Corp., 35-18 37th St., Long Island
City 1, N. Y.

TOREEN INSTRUMENT CO., 5806 Hough Ave.,
Cleveiand 3, Ohio. ADV. PG. 348, 349.

### CUTCHEONS

IERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-ago 50, III. ADV. PG. 212. erican Radio Hardware Co., Inc., 152 MacQueston Newy., Mt. Vernon, N. Y. iterson & Sons Inc., N. Elm & Notre Dame Sts., West-Feld Mass.

field, Mass. his Co., R. B., 1101 N. Delaware St., Indianapolis,

Frame, Inc., 3701 Ravenswood Ave., Chicago, III.
Co Radio Div., General Motors Corp., Kokomo, Ind.
RESISTOR CORP., 644 W. 12th St., Erie, Pa. Molding Corp., 4600 W. Huron St., Chicago 44,

hr. Sp. Press, Inc., 460 W. 34th St., New York, N. Y. Swest Molding & Mfg. Co., 4630 W. Fullerton Ave., chicago 39, III. sisian Novelty Co., 3510 South Western Ave., shicago 9, III.

lisian Novelty Co., 3510 South Western Ave., hicago 9, III. Esision Plastic Products, Inc., 628-30 W. Lake St., hicago 6, III.

## ELETS

ERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. G. 95.
Iss Tack Corp., Pleasant St., Fairhaven, Mass.
Frett Bindery Co., 1332 W. Monroe St., Chicago, III.
Screw Products Co., Inc., 32-21 58th St., Wood-

Screw Products Co., Inc., 32-21 58th St., Wood-

de, N., Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ive., New York 17, N. Y.

John Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ive., New York 17, N. Y.

FERAL SCREW PRODUCTS, INC., 224 W. Huron It., Chicago 10, III. ADV. PG. 498.

WERAL CEMENT MFG. CO., 919 Taylor Ave., Rockbord, III. ADV. PG. 120.

ULINE CORP. of AMERICA, 36-02 35th Ave., Long Jaland City, N. Y. ADV. PG. 477

J NSON & HOFFMAN MFG. CO., 55-65 Ongley St., ockville Centre, N. Y. ADV. PG. 344, 345.

MFG CO., INC., 24 Bedford St., Newark, N. J.

DV. PG. 160.

Fine & Atwood Mfg. Co., 220 Broadway, New York, re Copper & Brass, Inc., 230 Park Ave., New York

7, N. Y.
Svill Manufacturing Co., Waterbury, 20, Conn.
Sal, Edward, 72 Spring St., New York 12, N. Y.
Spison Co., Inc., Edwin B., 74 Franklin Ave., Brookin 5, N. Y.
TED CARR FASTENER CORP., Cambridge 47, Mass.

DV. PG. 100. Ued Shoe Machinery Corp., 140 Federal St., Boston

ee Insulation Materials

## PESIMILE

ee Recorders, Facsimile

## ESIMILE RECORDING PAPERS ee Recorders, Facsimile

## FIS-Tube Cooling

A Control Installations, Ltd., Ruislip, Middlesex, Engnd. A MARINE MOTORS, INC., 2183 Jackson Ave., Sea-ird, N. Y. ADV. PG. 504. Dimic Air Engineering Inc., 7412 Maie Ave., Los An-les 1, Cafif.

Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y. Globe Industries, Inc., 125 Sunrise Place, Dayton 7,

Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. V.

N. V.

Joy Mfg. Co., Ollver Bldg., Plttsburgh 22, Pa.

LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.

McLean Engineering Laboratories, Princeton, N. J.

MASTER APPLIANCE MFG. Co., Fourth & Ontario Sts.,
Racine, Wis. ADV. PG. 439.

Mission Electric Mfg. Co., Inc., 132-134 W. Colorado,
Pasadena 1, Calif.

ROTRON MFG. CO., 7-9 Schoonmaker Lane, Woodstock,
N. Y. ADV. PG. 76.

Small Motors, Inc., 2076 Elston Ave., Chicago 14, III.
Stanat Tool & Machine Co., 47-28 37th St., Long Island
City 1, N. Y.

Standard Electric Mfg. Co., West Berlin, N. J.

### FASTENERS & FASTENING DEVICES

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago, ALLEN MFG. CO., Hartford 2, Conn. ADV. PG. 132.
Allmetal Screw Products Co., Inc., 33 Greene St.,
New York 13, N. Y.

Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa. American Scientific Co., P. O. Box 11, High Bridge Station, New York 52, N. Y.
Anti-Corrosive Products Co., Castleton-on-Hudson, N. Y.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 503.
Boots Altcraft Nut Corp., 55 John St., Stamford, Conn. Camloc Fastener Corp., 420 Lexington Ave., New York 17, N. Y.
Central Screw Co., 3501 Shields Ave. Chicago D. III.

17, N. Y.
Central Screw Co., 3501 Shields Ave., Chicago 9, III.
Cherry Rivet Co., A Div. of Townsend Co., 231 Winston St., Los Angeles 13, Calif.
Chicago Rivet & Machine Co., Bellwood, III.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
Dzus Fastener Co., Inc., Box 785, Babylon, N. Y.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.
Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
Groov-Pin Corp., 1125 Hendricks Causanana Bide Chicago.

54, N. Y. Groov-Pin Corp., 1125 Hendricks Causeway, Ridgefield,

N. J.
Heli-Coil Corp., Shelter Rock Rd., Danbury, Conn.
Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount
Vernon, N. Y.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio

Lion Fastener, Inc., Honeoye Falls, N. Y.
MILFORD RIVET & MACHINE CO., Milford, Conn. ADV.

PG. 369.
Nylok Corp., Box 341, Elmira, N. Y.
Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
Penn Engineering & Mfg. Corp., Box 311, Doylestown, Pa.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Russell, Burdsall & Ward Bolt & Nut Co., Port Chester,
N. Y.

N. Y.
Scovill Manufacturing Co., Waterbury 20, Conn.
Self Lock Fastener Corp., 259 Stephens St., Belleville 9, N. J.
Set Screw Mfg. Co., 470 Main St., Bartlett, Ill.
Shakeproof Inc., Div. of Illinois Tool Works, 2501 N.
Keeler Ave., Chicago 39, Ill.
South Chester Corp., Southco Div., 1409 Finance Bldg.,
Philadelphia 2, Pa.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.
Star Expansion Bolt Co., 147-149 Cedar St., New York
6, N. Y.

6, N. Y. Star Stainless Screw Co., 206 Union Ave., Paterson 2,

Star Stainless Screw Co., 200 Cincol.

N. J.
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.
UCINITE CO., DIV., UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 101.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass.

ADV. PG. 100.
United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
Waldes Kohinoor Inc., 47-16 Austel Place, Long Island City 1, N. Y.

### FELTS & FELT PARTS

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, III. Felters Co., 210 South St., Boston, Mass. Western Felt Works, 4029 Ogden Ave., Chicago, Ill.

Aerolite Electronics Corp., 507 26th St., Union City, N. J.

Andrew Corp., 363 E. 75th St., Chicago 19, Ilf.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 433.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. DEUTSCHMANN CORP., TOBE, 921 Providence Hwy., Norwood, Mass. ADV. PG. 280.
Eldico of New York, Inc., 44-31 Douglaston, Pkwy., Douglaston, N. Y. Douglaston, N. Y.
Gates Radio Co., Quincy, III.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
JFD MFG. Co., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3,
Calif.
National Electric Products Co., 1356 Chamber of
Commerce Bldg., Pittsburgh 30, Pa.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Resdel Engineering, 2309 Riverside Drive, Los Angeles
39, Calif.
Telrex, Inc., Rutherford & Neptune Highway, Asbury Inc., Rutherford & Neptune Highway, Asbury Park, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
N. J. ADV. PG. 413.
West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers,
N. Y. ADV. PG. 482.

### FILTERS—Band Elimination

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 496.
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, Aerolite Electronics Corp., 356 Santa Monica Blvd., Beverly N. J.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Andrew Corp., 363 E. 75th St., Chicago 19, III.

AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 368.

Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.

Baird Associates Inc., 33 University Rd., Cambridge 38, Mass. Mass.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. BARKER & WILLIAMSON, Darby, Pa. ADV. PG. 397.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y.
ADV. PG. 157.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
Chicago Electronic Engineering Co., 3223 W. Armitage
Ave., Chicago 47, III.
CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501
W. Addison St., Chicago 18, III. ADV. PG. 56.
Cinema-Television Ltd., Worsley Bridge Rd., London,
S.E. 26. England. Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
COMMUNICATION ACCESSORIES CO., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri. ADV. PG. 290.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittania St., Meriden, Conn. ADV. PG. 292.
DECOURSEY ENGINEERING LAB., P. 0. Box 235, Los Angeles 25, Calif. ADV. PG. 76.
DEUTSCHMANN CORP., TOBE, 921 Providence Hwy., Norwood, Mass. ADV. PG. 280.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307.

DIETZ DESIGN & MFG. CU., Grandview 6, Mo. PG. 307.
PG. 307.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 484.
EPCO ELECTRONICS, 140 Liberty St., New York, N. Y. ADV. PG. 372.

EPCO ELECTRONICS, 140 Liberty St., New York, N. Y. ADV. PG. 372.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 274.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 188.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
GERTSCH PRODUCTS, INC., 11846 Mississippl Ave., Los Angeles 25, Calif. ADV. PG. 449.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.

N. Y.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
HYCOR CO., INC., 11423 Vanown St., North Hollywood,
Calif. ADV. PG. 172.
Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego
Calif.

Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10, Calif. KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274. KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 196. KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 41. Lenkurt Electric Co., Inc., 1113 County Road, San Carlos,

Calif.
Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

Meissner Mfg. Dlv., Maguire Industries, Inc., Mt. Carmel,

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III.

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. Miller Co., J. W., 5917 S. Main St., Los Angeles 3,

ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.

Railway Communications, Inc., Smith Road & Glenwood,

Raytown, Mo.
Resdel Engineering, 2309 Riverside Drive, Los Angeles

Resdel Engineering, 2309 Riverside Drive, Ed. Chisco.
39, Calif.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
Standard Electronics Corp., 285 Emmet St., Newark,
N. J.
Standard Transformer Corp., Elston, Kedzie & Addison,
Chicago. 18. III.

Chicago 18, III. Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Calif.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
Telrex, Inc., Rutherford & Neptune Highway, Asbury
Park, N. J.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
Transformer Engineers, 389 South Arroyo Parkway, Pasadena, Calif.

dena, Calif. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,

N. J. ADV. PG. 413.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo. YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

### FILTERS—Band Pass

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 496.
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.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
ASTRON CORP., 255 Grant Ave., East Newark, N. J.
ADV. PG. 209.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 368.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles
64, Calif.

Audio Products Corp., 2200 1.64, Calif.
Avion Instrument Corp., Paramus, N. J.
Baird Associates, Inc., 33 University Rd., Cambridge 38,

Mass.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600 Sherman Way, North Hollywood, Calif. ADV. PG. 129.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y.

ADV. PG. 157. C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford,

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. Chicago Electronic Engineering Co., 3224 W. Armitage Ave., Chicago 47, III.
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 W. Addison St., Chicago 18, III. ADV. PG. 56.
Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26 Fooland

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England COMMUNICATION ACCESSORIES CO., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri. ADV. PG. 290.

DX RADIO PRODUCTS CO., INC., 2300 Armitage Ave., Chicago 47, III. ADV. PG. 294.

DeCOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. ADV. PG. 76.

DEUTSCHMANN CORP., TOBE, 921 Providence Hwy., Norwood, Mass. ADV. PG. 280.

DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307.

Douglaston, N. Y.

Electronic Systems Co., 578 E. 161st St., New York 56,

N. Y. ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.

EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 484.

Bellmore, N. Y. ADV. PG. 484.
EPCO ELECTRONICS, 140 Liberty St., New York, N. Y.

ADV. PG. 372.

EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 274.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 188.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Geotronic Labs., Inc., Dallas 8, Texas.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., Los Angeles 25, Calif. ADV. PG. 449.
GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 364.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y. HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 172.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, III.
K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10.

Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10,

Calif.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S.
Cicero Ave., Chicago 38, III. ADV. PG. 274.

KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 196.

KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 41.

Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.

Lynch Carrier 5, Calif. Magnavox Co Carrier Systems, Inc., 96 Jessie St., San Francisco Magnavox Co., The, Components Div., Fort Wayne 4, Ind. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,

Merit Coll & Transformer Corp., 4427 N. Clark St., Chi-cago 40, III. Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.

Calif.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St.,
New York 11, N. Y. ADV. PG. 50, 51.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
POLYPHASE INSTRUMENT CO., 705 Haverford Rd., Bryn
Mawr. Pa. ADV. PG. 519.

Mawr, Pa. ADV. PG. 519.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Railway Communications, Inc., Smith Road & Glenwood,

Raytown, Mo. Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Sickles, F. W. Div. General Instrument Corp., 165 Front St., Chicopee, Mass.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347.
Standard Telephones & Cables Ltd., Connaught House, Adwych, London, W. C. 2, England.
Standard Transformer Corp., Elston, Kedzie & Addlson, Chicago 18, Ill.
Stephens Mfg. Corp., 8538 Warner Drlve, Culver City, Calif.

Calif.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
Telrex, Inc., Rutherford & Neptune Highway, Asbury Park,
N. J.

Telvision Laboratories, Inc., 5045 W. Lake St., Chicago 44, III.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
Transformer Engineers, 389 South Arroyo Parkway, Pasadona Calif

dena, Calif.

TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV.

TRANSFORMER SPECIALTY CO., Data Cythyg, Fa., CRY, PG. 379.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.
West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6. Calif.

Vestern-Electroncs Co., 1601 S. Burlington St.,
Los Angeles 6, Calif,
Western-Electro-Acoustic
Beverly Hills, Calif,
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
YONKERS INDUSTRIES,
N. Y. ADV. PG. 482.

## FILTERS-Crystal

FILTERS—Crystal

BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 157.

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

KINGS MICROWAVE CO., INC., 719 Main St., Rochelle, N. Y. ADV. PG. 142, 143.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, III. Norwood, Mass. ADV. PG. 280.

Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413. Westline Electronics Co., 11656 Olympic Blvd., Los Angeles 25, Calif.

### FILTERS—Detonation

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif. U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.

### FILTERS—Electric Wave Section

Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
ASTRON CORP., 255 Grant Ave., East Newark, N. J.
ADV. PG. 209.
AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. ADV. PG. 368.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y.
ADV. PG. 157.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
COMMUNICATION ACCESSORIES CO., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri. ADV. PG. 290.
DEUTSCHMANN CORP., TOBE, 921 Providence Hwy., Norwood, Mass. ADV. PG. 280.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307. Acro Transformer Mfg. Corp., 26-02 4th St., Astoria

DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307.

ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 188.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 172.

KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 196.

Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.

Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco

ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Standard Transformer Corp., Elston, Kedzie & Addison

Standard Transformer Corp., Elstin, North Standard Transformer Corp., Elstin, North Standard The Chicago 18, III.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

West Coast Electronics Co., 1601 S. Burlington St., Los Appales 6. Calif

### FILTERS—Equalizer

Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2,

Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Astatic Corp., The Conneaut, Ohio.
Audak Co., 500 Fifth Ave., New York, N. Y.
AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. ADV. PG. 368.
Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y.
Audio Instrument Co., Inc. 133 W. 14th St., New York

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. Berkeley Custom Electronics, 2302 Roosevelt Ave., Berke-

Berkeley Custom Electronics, 2302 Roosevelt Ave., Berkeley 3, Calif.
BURNELL & CO., 45 Warburton Ave., Yonkers 2,
N. Y. ADV. PG. 157.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
Burbank, Calif. ADV. PG. 386.
Coil Winders, Inc., 61 Bergen St., Brocklyn 2, N. Y.
COMMUNICATION ACCESSORIES CO., Box 345, 110th
St. Hillcrest Rd., Hickman Hills, Missouri. ADV.
PG. 290.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.
PG. 121.

DAVEN CO., 191 Central Ave., Newark 4, N. J.
PG. 121.
DECOURSEY ENGINEERING LAB., P. O. Box 235, Los
Angeles 25, Calif. ADV. PG. 76.
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th
St., New York, N. Y. ADV. PG. 383.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn
17, N. Y. ADV. PG. 274.
Fairchild Recording Equipment Corp., 154th St. & 7th
Ave., Whitestone, N. Y.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New
York 20, N. Y. ADV. PG. 188.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Geotronic Labs., Inc., Dallas 8, Texas.
GRAY RESEARCH & DEVELOPMENT CO., INC., 16
Arbor St., Hartford 1, Conn. ADV. PG. 381.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood,
Calif. ADV. PG. 172. Calif. ADV. PG. 172.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 196.

ynch Carrier Systems, Inc., 96 Jessie St., San Francisco NRTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.
Painton & Co., Inc., Ltd., 366 Madison Ave., New York

17, N. Y. Radio Music Corp., 84 S. Water St., Port Chester, N. Y. Lailway Communications, Inc., Smith Road & Glenwood,

Raytown, Mo.
Resdel Engineering, 2309 Riverside Drive, Los Angeles
39, Calif. 39, Calif.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.
tandard Transformer Corp., Elston, Kedzie & Addison,

tandard Transformer Corp., Eiston, Redzie & Addison, Chicago 18, III.
ech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
ELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
hordarson-Meissner Mfg. Divs., Mt. Carmel, III.
ransformer Engineers, 389 South Arroyo Parkway, Pasadena. Calif.

dena, Calif.

NITED TRANSFORMER CO., 150 Varick St., New York
13, N. Y. ADV. PG. Inside Front Cover.

### ILTERS—Lighting (for radio towers)

ndrew Corp., 363 E. 75th St., Chicago 19, III.
ARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
ates Radio Co., Quincy, III.
OHNSON CO., E. F., Waseca, Minn., III. ADV. PG. 248.251

248-251.

Co., J. W., 5917 S. Main St., Los Angeles 3,

hordarson-Meissner Mfg. Divs., Mt. Carmel, III.
S. ELECTRONICS CORP., 276 Warren St., Lynd-hurst, N. J. ADV. PG. 413.

### ILTERS-Microwave

indrew Corp., 363 E. 75th St., Chicago 19, III. udd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y. 1, N. Y. Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.

LECTRO PRECISION PRODUCTS INC., 119-01 22nd
Ave., College Point, N. Y. ADV. PG. 431.

MPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside
61, N. Y. ADV. PG. 503.

ENERAL ELECTROSONICS, INC., 32 W. 22nd St., New
York 10, N. Y. ADV. PG. 525.

ENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15,
Mass. ADV. PG. 160

Mass. ADV. PG. 160.
ENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

Transformer Corp., 27. Apr. Programmer Corp., 27

ADV. PG. 362.

DLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.
atter Co., 1850 Sheridan Rd., North Chicago, III.
aliway Communications, Inc., Smith Road & Glenwood,

Engineering, 2309 Riverside Drive, Los Angeles

39, Calif.
39, Calif.
39, Calif.
39, Calif.
PERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
ITEFLEX, INC., 500 Frelinghuysen Ave., Newark, 5,
N. J. ADV. PG. 399.
aveline, Inc., North Caldwell, N. J.
seymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.
fineeler Laboratories, Inc., Great Neck, N. Y.

## LTERS—Needle Scratch

tatic Corp., The, Conneaut, Ohio.

\*\*Prkeley Custom Electronics, 2302 Roosevelt Ave., Berkeley 3, Calif.

Prkeley Custom Electronics, 2902 Nooscoti, 1ey 3, Calif.
JRNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 157.
Il Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. ECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 383.
tes Radio Co., Quincy, III.
agna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inolewood. Calif.

agna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
RTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Idio Music Corp., 84 S. Water St., Port Chester, N. Y.
cott, Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
andard Transformer Corp., Elston Kedzie & Addison,
Chicago, 18, 111

Chicago 18, III. VITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

## LTERS-Radio Interference

rolite Electronics Corp., 507 26th St., Union City,

AEROVOX CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 240-243. ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 209. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y.

N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
Carbonneau Industries, Inc., Grand Rapids, Mich.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe
Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CHICAGO CONDENSER CORP., 3255 W. Armitage Ave.,
Chicago 47, III. ADV. PG. 274.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
COMMUNICATIONS ACCESSORIES CO., Box 345, 110th
St & Hillcrest Rd., Hickman Hills, Mo. ADV. PG.
290.

St & Hillcrest Rd., Hickman Hills, Mil. 200. 10.
290.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
DEUTSCHMANN CORP., TOBE, 921 Providence Hwy.,
Norwood Mass. ADV. PG. 280.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.
EPCO ELECTRONICS, 140 Liberty St., New York, N. Y.
ADV. PG. 372.

EPCO ELECTRONICS, 140 Liberty St., New York, N. Y. ADV. PG. 372.
FAST & CO., JOHN E., 3101 N. Pulaski Rd., Chicago 41, III. ADV. PG. 489.
Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. Glenco Corp., Metuchen, N. J. Guiton Mfg. Corp., Metuchen, N. J. Grayburne Corp., 103 Lafayette St., New York 13, N. Y. Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. Hartley Co., Ltd., H. A., 152 Hammersmith Rd., London W. 6, England.
Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, III.
K-V Transformer Corp., 4414 Park Ave., New York 57,

Chicago 18, III. V Transformer Corp., 4414 Park Ave., New York 57, K-V

N. Y.
Mallory & Co., R. R., 3029 E. Washington St., Indianapolis 6, Ind.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III. Miller Co., J. W., 5917 S. Main St., Los Angeles 3,

Calif.
National Electronic Mfg. Corp., 42-08 Vernon Blvd.,
Long Island City, N. Y.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Potter Co., 1850 Sheridan Rd., North Chicago, III.
PYRAMID ELECTRIC CO., 1445 Hudson Blvd., North
Bergen, N. J. ADV. PG. 107.
Radiomarine Corp., of America, 75 Varick St., New York
13, N. Y.

13, N. Y. Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.

Sprague Electric Co., 125 Marshall St., North Adams, Mass. 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.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

### FILTERS-Television

ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 209.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. CHICAGO CONDENSER CORP., 3255 W. Armitage Ave., Chicago 47, III. ADV. PG. 274.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Cinema-lelevision Ltd., Worsley bringe Roy, Sandy, E. 26, England.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.
Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
JF D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Liberty Mirror Div., Libbey-Owens-Ford Glass Co., Tarentum, Pa.

tum, Pa. Lynmar Engineers, Inc., 1432 N. Carlisle St., Phila-

Lynmar Engineers, Ass., delphia 21, Pa.
Merit Coil & Transformer Corp., 4427 N. Clark St., Chlcago 40, Ill.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3,

Calif.

Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34, III.

ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.

Resdel Engineering, 2309 Riverside Drive, Los Angeles

39, Calif.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton,
London W. 3, England.
Telrex, Inc., Rutherford & Neptune Highway, Asbury
Park, N. J.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
N. J. AV. PG. 413.

West Coast Electronics Co., 1601 S. Burlington St., Lon Angeles 6, Calif. YONKERS INDUSTRIES, INC., 28 School St., Yonkers N. Y. ADV. PG. 482.

### FILTERS-uhf & vhf

Aerolite Electronics Corp., 507 26th St., Union City,

Aerolite Electronics Corp., 507 26th St., Union City, N. J.

AEROVOX CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 240-243.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 433.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.-Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.-DEUTSCHMANN CORP., TOBE, 921 Providence Hwy., Norwood, Mass. ADV. PG. 266.
ELECTRO PRECISION PRODUCTS INC., 119-01 22nd Ave., College Point, N. Y. ADV. PG. 431.
Electronic Systems Co., 578 E. 161st St., New York 56, N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 503.
Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, N. Y. ADV. PG. 398.
K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.
Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III.
Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3 Calif.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.

Calif.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Potter Co., 1850 Sheridan Rd., North Chicago, III.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
Railway Communications, Inc., Smith Road & Glenwood,
Daystown Ma.

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.

SPERRY GYROSCOPE CO. Div. of The Sports Co. 39, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Standard Electronics Corp., 285 Emmet St., Newark,

N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413. West Coast Electronics Co., 1601 S. Burlington St., Los

Angeles 6, Calif.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers,
N. Y. ADV. PG. 482.

### FILTERS-Variable Electronic

Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. Chicago Electronic Engineering Co., 3223 W. Armitag Ave., Chicago 47, III.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. EPCO ELECTRONICS, 140 Liberty St., New York, N. Y. ADV. PG. 372.

ADV. PG. 372.
Resdel Engineering, 2309 Riverside Drive, Los Angele

39, Calif.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 351.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG 311.
Thordarson-Melssner Mfg. Divs., Mt. Carmel, III.
UNITED TRANSFORMER CO., 150 Varick St., New York
13, N. Y. ADV. PG. Inside Front Cover.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers,
N. Y. ADV. PG. 482.

## FINISHES—Crystal

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

Maas & Waldstein Co., 438 River Ave., Newark 4, N. J. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

## FINISHES—Luminous Materials

Canadian Radium & Uranium Corp., 630 Flfth Ave., New York 20, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J.

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. 272.

## FINISHES—Ripple

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rock ford, III. ADV. PG. 120.

Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J. Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.

Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.

### FLOCK & FLOCKED PAPER

Cellusuede Products, Inc., Rockford, III.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn.
GENERAL CEMENT MFG. CO., 919 Taylor Ave Rock
ford, III. ADV. PG. 120. Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J. Shannon Luminous Materials Co., 7356 Santa Morica Blvd., Hollywood 46, Calif.

### FLUORESCENT COMPOUNDS—Phosphors

Bram Chemical Co. 820 65th Ave, Philadelphia 26, Pa. Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y. York 20, N. Y. Pont de Nemours & Co., Inc., E. I., Wilmington 98,

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rock-

ford, III. ADV. PG. 120.
Menlo Research Laboratory, Menlo Park, Calif.
North American Philips Co., Inc., 100 E. 42nd St.,
New York 17, N. Y.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
NUCLEAR RESEARCH CORP., 2563 Grays Ferry Ave., Philadelphia 46, Pa. ADV. PG. 301.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 272.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32, N. Y. ADV. PG. 517.

### **FLUOROMETERS**

Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif Farrand Optical Co., Inc., 4401 Bronx Blvd., New York

### FLUX—Brazing or Soldering

Allen Co., Inc., L. B., 6751 Bryn Mawr Ave., Chicago 31, III.

ALPHA METALS, INC., P. O. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357.

Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa. American Chemical Paint Co., Ambler, Pa. AMERICAN PLATINUM WORKS, N. J. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

54, N. Y. American Solder & Flux Co., 2152 E. Norris St., Phila-

American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.

Burnley Battery & Mfg Co., Clay St., North East, Pa. Decimeter, Inc., 1430 Market St., Denver 2, Colo. DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.

Bunton Co., M. W., 7 Goff St., Providence 3, R. I. du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.

New York 17, N. Y.

Eutetic Welding Alloys Corp., 40 Worth St., New York

Eutetic Welding Alloys Corp., 40 World St., New York 13, N. Y.
Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa. Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn, N. Y.
Goldsmith Bros. Smelting & Refining Co., 111 N.
Wabash Ave., Chicago 2, III.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Handy & Harman, 82 Fulton St., New York 38, N. Y.
International Nickel Co., Inc., 67 Wall St., New York

International Nickel Co., Inc., 67 Wall St., New York 38, N. Y.
International Nickel Co., Inc., 67 Wall St., New York
5, N. Y.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago
39, III. ADV. PG. 442.
Linick Chemical Co., 59 E. Madison St., Chicago 2, III.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 353.
MULTICORE SOLDERS, LTD., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshirs, England.
ADV. PG. 47.
National Lead Co., 111 Broadway, New York 6, N. Y.
Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
Osborn Products, Glen Ellyn, III.
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 Attle-

Standard Metals Corp., 262 Broad St., North Attle-

boro, Mass.

uper Flow Solder Co., Inc., 90 State St., Albany,

Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.
Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, III. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109 115.
Wildberg Bros., Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

### **FLUXMETERS**

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Dyna Labs., Inc., 132 Lafayette St., New York 13, N Y. N V.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal
St., Manchester, N. H. ADV. PG. 284.
Rawson Electrical 'nstrument Co., 111 Potter St., Mass. Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29 Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
VARIAN ASSOCIATES, 990 Varian St., San Carlos
Calif. ADV. PG. 213.

### FOCUS COILS

See Coils, Television Focusing

### FORKS-Electrically Driven Tuning

Acme Telectronix Div., NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.

AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 19, N. Y. ADV. PG. 478.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo. Miller Corp., William, 325 N. Halstead St., Pasadena 8,

Miller Corp., William, 323 N. Haisteau St., Fasauena S, Calif. Muirhead Co., Inc. Beckenham, Kent, England. PHILAMON LABORATORIES, 5717 Third Ave., Brooklyn 20, N. Y. ADV. PG. 244. Riverbank Laboratories, Dept. of Engineering, Geneva,

III.
TIMES FACSIMILE CORP., 540 W. 58th St., New York
19, N. Y. ADV. PG. 526.
Varo Mfg. Co., Inc., Box 638, Garland, Texas.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

### FORMS-Antenna

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y Speer Resistor Corp., St. Marys, Pa. Torngren Co., Inc., C. W., 236 Pearl St., Somerville Torngren Co., 45, Mass.

### FORMS-Coil

### See Also Bobbins

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24. AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, III. ADV. PG. 326.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

Associated Production Co., 162 N. Clinton St., Chicago

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512. CITATION PRODUCTS 60., 233 E. 176th 3t., 18th 3t., 51, N. Y. ADV. PG. 512.

CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 261.

Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

CONTINENTAL-DIAMUND FIBRE 2017
ADV. PG. 222, 223.
Corning Glass Works, Corning, N. Y.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison
Ave., New York 17, N. Y.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

Felsenthal & Sons, Inc., G., Task II.

cago 51, III.

GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.

General Laminated Products, Inc., 2857 S. Halstead St.,

Chicago 8, III.

GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 364.

Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.

Gries Reproducer Corp., 100 William City, 154, N. Y.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
Insulating Tube Co., 26 Cottage St., P. 0. Box 1, Poughkeepsie, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG.

KIRCHBERGER & CO., INC., M., 1425 37th St., Brook-lyn 18, N. Y. ADV. PG. 498.

Maida Development Co., 12 E. Howard St., Phoebus, Va. Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, III. chicago 30, III.

cago 4C, III. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd.,

MYCALEX CORPORATION OF AMERICA, Clifton Blwd., Clifton, N. J. ADV. PG. 130, 131. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329. NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 450. NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258. NORTH HILLS ELECTRIC CO., P. O. Box 427, Great Neck, N. Y. ADV. PG. 132. PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 470. Quality Components, Inc., St. Mary's, Pa. Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Speer Resistor Corp., St. Mary's, Pa. STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

STUPÁKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.
Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
Synthane Corp., Oaks, Pa.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109, 115.
Wisconsin Procelain Co., Sun Prairie, Wis.

### FORMS—Resistor

CENTRALAB DIV. OF GLOBE UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Calif.
GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.
(SOLANTITE MFG. CORP., Stirling, N. J. ADV. PG.

KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.
LOUTHAN MFG. CO., East Liverpool, Ohio. ADV. PG.

Painton Co., Inc., Ltd., 366 Madison Ave., New York 17,

Quality Components, Inc., St. Marys, Pa.
Speer Resistor Corp., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa.
ADV. PG. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.

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. 510.

U. S. GASKET JO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.

### FORMS--Wire

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 246.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

LEE MECHANICAL LABORATORIES, 30 Main St., Brooklyn 1, N. Y. ADV. PG. 365.
Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chlorodes.

id-West Spring 1919. Co., 1920 (ago 9, 11). The cago 9, 111. The cago 9, 1 Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa. Roebling's Sons Co., John A., 640 Broad St., Trenton 2,

N. J. Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park,

N. J.
Speer Resistor Corp., St. Marys, Pa.
Stone City Machine & Tool Co., Inc., P. 0. Pox 351, 1206 Seventh St., Bedford, Ind.
U. S. GASKET CO., Fluorocarbon Products Div. P. 0.
Box 93, Camden, N. J. ADV. PG. 472.
Universal Chain Co., 92 Burnett Ave., Maplewood, N. J.
Webster, Spring Corp. 176, 130, Lebraco Bewood, N. J.
Webster, Spring Corp. 176, 130, Lebraco Bewood, N. J.

Webster Spring Corp., 176-182 Johnson St., Brooklyn 1,

N. Y.
erick Mfg. Corp., Beechwood & Rockdale Aves., New
Rochelle, N. Y.

## FREQUENCY STANDARDS See Standards—Frequency

### FURNACES—Electric (for Electronic Component Production)

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362.

# LECTRONIC and ALLIED PRODUCTS\_

hectric Furnace Co., Salem, Ohio.

NERAL ELECTRIC CO.. Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

NERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

rper Electric Furnace Corp., 39 E. River St., Buffalo 2, (N. Y. ppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37 Jul.

HLE ENGINEERING CO., 1307 Seventh St., 419 North Bergen, N. J. ADV. PG. 419. deds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. skela Infra-Red Co., E. 73rd & Grand Ave., Cleveland

4, Ohio. EINER-IVES CO., 16 Avenue L, Newark 5, N. J. ADV.

PG. 390.

age Electric, Inc., 720 Colfax Ave., Kenilworth, N. J. astern Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
ESTINGHOUSE—ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### RNACES—High Frequency

o High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J. Bergen, N. J.
NERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
NERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
ph Frequency Heating Co., 143 Glen Park Ave., Gary,

DUCTION HEATING CORP., 181 Wythe Ave., Brooklyn

11, N. Y. ADV. PG. 467.
eve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
erman Industrial Electronics Co., Inc., 505 Washington

prman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J. brt Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif. kes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa. bodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

### SE HOLDERS

### See Blocks

L-FUSE, INC., 311 Mountain Road, Union City, N. J. ADV. PG. 521. Ling & Lee Ltd., 366 Madison Ave., New York 17,

N.Y.

ISSMANN MFG. CO., St. Louis 7, Mo. ADV. PG. 370. gle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y. pnomy Fuse & Mfg. Co., 2717 Greenview Ave., Chicago H4, III.

Peral Fuse Co., 16 Robert St., South River, N. J.

FTELFUSE, INC., Des Plaines, III. ADV. PG. 465. Ilco Corp., Tioga & C Sts., Philadelphia 34, Pa. Ico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis. CSTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### GES—Comparator

All Co., 254 N. Laurel Ave., Des Plaines, III.

Stann Kodak Co., Industrial Photographic Div., 343
State St., Rochester 4, N. Y.

NERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

thaway Instrument Co., 1315 S. Clarkson St., Denver
alo. Colo. 10, Colo. Nyer Instrument Co., Inc., 54 Lafayette St., New York DUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123. tron Instrument Co., 432 Lincoln St., Denver 9, Colo. Perr Co., Inc., Geo., 200 Lafayette St., New York 12, N. Y.

## GES—Displacement Measuring

RGES—Displacement Measuring

R ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.

\*\*JUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

\*\*rke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md. (al Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.

\*\*ECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 413.

\*\*kboro Co., The, Foxboro, Mass.

\*\*nco Corp., Metuchen, N. J.

\*\*thon Mfg. Corp., Metuchen, N. J.

\*\*thaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

\*\*DUSTRIAL ELECTRONICS. INC.. 8060 Wheeler St.\*\*

10, Colo.
DUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.
ITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveand 15, Ohio. ADV. PG. 44, 45.
btocon Research Products, 421 N. Foothill Blvd.,

Pasadena, Calif.

haevitz Engineering, Crescent Blvd. at Drexel Ave.,

Pennsauken Township, Camden 11, N. J.

htham Laboratories, Inc., 12401 W. Olympic Blvd.,

Los Angeles 64, Calif.

### GAGES—Electronic Fuel Indicator

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. ADV. PG. 153.
Vapor Recovery Systems Co., P. O. Box 231, 2820 N.
Alameda, Compton, Calif.

### GAGES-Electronic Inspection

Arma Corp., 254 36th St., Brooklyn 32, N. Y.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave.,
Stamford, Conn. ADV. PG. 436.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Dice Co., J. W., Englewood, N. J.
DOAII Co., 254 N. Laurel Ave., Des Plaines, III.
Electronic Control Corp., 1573 E. Forest St., Detroit,
Mich.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. AV. PG. 122, 123.
Photocon Research Products, 421 N. Foothill Blvd.,
Pasadena, Calif.
Pratt & Whitney Div., Niles-Bement-Pond Co., West Hartford 1, Conn. Pratt & Whitney Div., Niles-Bement-Pond Co., 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. 446.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

### GAGES-Electronic Spring Checking

Dice Co., J. W., Englewood, N. J.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.

### GAGES—Ionization

Distillation Products Div. of Eastman Kodak Co., 755 Ridge Rd., W. Rochester 3, N. Y. Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. GENERAL ELECTRIC CO., Tube Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
National Research Corp., 70 Memorial Drive, Cambridge 42 Mass. 42, Mass.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,
N. Y. Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### GAGES—Paint Depth

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 436.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. ADV. PG. 413.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

### GAGES—Photoelectric Dimension

Electrodyne Co., 32 Oliver St., Boston, Mass.
Electronic Control Corp., 1573 E. Forest St., Detrolt,
Mich.
Industrial Electronics Co., Inc., Hanover, Mass.
Photobell Company, 116 Nassau St., New York 7, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### GAGES—Pirani

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
Distillation Products Div. of Eastman Kodak Co., 755
Ridge Rd., W. Rochester 3, N. Y.
EISLER ENGINEERING CO., INC., 740 S. 13th St.,
Newark 3, N. J. ADV. PG. 362.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chlcago 10, III.
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### GAGES—Pressure, Electronic

Airplane & Marine Instruments, Inc., Clearfield, Pa.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, North Hollywood, Calif. ADV. PG. 129.
Bristol Co., The, Waterbury 20, Conn.
Control Engineering Corp., 863 Washington St., Canton, Control Engineering Corp., 863 Washington St., Canton, Mass.

Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. ADV. PG. 413.

Flader, Inc., Fred, 1330 Lasky Rd., Toledo 12, Ohio. Foxboro Co., The, Foxboro, Mass.

Giannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena 1, Calif.

Glenco Corp., Metuchen, N. J.

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.

Gulton Mfg. Corp., Metuchen, N. J.

INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Michigan. ADV. PG. 122, 123.

Manning, Maxwell & Moore, Inc., Stratford, Conn.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 304, 305.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif. Photocon Research Products, 421 N. Foothill Blvd., Fasadena, Calif.
SERVOMECHANISMS, INC., Post & Stevart Aves., Westbury, N. Y. ADV. PG. 392.
Sierra Electronic Corp., San Carlos, Calif.
Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 509.
WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG. 486. GAGES-Strain

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.

BENDIX AVIATION CORP., PACIFIC DIVISION, 11600 Sherman Way, North Hollywood, Calif. ADV. PG. 129.

Dillion & Co., Inc., W. C. 1421 S. Circle Ave., Forest Park., III.

Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Glenco Corp., Metuchen, N. J.
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. ADV. PG. 122, 123.

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Dice Co., J., W. Englewood, N. J.
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Photocon Research Products, 421 N. Foothill Blvd.,
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Sperry Products, Inc., Danbury, Conn.

### GAGES—Vacuum

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Central Scientific Co., 1700 Irving Park Rd., Chicago
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Clarke Instrument Div., National Electrical Machine 13, III.
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Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
COMMUNICATIONS EQUIPMENT DIV., The Robert Dollar
Co., 50 Drumm St., San Francisco 12, Calif. ADV.
PG. 487.
CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG. Hada Products Div. of Eastman Kodak Co., 755 Ridge Rd., W. Rochester 3, N. Y. Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Newark 3, N. J. ADV. PG. 362.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hastings Instrument Co., Inc., Hampton 9, Va. HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
Litton Industries, San Carlos, Calif.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
National Research Corp., 70 Memorial Drive, Cambridge 42, Mass.
Optical Film Englneering Co., 2731-37 N. 6th St., Philadelphia 33, Pa. Optical Film Englneering 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.
Stokes Machine Co., F. J. 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31, III.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Wallace & Tiernan Products, Inc., Belleville 9, N. J.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10. III. cago 10, III. WILMAD GLASS CO., INC., Landisville, N. J. ADV.

### **GALVANOMETERS**

### See Instruments—Electrical Measuring

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### GASES-Nitrogen

Linde Air Products Co., Division of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

GENERAL CHEMICAL DIV. OF ALLIED CHEMICAL DYE CORP., 40 Rector St., New York 6, N. Y. Al

PG. 453.
Linde Air Products Co., Division of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### GASKETS

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CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
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ADV. PG. 64, 65.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.
Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, III

Felt Products Mrg. Co., 1504 W. Carroll Ave., Chicago 7, III.

GARDE MFG. CO., 588 Eddy St., Providence 3, R. I.

ADV. PG. 507.

Garlock Packing Co., Palmyra, N. Y.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.

Johns-Manville, 22 E. 40th St., New York 16, N. Y.

METAL TEXTILE CORP., 547 E. First Ave., Roselle,
N. J. ADV. PG. 180.

Moore Co., Howard J., 266 William St., New York,
N. Y.

N. Y.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4,
N. J. ADV. PG. 258.
Penn Fibre & Specialty Co., 2020 E. Westmoreland St.,
Philadelphia 44, Pa.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,
N. Y.

N. Y. U. S. GASKET CO., Flurocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
U. S. Rubber Co., 1230 Avenue of the Americas, New York Western Felt Works, 4029 Ogden Ave., Chicago, III.

### GEARS—Precision

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

263. Arch Gear Works, Inc., Quincy, Mass. Associated Production Co., 162 N. Clinton St., Chicago

Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa. Beaver Gear Works, Inc., 1038 Parmele St., Rockford,

Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
BOWMAR INSTRUMENT CORP., 4214 Leo Rd., Fort

BOWMAR INSTRUMENT CORP., 4214 Leo Rd., Fort Wayne, Ind. ADV. PG. 498.
Farrand Optical Co., Inc., 4401 Bronx Blvd., Bronx 66, N. Y.
Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, III.
Gear Specialties, Inc., 2635 W. Medill Ave., Chicago 47, III.
Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, III.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
Metron Instrument Co., 432 Lincoln St., Denver 9, Colo. Powdered Metal Products Corp., Franklin Park, III.
Quaker City Gear Works, Red Lion & Philmont Rd., Bethayres, Pa.

RADIO CORES, INC., 9540 Tulley Ave., Oak Lawn, Ill. ADV. PG. 220.

REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 473.

Shakeproof, Inc., Div. of Illinois Tool Wks, 2501 N. Keeler Ave., Chicago 39, Ill.

TRANSICOIL CORP., 107 Grand St., New York 13, N. Y.

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- 5. Variable Frequency
- 6. Ultrasonic
- 7. Waveform

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Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y. 5.
AMERICAN CHRONOSCOPE CORP., 316 West First St., Mt. Vernon, N. Y. 6. ADV. PG. 523.

AMERICAN ELECTRONEERING CORP., 5025-29
Jefferson Blvd., Los Angeles 16, Calif. 5. PG. 396.
ANDERSEN LABORATORIES, INC., 39 Talcott Rd., West
Hartford 10, Conn. 6. ADV. PG. 172.
Approved Electronic Instrument Corp., 928 Broadway,
New York 10, N. Y. 1.
Audio Products Corp., 2265 Westwood Blvd., Los Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y. 1.

Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif. 4.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 5-6-7. ADV. PG. 397.

BERKELEY SCIENTIFIC CORP., Richmond, Calif. 4.

ADV. PG. 443.

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass. 4-7.

BOONTON RADIO CORP., Boonton, N. J. 1-3. ADV. PG. 49.

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. 6. ADV. PG. 436.

Bristol Engineering Corp., Lincoln Ave. & Pond St., Bristol, Pa. 7.

Bristol Engineering Corp., Bristol, Pa. 7.

Bristol, Pa. 7.

C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. 5. ADV. PG. 454.

CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. 4. ADV. PG. 96, 97.

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England. 445. E. 26, England. 4-5.
Instrument Co., 1320 S. Grand Ave., Los Angeles Calif. 5.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. 5.
Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario. 2-5.
Control Instrument Co., Sub. of Burroughs Adding Machine Co., 67-35th St., Brooklyn 32, N. Y. 4.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. 4-5.
CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. 1. ADV. PG. 515.
Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn. 6.

Conn. 6.
Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md. 4-7.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. 2-3-4-5. ADV. PG. 488.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. 4-5. ADV. PG. 451.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. 3-4. ADV. PG. 503.
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FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. 5. ADV. PG. 297.
Furst Electronics, 10 S. Jefferson St., Chicago 6, 111. 5.

III. 5.
Gates Radio Co., Quincy, III. 5.
Gates Radio Co., Quincy, III. 5.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 6. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. 1-2-7. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 1-3-4-5-6. ADV. PG. 82, 83.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. 1-3-4-5. ADV. PG. 29-34.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. 3.

Jackson Eelctrical Instrument Co., 16 S. Patterson Blvd.,

Jackson Electrical Instrument Co., 10 3. Fatterson End.,
Dayton 1, Ohio. 1-2-5.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
3-4-5. ADV. PG. 324, 325.

LABORATORY FOR ELECTRONICS, INC., 43 Leon St.,
Boston 15, Mass. 3. ADV. PG. 239.

LAVOIE LABORATORIES, Morganville, N. J. 2-3-4.
ADV. PG. 339.

ADV. PG. 339.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. 5. ADV. PG. 491.
Loral Electronics Corp., 794 E. 140th St., New York

Manson Laboratories, 76 Stage St., Stamford, Conn. 4.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. 1-2-3-4-5-6-7. ADV. PG. 355. Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. 1-7. Measurement Engineering, Ltd., Arnprior, Ontario, Can-MEASUREMENTS CORP., Boonton, N. J. 1-4-5. ADV. PG. 158, 159. Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn. 4-7.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. 1-2-5. Monarch Radio & Television Corp., 61 Grescent St., Brooklyn 8, N. Y. 1-2-5. Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. 6. NORRMAN LABS., ERNST, Williams Bay, Wis. 2. ADV. NORRMAN LABS., ERNST, Williams Day, Wis. C. Day. PG. 434.

NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. 5. ADV. PG. 50, 51.

Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y. 5.

Piezo Products Co., Whitney St., FramIngham, Mass. 6.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. 3. ADV. PG. 218, 219.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. 4. ADV. PG. 278.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y. 1.

Radar Engineers, 110 University St., Seattle 1, Wash. 4. 4.
Radiation Counter Laboratories, Inc., 5122 W. Grove St., Stokie, III. 4.
Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y. 5-6.
Rich-Roth Laboratories, East Hartford, Conn. 6.
Rutherford Electronics Corp., 3707 S. Robertson Blvd., Culver City, Calif. 4-7.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. 2-5-7. ADV. PG. 308, 309.
Sherron Electronic Co., Div. Jericho Ave., Brooklyn 6, N. Y. 7.
Sierra Electronic Corp., San Carlos, Calif. 2.
Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III. 1.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. 4. ADV. PG. 351.
SPERRY GYROSCOPE CO., Div of the Sperry Corp., Great Neck, N. Y. 3-4. ADV. PG. 139, 140.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
T. L. G. ELECTRIC CORP., 31 W 27th St., New York 1, N. Y. 4. ADV. PG. 499.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. 5. ADV. PG. 394, 395.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. 2-4-7. ADV. PG. 311.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. 5.
TELETRONICS LABORATORY, INC., 352 Maple Ave., Westburv. N. Y. 4. ADV. PG. 464, 529. Radiation Counter Laboratories, Inc., 5122 W. Grove St.,

City 1, N. Y. 5.

TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. 4. ADV. PG. 464, 529.

Television Equipment Corp., 238 William St., New York

38, N. Y. 4-5-6-7. Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

Ultrasonic Engineering Co., P. O. Box 46, Maywood,

Ultrasonic Engineering Co., 1. V. Varian St., San Carlos, Til. 6.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. 3. ADV. PG. 213.
VECTRON, INC., 235 High St., Waltham, Mass. 3. ADV. PG. 384.
Walkirt Co., 145 W. Hazel, Inglewood, Calif. 4-7.
Waveline, Inc., North Caldwell, N. J. 3.
Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 3.
Weymouth 89, Mass. 3.

Weymouth 89, Mass. 3.
West Coast Electronics Co., 1640 Commercial St., East Weymouth 89, Mass. 3.
West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif. 4.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. 5. ADV. PG. 109-115.
Wilmotte, Inc., Raymond M., 1469 Church St., N. W., Washington 5, D. C. 4.

### GENERATORS—Gas-Engine Driven

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Buda Co., The, Harvey, III.
Continental Electric Co., Inc., 334 Ferry St., Newark 5, N. J.

N. J.
Electric Machinery Mfg. Co., 1331 N. E. Tyler St.,
Minneapolis 13, Minn.
Electric Products Co., 1725 Clarkstone Rd., Cleveland

Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio.
Gaston Power Tools, Inc., 14829 Loomis St., Harvey, Ill. Georator Corp., 1820 N. Nash St., Arlington, Va. Gothard Mrg. Co., 2110 Clear Lake Ave., Springfield, Ill. Homelite Corp., Port Chester, N. Y.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 327.

327.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
Kato Engineering Co., 1415 First Ave., Mankato, Minn.
Leland Electric Co., 1501 Webster St., Dayton 1, Ohlo.
Midco Mfg. & Distributing Co., 607 8th St., Sheboygan, Wis.

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.
Ready Power Co., The Power Plant Div., 11231 Freud
Ave., Detroit 14, Mich.

iversal Motor Co., 456 Universal Drive, Oshkosh, Wis. incharger Corp., E. 7th & Division Sts., Sioux City, Iowa.

### ENERATORS—Hand Driven

NNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittania St., Meriden, Conn. ADV. PG. 292.
ntinental Electric Co., Inc., 334 Ferry St., Newark 5, N. J.
thard Mfg. Co., 2110 Clear Lake Ave., Springfield, III.
WARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG.

ELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Clicero Ave., Chicago 38, III. ADV. PG. 274. Elch Scientific Co., W. M., 1575 Sedgwick St., Chicago 110, III.

### ENERATORS-Motor

R ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

lis-Chalmers Mfg. Co., 935 South 70th St., Milwaukee

lis-Chaimers Wig. Co., 733 Goddi. Chaimers Wig. Co., Louis, 427 E. Stewart St., Milwaukee 7, Wis. as Coil Winders, Inc., Stamford, Conn. udworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
GUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, M. J. ADV. PG. 153.

N. J. ADV. PG. 153.
gue Railway Equipment Div., Bogue Electric Mfg. Co.,
52 Iowa Ave., Paterson 3, N. J.
turry Electric Co., 1806 Pine St., St. Louis 3, Mo.
ntinental Electric Co., Inc., 334 Ferry St., Newark 5,

N. J. stern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y. to High Frequency Corp., 7020 Hudson Blvd., North

be High Frequency Corp., 7020 Hudson Bivd., North Bergen, N. J.
ctric Machinery Mfg. Co., 1331 N. E. Tyler St.,
Minneapolis 13, Minn.
ctric Products Co., 1725 Clarkstone Rd., Cleveland
12, Ohio.
ctric Specialty Co., 211 South St., Stamford, Conn.
ston Power Tools, Inc., 14829 Loomis St., Harvey, Ill.
(MERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
brator Corp., 1820 N. Nash St., Arlington, Va.
jbe Industries, Inc., 125 Sunrise Place, Dayton 7,
Ohio.

hard Mfg. Co., 2110 Clear Lake Ave., Springfield, III. at Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, III. ther Electric Co., 12690 Elmwood Ave., Cleveland

Atzer-Cabot Div. of National Pneumatic Co., Inc., 130 Amory St., Boston 19, Mass. WARD INDUSTRIES, INC., Divisions: Cyclohm Motor Dorp., Electric Motor Corp., Racine, Wis. ADV. PG.

527.

tustrial Research Products, Inc., 9400 Belmont Ave.,
Franklin Park, III.

it, Inc., 8655 S. Main St., Los Angeles 3, Calif.
Co Engineering Co., 1415 First Ave., Mankato, Minn.
and Electric Co., 1501 Webster St., Dayton 1, Ohio.
ssion Electric Mfg. Co., Inc., 132-134 W. Colorado,
Dacadona 1 Calif

Pasadena 1, Calif. itoresearch Co., 1600 Junction Ave., Racine, Wis. Ineer Electric Co., 3700 E. Olympic Blvd., Los Angeles

23, Calif.

D BANK DIVISION, Bendix Aviation Corp., Red Bank,
N. J. ADV. PG. 125, 126.

Janond Co., Inc., Owosso, Mich.

dil Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.

ir-Kimble Motor Div. of Miehle Printing Press &

Mfg. Co., 200 Bloomfeld Ave., Bloomfeld, N. J.

lich Scientific Co., W. M., 1515 Sedgwick St., Chicago

10, Ill.

\*\*STINCHOUSE ELECTRIC CORP. P. O. Box 5578.

io. III. iSTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. pcharger Corp., E. 7th & Division Sts., Sioux City,

### KNERATORS—Picture Signal

NERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23. Lkok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

kson Electrical Instrument Co., 16 S. Paterson Blvd., Dayton 1, Ohio.
Inarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.

Jarooklyn 8, N. Y. LARAD ELECTRONICS CORP., 100 Metropolitan Ave., EBrooklyn 11, N. Y. ADV. PG. 218, 219. 1010 CORP. OF AMERICA, Engineering Products Dept., acamden, N. J. ADV. PG. 295, Inside Back & Back

Dovers.
Inpson Electric Co., Div., American Gage & Machine
Do., 5218 W. Kinzie St., Chicago 44, III.
Indard Electronics Corp., 285 Emmet St., Newark,

N. J. LECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311. L-INSTRUMENT CO., 50 Paterson Ave., East Ruther-ord, N. J. ADV. PG. 525. AD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

## GENERATORS—Square Wave

Audio Products Corp., 2265 Westwood Blvd., Los Angeles Addit Products Corp., 225 Hossians Calif.

84, Calif.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. F. 26 Findland.

Continuation Calif. Calif. Calif. Calif. Calif. Calif. Calif. Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontarlo.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burdank, Calif.
DuMont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Cleveland 8, Ohio.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.

ADV. PG. 324, 325.

KAY ELECTRIC CO., 25 Maple Ave., The Brook, ADV. PG. 324, 325.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 41.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New
York 4, N. Y. ADV. PG. 355.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

159. Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Radar Engineers, 110 University St., Seattle 1, Wash. Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y.

Reiner Electronics Co., 152 W. 25th St., New York, N. Y. Rutherford Electronics Corp., 3707 S. Robertson Blvd.,

Rutherford Electronics Corp., 3707 S. Robertson Blvd., Culver City, Calif.
Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. ADV. PG. 464, 529.
Television Equipment Corp., 238 William St., New York TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262
Walkirt Co., 145 W. Hazel, Inglewood, Calif.

### GENERATORS—Windriven Generating Equipment

Wincharger Corp., E. 7th & Division Sts., Sioux City,

Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa. Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

## GENERATORS, SIGNAL-a-f

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England. Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly

Hills, Calif.

AMERICAN ELECTRONEERING CO., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 19, N. Y. ADV. PG. 478.

Approved Electronic Instrument Corp., 928 Broadway,

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313. Cinema-Television Ltd., Worsley Bridge Rd., London, S.E.

Cinema-Television Etd., Worstey Bridge Rd., Collidor, St.C. 26, England.
Clough Brengle Co., 6014 N. Broadway, Chicago, III.
COMMUNICATION MEASUREMENTS LAB., INC., 120
Greenwich St., New York 6, N. Y. ADV. PG. 468.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

PG. 121.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 149.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.

Elm Laboratories, 18 South Broadway, Dobbs Ferry,

N. Y.

EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEATH CO., Benton Harbor, Mich. ADV. PG. 492.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,

Jackson Electrical Instrument Co., Dayton 1, Ohio.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 41.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New
York 4, N. Y. ADV. PG. 355.
Measurement Engineering, Ltd., Arnprior, Ontario, Can-

MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Moulic Specialtles Co., 1005-1007 W. Washington St., Bloomington, Ill.

Oak Ridge Products Mfg. Div. of Video Television Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Radio City Products Co., Inc., 152 W. 25th St., New York, N. Y.

york, N. Y. iner Electronics Co., 152 W. 25th St., New York,

York, N. Y.
Reiner Electronics Co., 152 W. 25th St., New York, N. Y.
Reiner Electronics Co., 152 W. 25th St., New York, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Supreme, Inc., Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. ADV. PG. 464, 529.
Television Equipment Corp., 238 William St., New York 38, N. Y.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.

Varo Mfg. Co., Inc., Box 638, Garland, Texas.

## GENERATORS, SIGNAL-f-m

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St.,
Brooklyn 11, N. Y. ADV. PG. 149.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ADV. PG. 488.

Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. GENERAL ELECTRIC Co., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Cleverand S. Onio.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,
Dayton 1, Ohio.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
ADV. PG. 324, 325. ADV. PG. 324, 325.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

MEASUREMENTS CORP., Boonton, N. J. ADV. Pg. 158, 159.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.

New London Instrument Co., Box 189, New London, Conn.

Conn.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Precision Apparatus Co., Inc., 92-27 Horace Harding
Blvd., Elmhurst, N. Y.

Blvd., Elmhurst, N. Y. Radio City Products Co., Inc., 152 W. 25th St., New York, N. Y. York, N. Y. iner Electronics Co., 153 W. 25th St., New York, Reiner E

N. Y.
Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif.
Simpson Electric Co., Div. of American Gage & Machine
Co., 5218 W. Kinzie St., Chicago 44, III.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Supreme, Inc., Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohlo.

ton, Ohlo.

## GENERATORS, SIGNAL-r-f

Airmec Laboratories, Ltd., High Wycombe, Bucking-

Airmec Laboratories, Ltd., High Wycombe, Bucking-hamshire, England.
Approved Electronic Instrument Corp., 928 Broadway,
New York 10, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49.
Clough Brengle Co., 6014 N. Broadway, Chicago, III.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 149.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. Brooklyn 11, N. Y. ADV. PG. 149.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
Federal Mfg. & Engr. Corp., 211 Steuben St., Brooklyn 5, N. Y.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. Loral Electronics Corp., 794 E. 140th St., New York MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.
Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Oak Ridge Products Mfg. Div. of Video Television Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
Philco Corp., Tioga & C Sts., 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, N. Y.
Reiner Electronics Co., 152 W. 25th St., New York, N. Y. York, N. Y.
Reiner Electronics Co., 152 W. 25th St., New York, Reiner Electronics Co., 152 W. 25th St., New Tork, N. Y., Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 308, 309. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Supreme, Inc., Greenwood, Miss. SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558. TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395. TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525. Thordarson-Meissner Mfg. Divs., Mt. Carmel, III. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.

## GENERATORS, SIGNAL-shf

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159 MEASURÉMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.

Metropolitan Electionics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. SPERRY GYROSCOPE Co., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, III. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

Wheeler Laboratories, Inc., Great Neck, N. Y.

Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

### GENERATORS, SIGNAL-Sweeping

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Clarkstan Corp., 11921 SW Pico Blvd., Los Angeles 64, Calif. Calif.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
N. S., Canada. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 1, N. Y. ADV. PG. 149.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio. Cleveland 8, Ohio.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.

ADV. PG. 324, 325.

MANUFACTURERS ENGINEERING & EQUIPMENT CORP., Willow Grove, Pa. ADV. PG. 496.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Philco Corp., Tioga & C Sts., 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.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295. Inside Back & Back Covers.
Reiner Electronics Co., 153 W. 25th St., New York, N. Y.

Covers.

Reiner Electronics Co., 153 W. 25th St., New York, N. Y. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzle St., Chicago 44, Ill.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 351.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Supreme, Inc., Greenwood, Miss.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

Television Equipment Corp., 238 William St., New York 38, N. Y.

Television Equipment Corp., 238 William St., New 1918 38, N. Y. TEL-INSTRUMENT CO., 50 Paterson Ave., East Ruther-ford, N. J. ADV. PG. 525. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. Triplett Electrical Instrument Co., Harmon Road, Bluffton,

## GENERATORS, SIGNAL—Television

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL PRECISION LABORATORY, INC., Pleasantville,

N. Y. ADV. PG. 84. Hickok Electrical Instrument Co., 10514 Dupont Ave.,

Cleveland 8, Ohio.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,

Dayton 1, Ohio.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, Pa.

Oak Ridge Products Mfg. Div. of Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Simpson Electric Co., Div. of American Gage & Machine

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
Standard Electronics Corp., 285 Emmet St., Newark,

N. J.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Supreme, Inc., Greenwood, Miss.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
Telequip Radio Co., 2559 W. 21st St., Chicago 8, III.
TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,
N. J. ADV. PG. 262.

## GENERATORS, SIGNAL-uhf or vhf

AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 477.
Approved Electronic Instrument Corp., 928 Broadway,
New York 10, N. Y.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488

ADV. PG. 503.

Federal Mfg. & Engr. Corp., 211 Steuben St., Brooklyn 5,

Federal Mfg. & Engr. Corp., 211 Steuben St., Brooklyn 5, N. Y.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HEWLETT-PACKARD CO., 395 Page MIII Rd., Palo Alto, Calif. ADV. PG. 29-34.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohlo.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 339.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

159.
Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

New London Instrument Co., P. O. Box 189, New London,

New London Instrument Co., P. U. DOX 107, New London, Conn.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 232, 233. Radiation, Inc., Melbourne, Fla.
Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Supreme Inc., Greenwood, Miss.
TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 525.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.

ADV. PG. 311.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

Wheeler Laboratories, Inc., Great Neck, N. Y.

### GEOPHYSICAL APPARATUS

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.

Calif.
Georator Corp., 1820 N. Nash St., Arlington, Va.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo.
HEILAND RESEARCH CORP., 130 E. Fifth Ave., Denver
9, Colo. ADV. PG. 480.
Nuclear Development Lab., Box 7034, Kansas City, Mo.
Southwestern Industrial Electronics Co., 2831 Post Oak
Rd., P. O. Box 13058, Houston 19, Texas.

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, III. ADV. PG. 120.
Grafo Colloids Corp., Sharon, Pa.
Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, III.

## GRIDS AND GRID SUPPORTS

See Tube Parts

### GRILLES-Metal

GRILLES—Metal

ABALON PRECISION MFG. CORP., 540 Casanova St.,
Bronx 59, N. Y. ADV. PG. 495
Barber-Colman Co., Rockford, III.
Colgate Mfg. Corp., Lindenhurst, N. Y.
Croname, Inc., 3701 Ravenswood Ave., Chicago, III.
Donnelly Electric & Mfg. Co., 3050 Washington St.,
Boston 19, Mass.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
Hayden Mfg. Co., 173 N. Peoria St., Chicago 7, III.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477
Schott Co., Walter L., 3225 Exposition PI., Los Angeles
18, Calif.

### GRILLES-Molded Plastic

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa.

Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chi-Felsenthal & Sons, Inc., G., 4160 th. Grand Alex, G., G., 209 51, III.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, III.

Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

Molded Insulation Co., 335 E. Price St., Philadelphia RICHARDSON CO., THE, 2767 Lake St., Melrose Park, JII. ADV. PG. 66.
Syracuse Ornamental Co., Inc., 581 S. Clinton St., Syra-

### GRILLES-Speaker

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.

Flock Process Co., Inc., 26 Fahey St., Springdale, ayden Mfg. Co., 173 N. Peoria St., Chicago 7, III. hott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif. Hayden Mfg. Co. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Syracuse Ornamental Co., Inc., 581 S. Clinton St., Syracuse, N. Y.

GROMMETS Aerolite Electronics Corp., 507 26th St., Union City, AMERICAN BRASS CO., 25 Broadway, New York 4, N. Y. ADV. PG. 373

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. ATLANTIC INDIA RUBBER WORKS, INC., Dept. EL., 571 W. Polk St., Chicago 7, III. ADV. PG. 274

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Com. Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223. Cortland Industries, Inc., 4545 Cortland St., Chicago 39, III.

DZUS FASTENICR CO., Inc., BOX 785, Babylon, N. Y.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd.,

Clifton, N. J. ADV. PG. 444.

FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St.,

Chicago 10, III. ADV. PG. 498.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rock
ford, III. ADV. PG. 120.

GENERAL CERAMICS & STEATITE CORP., Keasbey,

N. J. ADV. PG. 195, 197.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long

Island City, N. Y. ADV. PG. 477.

Lavelle Rubber Co., 424 N. Wood St., Chicago 22, III.

LOUTHAN MFG. CO., East Liverpool, Ohio ADV. PG.

102. MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts.
Racine, Wis. ADV. PG. 439.
Vayfair Molded Products Corp., 4440 N. Elston Ave., No. Elston Ave., Chicago 30, Ill.

NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258.

Philoc Corp., Tioga & C Sts., Philadelphia 34, Pa.

PIX MFG. CO., INC., 24 Bedford St., Newark N. J.

ADV. PG. 160. Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Scovill Manufacturing Co., Waterbury 20, Conn.
Stevens Products, Inc., 86-88 Main St., East Orange, Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
UNITED CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 100.
U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
United Shoe Machinery Corp., 140 Federal St., Boston

### GROMMETS-Fibre

7. Mass.

Aerolite Electronics Corp., 507 26th St., Union City, N. J. American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn. Conn Baer Co., N. S., 9 Montgomery St., Hillside, N. J. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del, ADV. PG. 222, 223. Cortland Industries, Inc., 4545 Cortland St., Chicago 39, GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.
Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Rogers Corp., Manchester, Conn.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J. Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Wilmington Fibre Specialty Co., P. O. Drawer 1028,
Wilmington 99, Del.

### HAND TOOLS

See Tools-Hand or Mechanical

### HARNESSES-Wire

## See Also Cable Assemblies

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
Aerolite Electronics Corp., 507 26th St., Union City, N. J.
Aeronautical Electronics, Inc., Raleigh-Durham Airport,
P. O. Box 6043, Raleigh, N. C.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
Mass. ADV. PG. 24.
American Electric Cable Co., 181 Appleton St., Holyoke, Mass. American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. Autel Electronics Co., 1946 Farmingdale Rd., Westfield, Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.
BRAND & CO., INC., William, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
BREEZE CORPS., INC., 41 E. Sixth St., Newark 7, N. J. ADV. PG. 259.
Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J. Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
Cable Electric Products Co., Providence, R. I.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
Channel Master Co., Ellenville, N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York S1, N. Y. ADV. PG. 512.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Britannia St., Meriden, Conn. ADV. PG. 292.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y.
ADV. PG. 138. CORNISM WIRE CO., 30 CHIEFOR St., New York, ADV. PG. 138.

CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.

Custom Electronics Corp., 738 Speedwell Ave., Morris DALE PRODUCTS, INC., Box 1, Columbus, Nebr. ADV. PG. 136, 137. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
Eastern Specialty Co., Philadelphia 40, Pa.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Essex Wire Corp., 1601 Wall St. Fort Wayne 6, Ind.
Etraco Mfg. Co., Inc., Woods Church Rd., Flemington, Gale Dorothea Mechanisms., 81-01 Broadway, Elmhurst, GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120. GENERAL ELECTROSONICS, INC., 32 W 22nd St., New York 10, N. Y. ADV. PG. 525. General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.
Holyoke Wire & Cable Co., Holyoke, Mass.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Industrial Electronics Co., Inc., Hanover, Mass.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
JOWIL ELECTRONICS INC., 1945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.
KELLOGG SWITCHBOARD & SUPPLY CO., 6550 S.
Cicero Ave., Chicago 38, III. ADV. PG. 274
LaRose & Associates, W. T., P. 0: Box 55, Tr.y, N. Y.
Loral Electronics Corp., 794 E. 140th St., New York 54,
N. Y. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Magna Electronics Co., 9810 Aliza Ave., 1. 0. Box 333, Inglewood, Calif. Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J. Molded Insulation Co., 335 E. Price St., Philadelphia Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Monarch Radio & Helevision Col., of checket est, Brooklyn 8, N. Y.
MONOWATT DEPT., GENERAL ELECTRIC CO., 66 Bissell St., Providence, R. I. ADV. PG. 22.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
Neomatic Inc., 879 Wellesley Ave., Los Angeles 49,

Electric Mfg. Co., 501 S. Market St., Galion,

Ohio.
Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta.,
Los Angeles 8, Calif.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
Peschel Electronics, Inc., 13 Garden St., New Rochelle,

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 175.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass. Riverside Electrical Mfg. Co., 10221 Michigan Ave., Dearborn, Mich. Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif. Scientific Assembly Co., 65 Hope St., Brooklyn 11, N. Y. Sittler Corp., 18 N. Ada St., Chicago 7, Ill. Standard E:ectronics Corp., 285 Emmet St., Newark, Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
Telrex, Inc., Rutherford & Neptune Highway, Asbury
Park, N. J. Telvision Laboratories, Inc., 5045 W. Lake St., Chicago Telvisión Laboratories, Inc., 5045 W. Lake St., Chicago 44, III.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 458.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
Tri-Dex Co., P. O. Box 643, Lindsay, Calif.
UNITED MFG. & SERVICE CO., 405 S. Sixth St., Mil-waukee 4, Wis. ADV. PG. 417.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PS. 491.
Whittaker Cable Corp., Kansas City 16, Mo.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

HEADPHONES & HEADSETS Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III.

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Cannon Co., C. F., Springwater, N. Y.

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 292.

Dyna Labs., Inc., 132 Lafayette St., New York 13, N. Y. GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245. ADV. PG. 245.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375. Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y. 3, N. Y. ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ROANWELL CURP., 602 Addition of the ADV. PG. 306.
Roffan Co., Everett, Mass.
Sonotone Corp., Saw Mill River Rd., P. 0. Box 200, Elmsford, N. Y.
Soundscriber Corp., 146 Munson St., New Haven 4, Telephonics Corp., Park Ave., Huntington, N. Y. TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. TRIMM, INC., 400 W. Lake St., Libertyville, III. ADV. PG. 180.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y. HEADS—Recording Astatic Corp., The, Conneaut, Ohio. Audak Co., 500 Fifth Ave., New York, N. Y. Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.

Calif.
Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
Burbank, Calif. ADV. PG. 386.
Cook Laboratories, R-2, Stamford, Conn.
Engineering Research Associates, Inc., 1902 W. Minnehaha
Ave., St. Paul, Minn.
Fairchild Recording Equipment Corp., 154th St. & 7th
Ave., Whitestone, N. Y.
Grayburne Corp., 103 Lafayette St., New York 13,
N. Y.

N. Y.
Pentron Corp., 221 E. Cullerton St., Chicago 16, III.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
Soundscriber Corp., 146 Munson St., New Haven 4, Conn.
United Pressed Products Co., 741 W. Harrison St., Chicago 7, III.

### **HEADS**—Wire & Tape Recording

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275. Berlant Associates, 4917 W. Jefferson Blvd., Los Angeles 16, Calif. Angeles 16, Calif.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland
14, Ohio. ADV. PG. 312, 313.

CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
Burbank, Calif. ADV. PG. 386.

Calif.

DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y. N. Y.
INDIANA STEEL PRODUCTS CO., Valparaiso, Indiana.
ADV. PG. 78.
Magnecord, Inc., 360 N. Michigan Ave., Chicago 1, Melpar, Inc., 452 Swann Ave., Alexandria, Va. Pentron Corp., 221 E. Cullerton St., Chicago 16, III. PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, III. ADV. PG. 414. Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
United Pressed Products Co., 741 W. Harrison St.,
Chicago 7, III.

## HEARING AID TUBES See Tubes-Hearing Aid

### HEARING AIDS

Aurex Corp., 1117 N. Franklin St., Chicago 10, III. Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
Beltone Hearing Aid Co., Beltone Bidg., 1450 W.
19th St., Chicago 8, III.
Hofmann Corp., C. L., 643 Liberty Ave., Pittsburgh 22, Pa. JERSEY CITY TECHNICAL LABORATORY, 880 Bergen Ave., Jersey City 6, N. J. ADV. PG. 424.

K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. N. Y. Laurehk 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, III.

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, Radioear Building, Pittsburgh 16, Pa.

Paravox, Inc., 2056 East 4th St., Cleveland 15, Ohio. Rochester Acoustical Laboratories, Inc., Rochester, Minn. Sonotone Corp., P. O. Box 200, Saw Mill River Road, Elmsford, N. Y.

TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 350. TRIMM INC., 400 W. Lake St., Libertyville, III. ADV.

# HEATING, ELECTRONIC—Accessories and Associated Equipment

Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 39, Calif.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.
BOWSER TECHNICAL REFRIGERATION DIV., Bowser, Inc., Terryville, Conn. ADV. PG. 93, 94.
Dolinko & Wilkens, Inc., 89 Adams St., Hoboken, N. J. Electronic Processes Corp., 328 N. Market St., San Jose 18. Calif. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. High Frequency Heating Co., 143 Glen Park Ave., Gary, Ind.
INDUCTION HEATING CORP., 181 Wythe Ave., Brooklyn
11, N. Y. ADV. PG. 467.
Lepel High Frequency Labs., Inc., 55th St. & 37th Ave.,
Woodside 77, N. Y.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Marchester, N. H. ADV. PG. 284.

METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 180.

Preston-Eidson Electronics Co., 2760 Whittier Blvd., Los Angeles 23, Calif.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers. Covers.

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. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Sta-Warm Electrical Co., Ravenna. Ohio. WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

## HEATING, ELECTRONIC - Dielectric

Airmec Laboratories, Ltd, High Wycombe, Buckingham-Airmec Laboratories, Etu, High Myssisse, Shire, England.
Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 39, Calif.
Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Electronic Processes Corp., 328 N. Market St., San Jose GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Girdler Corp., Thermex Div., 224 E. Broadway, Louisville 1, Ky. High Frequency Heating Co., 143 Glen Park Ave., Gary, Ind.
INDUCTION HEATING CORP., 181 Wythe Ave., Brooklyn
11, N. Y. ADV. PG. 467.
La Rose & Associates, W. T., P. O. Box 55, Troy,
N. Y. N. Y.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y.
Preston-Eidson Electronics Co., 2760 Whittier Blvd.,
Los Angeles 23, Calif.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers. RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 206.

Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Reeve Electronics, Inc., 807 W. Ball.

III.

"S" CORRUGATED QUENCHED GAP CO., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J. ADV. PG. 54, 55.

Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.

Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif. Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.
Spectrum Mfg. Co., P. O. Box 189, New London, Conn.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Sta-Warm Electric Co., Ravenna, Ohio.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

**HEATING, ELECTRONIC—Induction** Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
AllIs-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. ADV. PG. 153.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
High Frequency Heating Co., 143 Glen Park Ave., Gary,
Ind. INDUCTION HEATING CORP., 181 Wythe Ave., Brooklyn 11, N. Y. ADV. PG. 467. Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77. N. Y Lepel High Frequency Labs., Inc., Pour St. & July Rye., Woodside 77, N. Y.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y.

N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.

Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, III.

"S" CORRUGATED QUENCHED GAP CO., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J. ADV. PG. 54, 55.

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.

Sta-Warm Electric Co., Ravenna, Ohio.

Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### HEMOGLOBINOMETERS-Electronic

Farrand Optical Co., Inc., 4401 Bronx Blvd., New York Farrand Optical Co., Inc., 66, N. Y.
Maico Co., Inc., 21 N. Third St., Minneapolis, Minn.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29,

## HOLDERS-Crystal

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. ADV. PG. 212.
CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 435.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irv-ington 11, N. J. ADV. PG. 364. GRAYHILL, 4536 W. Madison St., Chicago 24, III. ADV. GRAYHILL, 4936 W. Maulson St., Ollicago 23, Mr. PG. 510.

HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark 7, N. J. ADV. PG. 77.

Industrial Products Co., Danbury, Conn.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 161.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Molded Insulation Co., 335 E. Price St., Philadelphia Pa.
National Electronic Mfg. Corp., 42-08 Vernon Blvd., Lo
Island City, N. Y.
Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn
N. Y. Philmore Mfg. Co., Inc., 113 University Place, New Yor 3, N. Y. Polytech Devices, Inc., 1180 E. Grand St., Elizabe SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Grance, N. Y. ADV. PG. 139, 140.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. AD

PG. 228, 229.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark N. J. ADV. PG. 399.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. B 93, Camden, N. J. ADV. PG. 472.
Westline Electronics Co., 11660 Olympic Blvd., L Angeles 25, Calif.

### HORNS—Speaker Projector

Altec Lansing Corp., 9356 Santa Monica Blvd., Bever Hills, Calif.

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y. Audiocraft, Inc., 77 S. Fifth St., Brooklyn 11, N. Y. Dilks Co., The, Seymour, Conn.

ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 48 Hawley Products Co., St. Charles, III.

Mullard Overseas Ltd., Century House, Shaftesbury Ave. London, W. C. 2, England.

Racon Electric Co., 52 E. 19th St., New York 3, N. Stephens Mfg. Corp., 8538 Warner Drive, Culver Cit. Calif.

UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave White Plains, N. Y. ADV. PG. 338.

### HOUSINGS—Antenna

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Lor Island City, N. Y. ADV. PG. 477.
Keller Products Co., 41 Union St., Manchester, N. H. Kennedy & Co., D. S., Cohasset, Mass.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 14 N. Y. ADV. PG. 483.

### HOUSINGS—Automobile Radio

Colgate Mfg. Corp., Lindenhurst, N. Y.
Delco Dadio Div., General Motors Corp., Kokomo, Ind.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicag Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicag 51, III.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y INSULINE CORP. OF AMERICA, 36-02 35th Ave., Lon Island City, N. Y. ADV. PG. 477.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16 ADV. PG. 483.

Ames Co., W. R., 150 Hooper St., San Francisco 7

### HOUSINGS-Instrument

Calit.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsed Ave., Brooklyn 14, N. Y. ADV. PG. 422.
BALTIC METAL PRODUCTS CO., 120 Sutton St., Brooklyn, N. Y. ADV. PG. 201.
Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. CHURCHILL CORP., 7 North Ave., Wakefield, Mass. ADV PG. 396.
Colgate Mfg. Corp., Lindenhurst, N. Y.
Corry-Jamestown Mfg. Co., Corry, Pa.
Cutler Metal Products Co., 1025 Line, Camden, N. J.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y. KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 165.
Keller Products Co., 41 Union St., Manchester, Conn. Lindsay Structure, Inc., 5000 W. Dempster St., Skokle, III. Minute Man Products, nc., 430 E. 102nd St., New York,

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Par-Metal Products Corp., 32-62 49th St., Long Island City 3, N. Y.

PREMIER METAL PRODUCTS CO., 3160 Webster Ave.,
Bronx, N. Y. ADV. PG. 506.

Scientific Wood Cabinet Co., 88 Holmes St., Belleville,

WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 483.

### HOUSINGS-Plug-In

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24. DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307.
ELECTRO-SEAL CORP., 946 Lee St., Des Plaines, III.

## 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.
Colgate Mfg. Corp., Lindenhurst, N. Y.
Culer Metal Products Co., 1025 Line St., Camden, N. J.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
Inglewood, Calif. Vibraloc Corporation, 425 Bush St., San Francisco 8.

WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 483.

### HOUSINGS-Speaker

Ace Mfg. Corp., Chalfont, Pa.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey

Hills, Calif.

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y. Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7,

Ohio.
Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Carbonneau Industries, Inc., Grand Rapids, Mich.
Colgate Mfg. Corp., Lindenhurst, N. Y.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago

Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, III.

Cutler Metal Products Co., 1025 Line St., Camden, N. J. ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485. Hawley Products Co., St. Charles, III. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Par-Metal Products Corp., 32-62 49th St., Long Island City 2, N. V.

City 3, N. Y.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
PREMIER METAL PRODUCTS CO., 3160 Webster Ave.,

Rount Record 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.

Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Stromberg-Carlson Co., Rochester 13, N. Y. Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave.,
White Plains, N. Y. ADV. PG. 338.
Utah Radio Products Co., Inc., 1123 E. Franklin St.,

Huntington, Ind.

Vibraloc Corporation, 425 Bush St., San Francisco 8,
Calif.

WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 483.

### IGNITION SYSTEMS—Electronic

BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J.

ADV. PG. 259.

Carol Cable Co., 190 Middle St., Pawtucket, R. I.

Modelectric Products Corp., 1500 Bangs Ave., Asbury
Park, N. J.

Park, N. J.

Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W C. 2, England.

Scintilia Magneto Div., Bendix Aviation Corp., Sidney,

N. Y.

TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Whitaker Cable Corp., Kansas City 16, Mo.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

## IGNITRON

See Tubes

### **ILLUMINATION CONTROLS**

See Controls, Illumination

## IMPREGNATING COMPOUNDS

See Insulating Compounds

### IMPREGNATING MACHINES

See Machines

### INDICATORS—Antenna Position

Avion Instrument Corp., Paramus, N. J.
Engineering Research Associates, Inc.,
haha Ave., St. Paul, Minn.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-

Northeastern Engineering, Inc., Manchester, N. H.
Telrex, Inc., Rutherford & Neptune Highway, Asbury
Park, N. J.

### INDICATORS—Arc Back

Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas. Walkirt Co., 145 W. Hazel, Inglewood, Calif.

### INDICATORS—Broadcast Volume

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

PG. 121.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
Gates Radio Co., Quincy, III.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### INDICATORS—Capacitor Leakage

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49. Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio. ADV. PG. 49.

& Northrup Co., 4970 Stenton Ave., Philadelphia

Electronics, Inc., 13 Garden St., New Rochelle,

### INDICATORS—Density

See Indicators, Specific Gravity

### INDICATORS—Detonation Indicators & Meters

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. ADV. PG. 413.
Photocon Research Products, 421 N. Foothill Blvd.,

Pasadena, Calif.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.

### INDICATORS—Dew Point

American Instrument Co., 8030 Georgia Ave., Silver

American Instrument Spring, Md.
Spring, Md.
Foxboro Co., The Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Illinois Testing Labs., Inc., 420 N. La Salle St., Chicago 10, III.

W. M., 1515 Sedgwick St., Chicago 10, III. Chicago 10, III.

elch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

### INDICATORS—Dielectric Constant

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49.
Central Research Laboratories, Inc., Red Wing, Mich. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.

### INDICATORS—Film Thickness

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln,

Mass. BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 436. Electronic Control Corp., 1573 E. Forest St., Detroit,

Mich.
Gardner Lab., Inc., Henry A., 4723 Elm St., Baltimore

14, Md. H. M. R. Electronics Inc., Grove St., New Canaan, Conn. Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo.
10, Colo.
Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, III.
Standard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y.
Traceriab, Inc., 130 High St., Boston 10, Mass.

## INDICATORS—Fluid Conductivity

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Foxboro Co., The, Foxboro, Mass. Industrial Instruments, Inc., 17 Pollack Ave., Jersey City 5, N. J.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.

Minneapolis-Honeywell Regulator Co., 2737 For the Act. S. Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.

## INDICATORS—Fluid Flow, Electronic

Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Ohio. Bristol Co., The, Waterbury 20, Conn. ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128. Fischer & Porter Co., 476 County Line Road, Hatboro, Pa. Foxboro Co., The, Foxboro, Mass. Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

Minneapolis-Honeywell Regulation Society Constitution S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III. Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

### INDICATORS—Frequency

Airmec Laboratories, Ltd., High Wycombe, Buckingham-

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.

Bidd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. F. 26 England

S. E. 26, England. DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

DAVEN CC., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River. Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. Pfs. 507.

Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.

Short Wave Plastic Forming Co., 2222 State of the Sperry Corp., Burbank, Calif.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Walkirt Co., 145 W. Hazel, Inglewood, Calif.

WESTON ELECTRICAL INSTRUMENTS CORP., 614

Freylinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

### INDICATORS—Hardness

Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, Ill. Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.

### INDICATORS—Humidity, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Foxboro Co., The, Foxboro, Mass.
Friez Instrument Div., Bendix Avlation Corp., Baltimore 4 Md

Friez Instrument Div., more 4, Md.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.
S. Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

## INDICATORS—Illumination

BRADLEY LABS, INC., 82 Meadow St., New Haven 10, Conn. ADV. PG. 254.
Drake Mfg. Co., 1713 Hubbard St., Chicago 22, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

## INDICATORS-Liquid Level, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.
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.
Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.
Fielden Instrument Corp., 2920 N. 4th St., Philadelphia 33, Pa.
Fischer & Porter Co., 476 County Line Road, Hatboro, Pa.
Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
Foxboro Co., The, Foxboro, Mass.

Call.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1
River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Haledy Electronics Co., 57 William St., New York 5,
N. Y.

N. Y.
Industrial Electronics Co., Inc., Hanover, Mass.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,
III.

III.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.
S., Minneapolis, Minn.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Philadelphia 4, Pa.
Thermo Instruments Co., Box 336, Belmont, Calif.
Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.
Vapor Recovery Systems Co., P. O. Box 231, 2820 N.
Alameda, Compton, Calif.

Warrick Co., Charles F., 16251 Hamilton Ave., Detroit 3, Mich. WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frey-linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### INDICATORS—Materials Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass.

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 436.
Dice Co., J. W., Englewood, N. J.

Electric Eye Equipment Co., 16 W. Fairchild St., Dan-

Electronic Control Corp., 1573 E. Forest St., Detroit,

Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
H. M. R. Electronics Inc., Grove St., New Canaan, Conn. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Industrial Electronics Co., Inc., Hanover, Mass.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.
Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, III.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Sterling Instruments Co., 13331 Linwood Ave. Detroit

Sterling Instruments Co., 13331 Linwood Ave., Detroit 6, Mich.

6, Mich.
Tracerlab, Inc., 130 High St., Boston 10, Mass.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

### INDICATORS—Moisture, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Beckman Instruments, Inc., 820 Mission St., South Pasa-dena, Calif. Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Fielden Instrument Corp., 2920 N. 4th St., Philadelphia 33, Pa.

33, Pa. Foxboro Co., The, Foxboro, Mass. Hart Moisture Gauges, Inc., 126 Liberty St., New York 6,

N. Y.
Industrial Electronics Co., Inc., Hanover, Mass.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III.
Tech Laboratories Inc., Bergen & Edsall Blvds., Palisades

Tech Laboratories Alls., Park, N. J. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III. WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuygen Ave., Newark 5, N. J. ADV. PG. 256.

## INDICATORS—Ocean Depth

Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

## INDICATORS—Oxygen

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Baker Co., Inc., 113 Astor St., Newark 5, N. J. Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 204.

### INDICATORS-pH

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Foxboro Co., The, Foxboro, Mass.
La Motte Chemical Products Co., Towson 4, Baltimore, Md.

La Motte Chemical Products Co., 1600-00. Md.

Md.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.

Menio Research Laboratory, Menio Park, Calif.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Ave., Philadelphia 44, Pa. ADV. PG. 304, 305.

Precision Scientific Co., 3737 W. Cortland St., Chicago

Pa. ADV. PG. 304, 305.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III. Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila-

delphia 44, Pa. Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago

## INDICATORS—Photographic Exposure

DeJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 183-185. Federal Instrument Corp., 14-02 Broadway, Long Island City 6, N. Y.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hickok Electrical Instrument Co., 10514 Depont Ave., Cleveland 8, Ohio.

Photocon Research Products, 421 N. Foothill Blvd., Pasa-

dena, Calif.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago
10, III.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. Y. ADV. PG. 256.

### INDICATORS—Positioning

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C. AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

263. Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1,

Avion Instrument Corp., Paramus, N. J.
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teter-boro, N J ADV. PG. 127, 128.
Electronic C ntrol Corp., 1573 E. Forest St., Detroit,

Mich.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
Kinetix Instrument Co., Inc., 902 Broadway, New York 10, N. Y.

Kinetix Instrument Co., Inc., 902 Broadway, New York
10, N. Y.
Ninneapolis-Honeywell Regulator Co., 2753 Fourth Ave.
S., Minneapolis, Minn.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
Sterling Instruments Co., 13331 Linwood Ave., Detroit 6,
Mich.

## INDICATORS—Power Level, Electronic

Bristol Co., The, Waterbury 20, Conn.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,
Calif.

Calif.
Cubic Corp., 2841 Canon St., San Diego 6. Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.
PG. 121.
FLUKE ENGINEERING CO., JOHN, Box 755, Springdale, Conn. ADV. PG. 268.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8. Ohio.

Cleveland 8, Ohio. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,

Calif. ADV. PG. 29-34.
INTERNATIONAL INSTRUMENTS, INC., P. 0. Box 2954,

New Haven 15, Conn. ADV. PG. 194.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20,

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Sterling Instruments Co., 13331 Linwood Ave., Detroit 6, Mich.

VECTRON, INC., 235 High St., Waltham, Mass. ADV.

PG. 384.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

## INDICATORS—Pressure

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Bristol Co., The, Waterbury 20, Conn. Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.

Detroit 3, Mich.
Ontrol Engineering Corp., 863 Washington St., Can-Control Engineering Corp., 863 Washington Sci., Call-ton, Mass.
Dillon & Co., Inc., W. C., 1421 S. Circle Ave., Forest Park, III.

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. ADV. PG. 413.
Fischer & Porter Co., 476 County Line Road, Hatboro, Pa.

Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. Foxboro Co., The, Foxboro, Mass. Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.
Manning, Maxwell & Moore, Inc., Stratford, Conn. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Photocon Research Products, 421 N. Foothill Blvg., Pasadena, Calif.

Sierra Electronic Corp., San Carlos, Calif.

Sterling Instruments Co., 13331 Linwood Ave., Detro 6, Mich.
TECHNITROL ENGINEERING CO., 2751 N. 4th Stable Philadelphia 33, Pa. ADV. PG. 509.
Trans-Sonics, Inc., Bedford Airport, Bedfrod, Mass.
Wallace & Tiernan Products, Inc., Belleville 9, N. J.

INDICATORS—Radiation See Counters, Geiger

### INDICATORS—Pulse Time Riser

Electronic Systems Co., 578 E. 161st St., New York 5

## INDICATORS—Recording Engine

American Instrument Co., 8030 Georgia Ave., Silv Spring, Md. Standard Telephones & Cables Ltd., Connaught Hous Aldwych, London, W. C. 2, England.

### INDICATORS—rf Probe

Andrew Corp., 363 E. 75th St., Chicago 19, III.
CITATION PRODUCTS CO., 233 E. 146th St., No.
York 51, N. Y. ADV. PG. 512.
De Mornay-Bonardi Inc., 322. Burton Ave., Burban
Calif.

Calif.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 Mont cello Ave., Skokie, III.
Javex, 921 State, Garland, Texas.
Precision Apparatus Co., Inc., 92-27 Horace Hardin Blvd., Eimhurst, N. Y.
Special Products Co., Silver Spring, Md.
WESTON FLECTRICAL INSTRUMENTS CORP., 614 Fr. linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### INDICATORS—Shorted Turn

Associated Research, Inc., 3788 W. Belmont, Chicago 18 III.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
FREED TRANSFORMER CO., INC., 1736 Weirfield St. Brooklyn 27, N. Y. ADV. PG. 297.
Hathaway Instrument Co., 1315 S. Clarkson St., Denve 10, Colo.
Kartron, Inc., Drawer 472, Huntington Beach, Calif.
PENNSYLVANIA TESTING LABORATORY, Doylestown
Pa. ADV. PG. 141.

## INDICATORS—Smoke & Combustion, Electronic

Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10 Chio.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3031 Grand Centra
Terminal, New York 17, N. Y.
Combustion Control Corp., 720 Beacon St., Boston 15

Mass.

De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place Chicago 14 III.
Electronic Control Corp., 1573 E. Forest St., Detroit Mich.

Ess Specialty Corp., 96 S. Washington Ave., Bergenfield

N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 Rive
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Industrial Electronics Co., Inc., Hanover, Mass.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphi
44, Pa. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5

Photobell Company, 116 Nassau St., New York 7, N. Y Resdel Engineering, 2309 Riverside Drive, Los Angele

39, Calif.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
Thompson & Associates, John E., 7210 S. Yates Ave.
Chicago 49, III.
Worner Electronic Devices, Rankin, III.

## INDICATORS—Sound Level

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV DAVEN CO., 191 Central Ave., Normal C., PG. 121.

PG. 121.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
CUALLEROSS MFG. CO., 10 Jackson Ave., Collingdale,

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.
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. 256.

### INDICATORS—Specific Gravity

Bristol Co., The, Waterbury 20, Conn.

Fischer & Porter Co., 476 County Line Road, Hatboro,

Pa.
Foxboro Co., The, Foxboro, Mass.
Gaveco Labs., Inc., Sub. of General Aviation Equipment
Co., Inc., 2 East End Ave., New York 21, N. Y.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

44, Pa.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.
S., Minneapolis, Minn.

### INDICATORS—Strain

Anderson, Arthur R., 517 North I St., Tacoma 3,

Wash.
Avion Instrument Corp., Paramus, N. J.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Ellis Associates, Box 77, Pelham 65, N. Y.

Ellis Associates, Box 77, Pelham 65, N. Y. Foxboro, Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Glenco Corp., Metuchen, N. J.
Gulton Mfg: Corp., Metuchen, N. J.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

44, Pa.
Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, III.
Miller Corp., William, 325 N. Halstead Ave., Pasadena 8, Calif.
POLYPHASE INSTRUMENT CO., 705 Haverford Rd.,
Bryn Mawr, Pa. ADV. PG. 519.
Sierra Electronic Corp., San Carlos, Calif.

### INDICATORS—Telemetering

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. Avion Instrument Corp., Paramus, N. J. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio.

Ohio.

BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, N. Hollywood, Calif. ADV. PG. 129.

Bristol Co., The, Waterbury 20, Conn.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver
10, Colo.

10, Colo.

Manning, Maxwell & Moore, Inc., Stratford, Conn.
Northeastern Engineering, Inc., Manchester, N. H.
PANDRAMIC RADIO PRODUCTS, INC., 10 South Second
Ave., Mt. Vernon, N. Y. ADV. PG. 507.
Rosen Engineering Products, Inc., Raymond, 32nd &
Walnut Sts., Philadelphia 4, Pa.
Telemetering Associates, P. O. Box 6, Silver Spring,
Md.

## INDICATORS—Temperature

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10,
Ohio.

Ohio.

Beckman & Whithey, Inc., 913 San Carlos Ave., San Carlos, Calif.

Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

15, Calif.
Dillon & Co., W. C., 1421 S. Circle Ave., Forest Park,

EDISON, INC., THOMAS A., Instrument Div., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 88, 89.
Electronic Control Corp., 1573 E. Forest St., Detroit,

Mich.
Fischer & Porter Co., 476 County Line Road, Hatboro,

Pa.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenettady 5, N. Y. ADV. PG. 1-23.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, III

III. M. R. Electronics Inc., Grove St., New Cannan, Conn.
Illinois Testing Labs:, Inc., 420 N. LaSalle St., Chicago

10, III.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954,
New Haven 15, Conn. ADV. PG. 194.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.
Lewis Engineering Co., 52 Rubber Ave., Naugatuck,
Cong.

Conn.

Manning, Maxwell & Moore, Inc., Stratford, Conn.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.

Minneapolis-Honeywell Regulator Co., 2/53 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
Trans-Sonics, Inc., Bedford Airport, Bedford, Mass. United Electric Controls Co., 85 School St., Watertown 72. Mass.

72, Mass.
VICTORY ENGINEERING CORP., Springfield Rd., Union, WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Wheelco Instruments Div., Barber-Colman Co., Rockford, Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

## INDICATORS—Timing

Aircraft Electronics Associates, Inc., 94 Silas Deane Highway, Rocky Hill, Conn. Airmec Laboratories, Ltd., High Wycombe, Buckingham-

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
AMERICAN CHRONOSCOPE CORP., 316 West First St., Mount Vernon, N. Y. ADV. PG. 523.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bristol Co., The, Waterbury 20, Conn.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 400.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.

N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. ADV. PG. 226, 227.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.
Rutherford Electronics Corp., 3707 S. Robertson Blvd.,

Rutherford Electronics Corp., 3707 S. Robertson Bivd., Culver City, Calif.
STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 494.

TELECHRON DEPT., General Electric Co., Ashland, Mass. ADV. PG. 23.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Zenith Electric Co., 152 W. Walton St., Chicago 10, III.

### INDICATORS-Torque

Avion Instrument Corp., Paramus, N. J.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12,
Ohio. Unio.
Foxboro Co., The, Foxboro, Mass.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.

## INDICATORS—Turbidity

Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

### INDICATORS—Vacuum

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10,

Bristol Co., The, Waterbury 20, Conn.
CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

Distillation Products Div. of Eastman Kodak Co., 755

Distillation Products Div. of Eastman Kodak Co., 755 Ridge Rd., W., Rochester 3, N. Y. Foxboro Co., The, Foxboro, Mass. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Hastings Instrument Co., Inc., Hampton 9, Va. Manning Maxwell & Moore, Inc., Stratford, Conn. 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.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O.,
Philadelphia 20, Pa.
Wallace & Tiernan Products, Inc., Belleville 9, N. J.
Welch Scientific Co., W. M., 1515 Sedgwick St.,
Chicago 10, III.

### INDICATORS-Volume

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.

INTERNATIONAL INSTRUMENTS, INC., P. 0. Box 2954, New Haven 15, Conn. ADV. PG. 194.

New Haven 15, Conn. ADV. PG. 194.

Pa. ADV. PG. 320.

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. 256.

## INDICATORS—Weight

Dillon & Co., Inc., W. C., 1421 S. Circle Ave., Forest Park, III. Park, III. Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Sterling Instruments Co., 13331 Linwood Ave., Detroit 6, Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-

### INDUCTANCES—Metallized Glass

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
Corning Glass Works, Corning, N. Y.
WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG.

### INDUCTORS—Variable Electronic

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola,

N.Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
Cambridge 38, Mass. ADV. PG. 437.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.
LEONARD ELECTRIC PRODUCTS Co., 1562 61st St.,
Brooklyn, N. Y. ADV. PG. 491.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
Muirhead & Co., Ltd., Beckenham, Kent, England.

## INDUCTION HEATING See Heating, Induction

INDUCTORS

See Chokes and Coils, Choke

INFRA-RED DRYING OVENS See Ovens

## INSPECTION EQUIPMENT—Lighting

Fostoria Pressed Steel Corp., Fostoria, Ohio.
Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, III.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### INSTRUMENT PARTS—Precision

AMERICAN BRASS CO., 25 Broadway, New York 4, N. Y. AMVERTIAN DRASS CO., 23 Droadway, New York 4, N. 1.
ADV. PG. 373.
Anderson & Sons, Inc., N. Elm & Notre Dame Sts.,
Westfield, Mass.
Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Associated Production Co., 162 N. Clinton St., Chicago 6,

Autoscrew Co., 216-222 W. 18th St., New York, N. Y. Barnes Development Co., Lansdowne, Pa. Belock Instrument Corp., 13-11 111th St., College Point,

N. Y.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III. ADV. PG. 506.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG.

121.
Eastern Specialty Co., Philadelphia 40, Pa.
Farrand Optical Co., Inc., 4401 Bronx Blvd., New York
66, N. Y.
Felsenthal & Sons Inc., G., 4100 W. Grand Ave., Chicago

Felsenthal & Sons Inc., G., 4100 W. Grand Ave., Unicago 51, III.

Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Gorrell & Gorrell, Haworth, N. J.
Instrument Laboratories, 315 W. Walton Place, Chicago 10, III.

K-V Transformer Corp., 4414 Park Ave., New York 57,

N. Y. McElroy Mfg. Corp., Littleton, Mass. Molded Insulation Co., 335 E. Price St., Philadelphia

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG.

465.
Permo, Inc., 6415 Ravenswood Ave., Chicago 26, III.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J.

Permo, Inc., 6415 Kavenswood Ave., Chicago 26, III.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J.
ADV. PG. 160.
REEVES INSTRUMENT CORP., 215 E. 91st St., New
York, N. Y. ADV. PG. 473.
SANDSTEEL SPRING DIV., Sandvik Steel, Inc., 145
Hudson St., New York 13, N. Y. ADV. PG. 160.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New
York 6, N. Y. ADV. PG. 446.
TELECHRON DEPT., General Electric Co., Ashland, Mass.
ADV. PG. 23.
Vallorbs Jewel Co., Lancaster, Pa.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., CleveIand 3, Ohio. ADV. PG. 348, 349.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16,
N. Y. ADV. PG. 483.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.

### INSTRUMENTS-ELECTRICAL MEASURING

## Ammeters to Wattmeters inclusive

### AMMETERS

See also Microammeters Micro-Microammeters Milliammeters

Assembly Products, Inc., Chagrin Falls 6, Ohio. Associated Research Inc., 3788 W. Belmont, Chicago 18,

Associated Research Inc., 3788 W. Belliott, Olicago 20, III.

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., Los Angeles 15, Calif.

Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio.

Electric Design & Mfg. Corp., Burlington, Iowa.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.

Ind.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J. INTERNATIONAL INSTRUMENTS INC., P. O. Box 2954,

New Haven 15, Conn. ADV. PG. 194.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, 1nd

Oak Ridge Products Mfg. Div. of Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y. Rawson Electrical Instrument Co., 111 Potter St., Cam-

bridge 42, Mass.
Reliance Instrument Co., 3027 W. Van Buren St., Chi-

cago 12, III.
Roller-Smih Corporation, Bethlehem, Pa.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt.

Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 520.
SImpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzle St., Chicago 44, III.
Sterling Mfg. Co., 9205 Detroit Ave., Cleveland 2, Ohio. Sun Electric Corp., 6323 Avondale Ave., Chicago 31, III.
T. L. G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 499.

N. Y. ADV. PG. 499.
Triplett Electrical Instrument Co, Harmon Road, Bluffton,

U. S. Gauge Div., American Machine and Metals, Inc., Sellersville, Pa. Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago

10, III.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

## AMMETERS-r-f

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Burlington Instrument Co., Burlington, Iowa.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Calif.
FLUKE ENGINEERING CO., JOHN, Box 755, Springdale, Conn. ADV. PG. 268.
Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y. Roller-Smith Corporation, Bethlehem, Pa.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon. N. Y.

Vernon, N. Y.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Triplett Electrical Instrument Co., Harmon Road, Bluffton,

Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-

cago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### AUDIOMETERS

Aurex Corp., 1117 N. Franklin St., Chicago 10, III.
Beltone Hearing Aid Co., Beltone Bldg., 1450 W. 19th
St., Chicago 8, III.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,
Indewood Calif

Marico Co., Inc., 21 North Third St., Minneapolis 1, Minn. MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.

### **BRIDGES**—Electrical

Barnes Development Co., Lansdowne, Pa.
Bristol Co., The, Waterbury 20, Conn.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.
K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

44, Pa.
MARCONI INSTRUMENTS LTD., 23 Beaver St., New
York 4, N. Y. ADV. PG. 355.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

Muirhead & Co., Ltd., Beckenham, Kent, England. Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa. SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

SHALLCROSS MFG. CU., 10 Jackson Circ.,
Pa. ADV. PG. 320.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
STITCHT CO., INC., HERMAN H., 27 Park Place, New
York 7, N. Y. ADV. PG. 502.
TECHNOLOGY INSTRUMENT CORP., 531 Main St.,
Acton, Mass. ADV. PG. 394, 395.
Trans-Sonics, Inc., Bedford Airport, Bedford, Mass.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago
10, III.

To, III.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J

### BRIDGES—Impedance

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Bristol Co., The, Waterbury 20, Conn.
Brown Electro-Measurement Corp., 4637 SE Hawthorne
Blvd., Portland 15, Ore.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles, 15.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Conant Labs., 6500 O St., Lincoln 5, Neb.
FREED TRANSFORMER CO., INC., 1736 Weirfeld St., Brooklyn 22, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44 Pa.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

Muirhead & Co., Ltd., Beckenham, Kent, England.

Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.

Radex Corp., 2076 N. Elston Ave., Chicago 14, III.
TECHNOLOGY INSTRUMENT CORP., 531 Main St.,
Acton, Mass. ADV. PG. 394, 395.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### **BRIDGES**—Inductance

Brown Electro-Measurement Corp., 4637 SE Hawthorne

Brown Electro-Measurement Corp., 400/ 3E Hawtholike Blvd., Portland 15, Oregon.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Clough Brengle Co., 6014 N. Broadway, Chicago, Ill. Computing Devices of Canada, Ltd., 338 Queen St.,

Clough Brengle Co., 6014 N. Broadway, Chicago, 111.
Computing Devices of Canada, Ltd., 338 Queen St.,
Ottawa 4, Ontario.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Industrial Transformer Co., Gouldsboro, Pa.
K-V Transformer Corp., 4414 Park Ave., New York 57,
N. Y.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. AD. PG. 355. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

159.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 427.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### BRIDGES-vhf

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
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. 355.

## CALIBRATORS—Sweep

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488. Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

KAY ELECTRIC Co., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325. ADV. PG. 324, 325.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159. Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. Owen Laboratories, 412 Woodward Blvd., Pasadena 10, RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers. Rutherford Electronics Corp., 3707 S. Robertson Blvd., Culver City, Calif.
TELETRONICS LABORATORY, INC., 352 Maple Ave.,
Westbury, N. Y. ADV. PG. 464, 529.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.

### CALIBRATORS-uhf

Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325. LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 339.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311. ADV. PG. 311.
ADV TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.

### COMPARATORS—Automatic Resistance

Avion Instrument Corp., Paramus, N. J.
Clippard Instrument Laboratory, Inc., 7390 Colerain
Ave., Cincinnati 14, Ohio.
COMMUNICATION MEASUREMENTS LAB., INC., 120
Greenwich St., New York 4, N. Y. ADV. PG. 468.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Foxboro Co., The, Foxboro, Mass.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
Pa. ADV. PG. 141.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6,
N. Y.
Weitronic Co., 19500 W. Eight Mile Rd., Detroit 19.

Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,

## COMPARATORS, Circuit Linearity

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

## COMPARATORS—Crystal

Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second
Ave., Mt. Vernon, N. Y. ADV. PG. 507.
Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.

## COMPARATORS—Voltage

Arma Corp., 254 36th St., Brooklyn, N. Y. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
KEPCO LABS., INC., 131-38 Sanford Ave., Flushing 55,
N. Y. ADV. PG. 236, 237.
Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn. t, Minn. cott, Inc., Hermon Hosmer, 385 Putnam Ave., Cam-bridge 39, Mass.

## **GALVANOMETERS**

Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
Cambridge Instrument Co., Inc., 3031 Grand Central
Terminal, New York 17, N. Y.
Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Okla.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles Cole Instrument Co., 1320 S. Grand Ave., Los Ángeles 15, Calif.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.
G-M LABORATORIES, INC., 4336 N. Knox Ave., Chicago III. ADV. PG. 470.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, HELLAND RESEARCH CURP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.

J B T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

44, Pa.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley
Ave., Stamford, Conn. ADV. PG. 180.
Midwestern Geophysical Laboratory, 3400 S. Harvard,
Tulsa, Okla.
Miller Corp., William, 325 N. Halstead St., Pasadena 8,
Calif.

Calif.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29,

Pa.

SANBORN CO., 39 Osborn St., Cambridge 39, Mass.
ADV. PG. 474.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 320.

Simpson Electric Co., Div., American Gage & Machine
Co., 5218 W. Kinzie St., Chicago 44, III.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago
10, III.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### INSTRUMENTS—Panel

Anderson & Sons Inc., N. Elm & Notre Dame Sts., West-field, Mass.

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.

Assembly Products, Inc., Chagrin Falls 6, Ohio.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

BALTIC METAL PRODUCTS CO., 120 Sutton St., Brooklyn, N. Y. ADV. PG. 201.

Bristol Co., The, Waterbury 20, Conn.

Burlington Instrument Co., Burlington, Iowa.

Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

Corry-Jamestown Mfg. Co., Corry, Pa.
Corry-Jamestown Mfg. Co., Corry, Pa.
Cortland Industries, Inc., 4545 Cortland St., Chicago 39,

III.

Electric Design & Mfg. Co., Burlington, Iowa.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Hopp Press, Inc., 460 W. 34th St., New York, N. Y.

INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 194.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Ind.

Oak Ridge Products Mfg. Div. of Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Q. V. S. Inc., 15 South Essex St., Orange, N. J.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, III.

cago 12, III. Sensitive Research Instrument Corp., 9 Elm Ave., Mt.

Vernon, N. Y.
SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 520.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,

Sterling Mfg. Co., 9205 Detroit Ave., Cleveland 2, Triplett Electrical Instrument Co., Harmon Road, Bluff-

WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 483. Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
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. 523.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.
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. ADV. PG. 152.

N. J. ADV. PG. 153.

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 436.

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles,

Calif.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J.
ADV. PG. 474.
Dice Co., J. W., Englewood, N. J.
Edo Corp., College Point, N. Y.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325.
Magnaflux Corp., 5900 Northwest Hwy., Chicago 31,

Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
Photocon Research Products, 421 N. Foothill Blvd., Pasadona Calif

Photocon Research 1 (1986)
dena, Calif.
Piezo Products Co., Whitney St., Framingham, Mass.
Rich-Roth Laboratories, East Hartford, Conn.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.

### MAGNETOMETERS

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Georator Corp., 1820 N. Nash St., Arlington, Va. HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.
H. M. R. Electronics Inc., Grove St., New Canaan, Conp. Conn.
LABORATORY FOR ELECTRONICS, INC., 43 Leon St.,
Boston 15, Mass. ADV. PG. 239.
Magnetics, Inc., Box 230-A, Butler, Pa.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42 Mass. VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-

### MEGOHMMETERS

Associated Research Inc., 3788 W. Belmont, Chicago 18, Cole Instrument Co., 1320 S. Grand Ave., Los Angeles Cole Instrument Co., 1320 S. Grand Rve., 203 Cligates 15, Calif.
COMMUNICATION MEASUREMENTS LAB., INC., 120 Greenwich St., New York 6, N. Y. ADV. PG. 468. Dice Co., J. W., Englewood, N. J. EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind. Ind.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge
39, Mass. ADV. PG. 82, 83.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8. Ohio.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
Hivoit Ltd., 34A Pottery Lane, London W. 11, England.
STITCHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 502.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

# METERS—d'Arsonval See Also Galvanometers

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.
Cambridge Instrument Co., Inc., 3031 Grand Central
Terminal, New York 17, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,
Calif.

Calif.
Electric Design & Mfg. Corp., Burlington, Iowa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8, Ohio.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954,
New Haven 15, Conn. ADV. PG. 194.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St.,
Magnetary N. H. ADV. PG. 284.

Manchester, N. H. ADV. PG. 284.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20,

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
Oak Ridge Products Mfg. Div., Video Televislon, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12. III.

Reliance Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y. Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Sun III. Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila-

delphia 44, Pa. Triplett Electrical Instrument Co., Harmon Rd., Bluffton,

Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-

cago 10, III.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Fre-linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### METERS—Electronic Capacitance

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10, Calif.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

MacLeod & Hanopol Inc., 10 Roland St., Charlestown 29, Mass. 29, Mass.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### METERS—Field Strength

York 10, N. Y.
Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md. Approved Electronic Instrument Corp., 928 Broadway, New 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 61, N. Y. ADV. PG. 503.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Jerrold Electronics Corp., 26th & Dickinson Sts., Phila-Jerrola Electronics of the delphia 46, Pa. JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524. KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325. ADV. PG. 324, 325. Lynmar Engineers Inc., 1432 N. Carlisle St., Philadelphla 21, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
MEASURÉMENTS CORP., Boonton, N. J. ADV. PG. 158, 159. Simpson Electric Co. Div., American Gage & Ma-chine Co., 5218 W. Kinzle St., Chicago 44, 111. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

# METERS—f-m Deviation See Also Monitors.

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. ARK ASSOCIATES, INC., Technology, 1263.

BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

MRCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.

### METERS—Frequency Airmec Laboratories, Ltd., High Wycombe, Buckingham-

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
Automatic Signal Division, Eastern Industries, Inc., 100 Regent St., East Norwalk, Conn.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Bassett, Inc., Rex, 307-311 N. W. First Ave., Fort Lauderdale, Fla.
BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 443.
Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa. Pa.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island
City 1, N. Y.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 481.
Conn, Ltd., C. G., Electronics Div., Elkhart, Ind.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
N. S., Canada.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

Calif.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolls,

Federal Mfg. & Engrg Corp., 211 Steuben St., Brooklyn

5, N. Y.
FREQUENCY STANDARDS, Box 66, Eatontown, N. J.
ADV. PG. 380.
General Communication Co., 530 Commonwealth Ave.,
Boston 15, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 35, Mass. ADV. PG. 82, 83.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., Los Angeles 25, Calif. ADV. PG. 449.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio. Cleveland 8, Ohio. Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calff.

J B T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457.

JOWIL ELECTRONICS, INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. PG. 324, 325. IN LABORATORIES, INC., Bradenton 1, Fla. LAMPKIN ADV. PG. 529. LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada Millen Mfg. Co., James, 150 Exchange St., Malden, Minnesota Electronics Corp., 47 W. Water St., St. 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. 50, 51.
Radiation, Inc., Melbourne, Fla.
Roller-Smith Corp., Bethlehem, Pa.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
T. L. G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 491 N. Y. ADV. PG. 499.
TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. ADV. PG. 464, 529.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. Triplett Electrical Instrument Co., Harmon Rd., Bluffton,

## METERS—Impedance

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 403.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

British Industries Corp., 164 Duane St., New York 13, N. Y.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island
City 1, N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
ADV. PG. 324, 325. LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.

SPERRY GYROSCOPE CO., Div., of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.

TECHNOLOGY INSTRUMENT CORP., 531 Main St.,
Acton, Mass. ADV. PG. 394, 395.

Walkirt Co., 145 W. Hazel, Inglewood, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

linghuysen Ave., Newark 5, N. J. ADV. PG. Weston Laboratories, Weston 93, Mass. Wheeler Laboratories, Inc., Great Neck, N. Y.

## METERS-Microwave

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, FREQUENCY STANDARDS, Box 66, Eatontown, N. J. LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 339.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311. ADV. PG. 311.

Waveline, Inc., North Caldwell, N. J.

Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.

Wheeler Laboratories, Inc., Great Neck, N. Y.

# METERS—Modulation See Also Monitors, Modulation.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34. LAMPKIN LABORATORIES, INC., Bradenton 1, Fla. ADV. PG. 529.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.
SYLVANIA ELECTRIC PRODUCTS INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.

### METERS-Null

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. 44, Pa.

MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.

Manning, Maxwell & Moore, Inc., Stratford, Conn.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.

Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y. N. Y.
Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio. Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

Airmec Laboratories, Ltd., High Wycombe, Buckingham-

### METERS-Output

Airmec Laboratories, Lett., High Ave., Upper Shire, England.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles DAVEN CO., 191 Central Av., Newark 4, N. J. ADV. PG. 121.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. PG. 121.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.

Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Manning, Maxwell & Moore, Inc., Stratford, Conn. Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, III. ADV. PG. 358.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio. ton, Ohio.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

## METERS—Panel

Anderson & Sons, Inc., N. Elm & Notre Dame St., West-field, Mass.

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.

Assembly Products, Inc., Chagrin Falls 6, Ohio.

Beede Electrical Instrument Co., Inc., Penacook, N. H.

Burlington Instrument Co., Burlington, Iowa.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15. Calif Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
DEJUR-AMSCO CORP., Northern Blvd., at 45th St.,
Long Island City 1, N. Y. ADV. PG. 183-185.
Electric Design & Mfg. Corp., Burlington, Iowa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8, Ohio.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St.,
Manchester N. H. ADV. PG. 284.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20,
Ind. Meters, Inc., 5353 N. Keystone Ave., Indianapolical Ind.

Ind.

Oak Ridge Products Mfg. Div., Video Television Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y. PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmburst, 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. cago 12, III. Roller-Smith Corp., Bethlehem, Pa.

Sensitive Research Instrument Corp., 9 Elm Ave., Mt Vernon, N. Y. Simpson Electric Co., Div. of American Gage & Ma chine Co., 5218 W. Kinzie St., Chicago 44, III. Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio Supreme, Inc., Greenwood, Miss. Triplett Electrical Instrument Co., Harmon Rd., Bluffton Ohio. Ohio. Welch Scientific Co., W. M. 1515 Sedgwick St., Chi cago 10, III.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578
Pittsburgh 30, Pa. ADV. PG. 109-115.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Phase Angle ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic N. J. ADV. PG. 403.

Aeronautical Electronics, Inc., Raleigh-Durham Airport P. O. Box 6043, Raleigh, N. C.

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England. Airmec Laboratories, Ltd., High Wycombe, Buckinghamishire, England.
Clarke Instrument Div., National Electrical Maching Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md Cubic Corp., 2941 Canon St., San Diego 6, Calif.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578 Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Free linghuysen Ave., Newark 5, N. J. ADV. PG. 256. METERS—Power Factor

# Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis

Conn. ADV. PG. 268.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Roller-Smith Corp., Bethlehem, Pa.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chil cago 10, III.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578
Pittsburgh 30, Pa. ADV. PG. 109-115.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Fre
linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

FLUKE ENGINEERING CO., JOHN, Box 755, Springdale

METERS-0 BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49 Clough Brengle Co., 6014 N. Broadway, Chicago, III. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J ADV. PG. 488.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39

Calif.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park
N. J. ADV. PG. 262.

### METERS-RF Power

AMERICAN ELECTRONEERING CORP., 5025-29 Wes Jefferson Blvd., Los Angeles 16, Calif. ADV. PG BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleve land 14, Ohio. ADV. PG. 433.
Communications Co., Inc., 300 Greco Ave., Coral Gable. 34. Fla. 34, Fla. Cubic Corp., 2941 Canon St., San Diego 6, Calif. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ADV. PG. 488.
FLUKE ENGINEERING CO., JOHN, Box 755, Springdale Conn. ADV. PG. 268.
General Communication Co., 530 Commonwealth Ave.
Boston 15, Mass.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto

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. 292.
MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.
PRECISION ELECTRONICS, INC., 643 Milwaukee Ave. Chicago 22, Ill. ADV. PG. 358.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### METERS—Standing Wave Ratio

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. BIRD ELECTRONICS CORP., 1800 E. 38th St., Cleve-land 14, Ohio. ADV. PG. 433.

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
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. 260, 505.
\*\*JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 292. tol, Conn. ADV. PG. 292.

MAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
ADV. PG. 324, 325.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 232, Rain Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. Sperry Gyroscope. San Carlos, Calif. Sperry Gyroscope Co., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140. TLLETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. ADV. PG. 464, 529. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

## METERS-Wave

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City, 1, N. Y.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Decimeter, Inc., 1430 Market St., Denver 2, Colorado.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, BENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83. CAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325. AVOIE LABORATORIES, Morganville, N. J. ADV. PG. 339.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 353.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
SPERRY GYROSCOPE CO., Div., of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Veymouth 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. 303.

Sambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.

EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.

Wenlo Research Laboratory, Menlo Park, Calif.

Vuclear Instrument & Chemical Corp., 223 W. Erie St., Chicao 10, III. Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.
Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
ICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
\*\*Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

## MICROAMMETERS

Assembly Products, Inc., Chagrin Falls 6, Ohio.

Beede Electrical Instrument Co., Inc., Penacook, N. H.
Burlington Instrument Co., Burlington, Iowa.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 183-185.
Electric Design & Mfg. Corp., Burlington, Iowa.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

NTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 194.
JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, P3. ADV. PG. 524.

EITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Dak Ridge Products Mfg. Div., Video Television, Inc., Dak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island 1, N. Y. PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119. Philco Corp., Tioga & C Sts., 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 CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
Roller-Smith Corp., Bethlehem, Pa.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
Supreme Inc., Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.

ton, Ohio.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Fre'"ghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### MICROFARAD METERS

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
WESTON ELECTRICAL INSTRUMENTS CORP., 61
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### MICRO-MICROAMMETERS

Beckman Instruments, Inc., 820 Mission St., South Pasa-Beckman Instruments, Inc., 820 MISSIGN 34., SURVINGENA, Calif.
BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 466.
Brujac Electronic Corp., 103 Lafayette St., New York 13, N. Y.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180.
Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y. Schenectady, N. Y.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### MILLIAMMETERS

Assembly Products, Inc., Chagrin Falls 6, Ohio. Associated Research, Inc., 3788 W. Belmont, Chicago Associated Research, Inc., 9768 W. Berniold, Gineago 18, III.

Beede Electrical Instrument Co., Inc., Penacook, N. H.

Bristol Co., The, Waterbury 20, Conn.

Burlington Instrument Co., Burlington, Iowa.

Cambridge Instrument Co., Inc., 3031 Grand Central

Terminal, New York 17, N. Y.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles Long Island City 1, N. Y. ADV. PG. 183-185.
Electric Design & Mfg. Corp., Burlington, Iowa.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Electric Design & Mfg. Corp., Burlington, Iowa.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
Felier Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hickok Electrical Instrument Co., 10514 Dupont Ave. Cleveland 8, Ohio.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 194.
Manning, Maxwell & Moore, Inc., Stratford, Conn. MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind. Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
Oak Ridge Products Mfg. Div., Video Television. Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.

Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, III.
Roller-Smith Corp., Bethlehem, Pa.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt.
Vernon, N. Y.
SHURITE METERS, 35-B Hamilton St., New Haven 8,
Conn. ADV. PG. 520.
Simpson Electric Co. Div., American Gage & Machine
Co., 5218 W. Kinzie St., Chicago 44, III.
Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31,
III.

III.
SUPREME, Inc., Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, N. Y. 19, N. Y. ADV. PG. 552-558.
Triplett Electrical Instrument Co., Harmon Rd., Bluffton,

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

Associated Research Inc., 3788 W. Belmont, Chicago

### OHMMETERS

18, III.
Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Dice Co., J. W., Englewood, N. J.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St.,
Brooklyn 11, N. Y. ADV. PG. 149.
Esterline-Angus Co., Inc., P. O. Box 586, Indianapolis,
Ind. Ind.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
Hivolt Ltd., 34A Pottery Lane, London, W. 11, England.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa. 44, Pa.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.

Oak Ridge Products Mfg. D v., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.

PRECISION ELECTRONICS, 643 Milwaukee Ave., Chicago 22, Ill. ADV. PG. 358.

Radio City Products Co., Inc., 152 W. 25th St., New York, N. Y. York, N. Y.
Roller-Smith Corp., Bethlehem, Pa.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.
SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 520.
Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
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. 502.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31, III. Supreme, Inc., Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
T. L. G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 499.
Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Obto. Ohio. Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

### RATIOMETERS

EDISON, INC., THOMAS A., Instrument Div., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 88, 89.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256. RECORDERS—Dielectric Constant Foxboro Co., The, Foxboro, Mass. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. RECORDERS—Frequency 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. 1-23.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. 44, Pa.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Ave., Philadelphia 44, Pa. ADV. PG. 304, 305.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 278.

SOUND APPARATUS CO., Stirling, N. J. ADV. PG. 518.

### RECORDERS—Potentiometer

Beckman Iinstruments, Inc., 820 Mission St., South Pasadena, Calif. Bristol Co., The, Waterbury 20, Conn. Electronic Associates, Inc., Long Branch, N. J. Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J. Foxboro Co., The, Foxboro, Mass. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, III. Beckman linstruments, Inc., 820 Mission St., South

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia MINNEAPOLIS-HONEYWELL REGULATOR CO., Indus-

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

SOUND APPARATUS CO., Stirling, N. J. ADV. PG. 518.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44 Pa.

delphia 44, Pa. WESTON ELECTRICAL INSTRUMENTS CORP., 614 Fre-linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### RECORDERS—Power Level

Bristol Co., The, Waterbury 20, Conn. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. SOUND APPARATUS CO., Stirling, N. J. ADV. PG. 518.

### **RECORDERS**—Telemetering

AIR ASSOCIATES, INC., Teterboro, N. J., ADV. PG. 263.
Ampex Electric Corp., 934 Charter St., Redwood City, Calif. Calif.
Anelex Corporation, Concord, N. H.
APPLIED SCIENCE OF PRINCETON, P. O. Box 44.
Princeton, N. J. ADV. PG. 528.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New
York 19, N. Y. ADV. PG. 275.
Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Century Geophysical Corp., 1333 N. Utica, Tulsa 3,
Okla. Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia, 44, Pa. 44, Pa.

Manning Maxwell & Moore, Inc., Stratford, Conn.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Philadelphia 4, Pa.

Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.

## STANDARDS—Capacitance

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.

Muirhead & Co., Ltd., Beckenham, Kent, England.

Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y.

### STANDARDS—Frequency

AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 19, N. Y. ADV. PG. 478. BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 283. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 481. De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
General Communication Co., 530 Commonwealth Ave., Brooklyn 27, N. Y. ADV. P.G. 297.
General Communication Co., 530 Commonwealth Ave.,
Boston 15, Mass.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich,
III. ADV. PG. 161.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.
Muirhead & Co., Ltd., Beckenham, Kent, England.
NORRMAN LABORATORIES, ERNST, Williams Bay, NORRMAN LABORATORIES, ERNSI, WIlliams Bay, Wis. ADV. PG. 434.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 278.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 308, 309.

SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y., ADV. PG. 139, 140. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. S. 2, England. Varo Mfg. Co., Inc., Box 638, Garland, Tex. Westline Electronics Co., 11656 Olympic Blvd., Los Angeles 25, Calif.

### STANDARDS—Inductance

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297. GENERAL RADIO CO., 275 Massachusetts Ave., Cam-bridge 39, Mass. ADV. PG. 82, 83. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

### STANDARDS—Resistance

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y. Precision Resistor Co., 334 Badger Ave., Newark 8, N. J. Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa. Sensitive Research Instrument Corporation, 9 Eim Avenue, Mount Vernon, N. Y.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-

### TRACERS—Signal

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
Special Products Co., Silver Spring, Maryland.

Assembly Products, Inc., Chagrin Falls 6, Ohio. Associated Research, Inc., 3788 W. Belmont, Chicago

### VOLTMETERS

Associated Geography 20, Conn.
18, III.
Bristol Co., The, Waterbury 20, Conn.
Burlington Instrument Co., Burlington, Iowa.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.
Electric Design & Mfg., Corp., Burlington, Iowa.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St.,
Brooklyn 11, N. Y. ADV. PG. 149.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J. INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 194.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159. Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20,

Ind.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Oak Ridge Products Mfg. Div. Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd.

Elmhurst, N. Y.

Pursanid Instrument Corp. 620 Marrick Rd. Lymbook. Flmhurst, N. Y. Pramid Instrument Corp., 630 Merrick Rd., Lynbrook,

Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass. Sliance Instrument Co., 3027 W. Van Buren St.,

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, III.
Roller-Smith Corp., Bethlehem, Pa.
Sensitive Research Instrument Corporation, 9 Elm Avenue, Mount Vernon, N. Y.
SHURITE METERS, 35-B Hamilton St., New Haven 6, Conn. ADV. PG. 520.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 332, 333.
Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31, III.
Superior Instrument Co., 227 Fulton St., New York, N. Y.

N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. Pt 350. Triplett Electrical Instrument Co., Harmon Rd., Blu ton, Ohio.

U. S. Gauge Div., American Machine and Metals, In Sellersville, Pa.

Welch Scientific Co., W. M., 1515 Sedgwick St., Ch west scientification of the cago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 557
Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Freinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### **VOLTMETERS—Crystal**

Cole Instrument Co., 1320 S. Grand Ave., Los Angel 15, Calif.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026
Monticello Ave., Skokie, III
GENERAL RADIO CO., 275 Massachusetts Ave., Carbridge 39, Mass. ADV. PG. 82, 83.

### VOLTMETERS—Electronic

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pasaic, N. J. ADV. PG. 403. Airmec Laboratories, Ltd., High Wycombe, Buckingha AMERICAN CHRONOSCOPE CORP., 316 W. First S. Mt. Vernon, N. Y. ADV. PG. 523.

BALLANTINE LABORATORIES, INC., Boonton, N. ADV. PG. 124.

Barber Labs., Alfred W., 32-44 Francis Lewis Blve Flushing, N. Y.

Cambridge Instrument Co., Inc., 3031 Grand Centr Terminal, New York 17, N. Y.

Clippard Instrument Laboratory, Inc., 7390 Colerain Ave Cincinnati 24, Ohio.

Cole Instrument Co., 1320 S. Grand Ave., Los Anget 15, Calif. 15, Calif.

DAVEN CO., 191 Central Ave., Newark 4, N. J. AD ELECTRONIC INSTRUMENT CO., INC., 84 Withers S Brooklyn 11, N. Y. ADV. PG. 149. Electronic Measurements Corp., 280 Lafayette St., Ne Feller Engineering & Mfg. Co., Dept. EBG, 8026

Monticello Ave., Skokie, III.

FLUKE ENGINEERING CO., JOHN, Box 775, Springda FLUKE ENGINEERING CO., JOHN, Box 775, Springda Conn. ADV. PG. 268.
FREED TRANSFORMER CO., INC., 1736 Weirfield S Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 Riv. Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cabridge 39, Mass. ADV. PG. 82, 83.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Al Calif. ADV. PG. 29-34.
Hickok Electrical Instrument Co., 10514 Dupont Ave. Cleveland 8, Ohio.
Instrument Electronics Corp., 90 Main St., Port Wasington, N. Y.
Jackson Electrical Instrument Co., 16 S. Patterson Blvt. Cleveland 8, Ohio.
Instrument Electronics Corp., 90 Main St., Port Wasington, N. Y.
Jackson Electrical Instrument Co., 16 S. Patterson Blvi Dayton 1, Ohio.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Clev land 15, Ohio. ADV. PG. 44, 45.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. ADV. PG. 516.
Metropolitan Electronics & Instrument Co., 106 Fit Ave., New York 11, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Precision Apparatus Co., Inc., 92-27 Horace Hardingly, Elmhurst, N. Y.
Radio City Products Co., Inc., 152 W. 25th St., Ny York 1, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. ADV. PG. 295, Inside Back & Back Covers.
SANBORN CO., 39 Osborn St., Cambridge 39, Mai ADV. PG. 474.
Sierra Electronic Corp., San Carlos, Calif.
Simpson Electric Co., Div. of American Gage & Maching. Co., 5218 W. Kinzie St., Chicago 44, III.
Southwestern Industrial Electronics Co., 2831 Post Ond., P. O. Box 13058, Houston 19, Texas.
Telectro Industries Corp., 35-18 37th St., Long Islas City 1, N. Y.
Triplett Electrical Instrument Co., Harmon Rd., Blufftc

Beverly Hills, Calif.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Freinghuysen Ave., Newark 5, N. J. ADV. PG. 256. VOLT-OHM-MILLIAMMETERS AMERICAN CHRONOSCOPE CORP., 316 W. First St., M. Vernon, N. Y. ADV. PG. 523.
Cole Instrument Co., 1320 S. Grand Ave., Los Angel 15, Calif.
Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mas ELECTRONIC INSTRUMENT CO., INC., 84 Withers S Brooklyn 11, N. Y. ADV. PG. 149.
Electronic Measurements Corp., 280 Lafayette St., Ne York 12, N. Y.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 Monticello Ave., Skokie, III.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
Hickok Electrical Instrument Co., 10514 Dupont Ave Cleveland 8, Ohio. 15. Calif. Cleveland 8, Ohio.

City 1, N. Y.

Triplett Electrical Instrument Co., Harmon Rd., Blufftc Ohio.

Western-Electro-Acoustic Labs., 204 S. Beverly Driv

Instrument Laboratories, 315 W. Walton Place, Chicago 10, III. WTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 194. Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio. Neters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, III.

Jak Ridge Products Mfg. Div., Video Television, Inc., 1 37-01 Vernon Blvd., Long Island City 1, N. Y.

Philce Corp., Tioga & C Sts., Philadelphia 34, Pa.

Precision Apparatus Co., Inc., 92-27 Horace Harding 18 Md., Elmburst, N. Y.

PRECISION ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 22, III. ADV. PG. 358.

Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y-Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y-RADIO CÓRP. 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, III. Superior Instrument Co., 227 Fulton St., New York, N. Y. Superme, Inc., Greenwood, Miss. SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio. Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
VONKERS INDUSTRIES, INC., 28 School St., Yonkers. N. Y. ADV. PG. 482.

### WATTMETERS

NOTE: e indicates electronic BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 433.

Dubic Corp., 2841 Canon St., San Diego 6, Calif. (e) 
Esterline-Angus Co., Inc., P. 0. Box 596, Indianapolis, Indianapolis FLUKE ENGINEERING CO., John, Box 755, Springdale, Con. ADV. PG. 268.

Con. ADV. PG. 268.

Con. ADV. PG. 268.

Con. ADV. PG. 268.

Con. ADV. PG. 279.

Rd. Schenectady 5, N. Y. ADV. PS. 1-23.

IONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 292.

CEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

LANDIS & GYR, INC., 45 W. 45th St., New York 36, N. Y. ADV. PG. 315.

Radiation, Inc., Melbourne, Fla.

Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.

Revision Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, III.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III. (e)
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Triplett Electrical Instrument Co., Harmon Road, Bluffton, Dbio

Ohio. Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-

cago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### INSTRUMENTS—Electronic Musical

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461. ATOMIC INSTRUMENT 80., Dridge 39, Mass. ADV. PG. 461.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,
Inglewood, Calif.
Metropolitan Electronics & Instrument Co., 106 Fifth
Ave. New York 11, N. Y. Ave., New York 11, N. Y.

Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.

## INSTRUMENTS—Graphic Recording

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.

Barnes Development Co., Lansdowne, Pa. 38, Mass.
Barnes Development Co., Lansdowne, Pa.
Bludworth Marine Div., National-Simplex-Bludworth, Inc.,
92 Gold St., New York 38, N. Y.
Bristol Co., The, Waterbury 20, Conn.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Consolidated Engineering Corp., 300 N. Sierra Madre
Villa, Pasadena 8, Calif.
Cutler Metal Products Co., 1025 Line St., Camden,
N. J. EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.

Foxboro Co., The Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Gorrell & Gorrell, Haworth, N. J.
Grass Instrument Co., 101 Old Colony Ave., Quincy,

Mass.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.
Hogan Laboratories, Inc., 155 Perry St., New York

Hogan Laboratories, Inc., 155 Perry St., New 1019
14, N. Y.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
ADV. PG. 324, 325.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.
McElroy Mfg. Corp., Littleton, Mass.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.
S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO. INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44,
Pa. ADV. PG. 304, 305.
PRECISE MEASUREMENTS CO., 942 Kings Highway,
Brooklyn 23, N. Y. ADV. PG. 220.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III.
RAHM INSTRUMENTS, INC., 12 W. Broadway, New

Precision Scientific Co., 3/3/ W. Cortianu St., Cincago 47, III.

RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. ADV. PG. 522.

SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44. Pa.

delphia 44, Pa.
WESTINGHOUSE ELECTRIC CORP., P. 0.
Pittsburgh 30, Pa. ADV. PG. 109-115. 0. Box 5578,

INSTRUMENTS—*Panel* INSTRUMENTS—*Ultrasonic* See instruments—Ele<mark>ctrical Measuring</mark>

## INSULATING COMPOUNDS

BIWAX CORP., 3445 Howard St., Skokie, III. ADV. PG. 436.
BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 499.
Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y. N. Y. General Electric Co., Chemical Div., 1 Plastics Ave.,

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.

MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.

Ruberoid Co., 500 Fifth Ave., New York 18, N. Y.

ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32, N. Y. ADV. PG. 517.

### Coil Dopes

Acme Wire Co., New Haven 14, Conn.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

BORTHIG CO., INC., GEORGE C., P. 0. Box 115, East Rutherford, N. J. ADV. PG. 499.

EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.

HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 372. N. Y. ADV. PG. 372. INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 438. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329. PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
Schenectady Varnish Co., Schenectady, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

Acme Wire Co., New Haven 14, Conn.
Biggs Co., Carl H., 11616 W. Pico Blvd., Los Angeles,
Calif. Calif.
BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 499.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware. du Pont de Nemours & Co., Inic., et al., Delaware.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.

INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 438.

PQVINGTON VARNISH & INSULATOR CO., 6 Argyle Inc., Argyle Inc., Argyle Inc., Argyle Inc., Inc., Argyle Inc., I PG. 438. IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63. Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
Schenectady, Varnish Co., Schenectady, N. Y.
Standard-Toch Chemicals, Inc., 2600 Richmond Terrace,
Staten Island 3, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115. Ohio.

## Impregnating Compounds

Acme Wire Co., New Haven 14, Conn.

AIRCRAFT MARINE PRODUCTS, INC., 2100 Paxton St., Harrisburg 10, Pa. ADV. PG. 469.

American Products Mfg. Corp., 8127-33 Oleander St., New Orleans 18, La.

Bakelite Co., A Div. of Union Carbide & Corbon Corp., 30 E. 42nd St., New York 17, N. Y.

Biggs Co., Carl H., 11616 W. Pico Blvd., Los Angeles, Calif. BIWAX CORP., 3445 Howard St., Skokie, III. P. P. P. 436.
BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 499.
DOW CORNING CORP., Midland, Mich. ADV. PG. 382.
Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
FORMAN CO., B. G., 238 William St., New York 38, N. Y. ADV. PG. 505.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass. BIWAX CORP., 3445 Howard St., Skokie, III. ADV. General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y. Halowax Products Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 372.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y. INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 438. PG. 438.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
MICRO-CIRCUITS CO., New Buffalo, Nich. ADV. PG. 462.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
Monsanto Chemical Co., Plastics Div., Springfield, Mass. Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Schenectady Varnish Co., Schenectady, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles Schenectady Varnish Co., Schenectady, N. T.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Standard-Toch Chemicals, Inc., 2600 Richmond Terrace,
Staten Island 3, N. Y.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.
U. S. Stoneware Co., The, Akron 9, Ohio.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32,
N. Y. ADV. PG. 517.

## Insulating Varnish

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.
Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
BORTHIG CO., INC., GEORGE C., P. O. Box 115, East
Rutherford, N. J. ADV. PG. 499.
BROOKLYN PAINT AND VARNISH CO., INC., 50 Jay
St., Brooklyn, N. Y. ADV. PG. 495.
DOW CORNING CORP., Midland, Mich. ADV. PG. 382.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98,
Delaware. Delaware. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda. N. Y. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

George Co., P. D., 5200 N. Second St., St. Louis, Mo. Horn Co., Inc., A. C., 10th & 44th Ave., Long Island City 1, N. Y.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

INSL-X CO., INC., Water St., Ossining, N. Y. ADV.

PG. 438. PG. 438.

IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.

Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J. 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. 177.
Monsanto Chemical Co., Plastics Div., Springfield, 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. N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Standard-Toch Chemicals, Inc., 2600 Richmond Terrace,
Staten Island 3, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### Lacquer

Acme Wire Co., New Haven 14, Conn.
American Products Mfg. Corp., 8127-33 Oleander St.,
New Orleans 18, La.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 438. IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Ferrace, Irvington 11, N. J. ADV. PG. 62, 63.

Maas & Waldstein Cc., 438 Riverside Ave., Newark 4, Marblette Corp., 37-21 30th St., Long Island City, N. Y. MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 462. Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif. Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### Phenolic Molding Compounds

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Borden Co., The, Chemical Div., 350 Madison Ave., New York 17, N. Y.
Durez Plastics & Chemicals, Inc., 1921 Walck Rd., N. Tonawanda, N. Y.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass. Pittsfield, Mass.
Monsanto Chemical Co., Plastics Div., Springfield, Mass.
Rogers Corp., Manchester, Conn.

### Pitch

BIWAX CORP., 3445 Howard St., Skokie, III. ADV. PG. 436.
Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32, N. Y. ADV. PG. 517. 436

### **Protective Sealers**

Acme Wire Co., New Haven 14, Conn.
Biggs Co., Carl H., 11616 W. Pico Blvd., Los Angeles,
Calif. Calif.

BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 499.

BROOKLYN PAINT WARNISH CO., INC., 50 Jay St., Brooklyn, N. Y. ADV. PG. 495.

COX & CO., INC., 50 Broad St., New York 4, N. Y. ADV. PG. 484. COX & CO., INC., 50 Broad St., New York 4, N. Y. ADV. PG. 484.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

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. ADV. PG. 505.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 438. MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 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. 177.
Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
Schenectady Varnish Co., Schenectady, N. Y.
Short Wave Plastic Forming Co., 2921 W. Alameda St.,
Burbank, Calif.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.
ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32,
N. Y. ADV. PG. 517.

### Resins

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Biggs Co., Carl H., 11616 W. Pico Blvd., Los Angeles, Calif.
BIWAX CORP., 3445 Howard St., Skokie, III. ADV. PG. 436.

Dow Chemical Co., Midland, Mich.

DOW CORNING CORP., Midland, Mich. ADV. PG. 382.

Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
FORMAN CO., B. G., 238 William St., New York 38, N. Y. ADV. PG. 505.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144
E. Market St., Akron 16, Ohio.
Halowax Products Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 372.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63. Marblette Corp., 37-21 30th St., Long Island City, N. Y. MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177. Melpar, Inc., 452 Swann Ave., Alexandria, Va. Plaskon Div., Libbey-Owens-Ford Glass Co., 2112-24 Sylvan Ave., Toledo 6, Ohio. Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y. Schenectauy Varnish Co., Schenectady, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32,
N. Y. ADV. PG. 517.

### Silicone Compounds

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove, N. J. ADV. PG. 273. ADV. PG. 273.

DOW CORNING CORP., Midland, Mich. ADV. PG. 382.

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.

INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 438. Melpar, Inc., 452 Swann Ave., Alexandria, Va.
MITCHELL RAND INSULATION CO., INC., 51 Murray
St., New York 7, N. Y. ADV. PG. 177.
Plaskon Div., Libbey-Owens-Ford Glass Co., 2112-24
Slyvan Ave., Toledo 6, Ohio.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif. 18, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0.
Pittsburgh 30, Pa. ADV. PG. 109-115. 0. Box 5578,

### Varnish Cambric Coatings

Acme Wire Co., New Haven 14, Conn.
BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove,
N. J. ADV. PG. 273.

ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J.
ADV. PG. 456.
General Electric Co., Chemical Div., 1 Plastics Aye.,
Pittsfield, Mass.

IRVINGTON VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
Mica Insulator Co., Schenectady 1, N. Y.
Schenectady Varnish Co., Schenectady, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

New Orleans 18, La.
BIWAX CORP., 3445 Howard St., Skokie, III. ADV.

## Waxes American Products Mfg. Corp., 8127-33 Oleander St.,

PG. 436.
Pont de Nemours & Co., Inc., E. I., Wilmington 98, Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y. N. Y.

Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.

Halowax Products Division, Union Carbide & Carbon
Corp., 30 E. 42nd St., New York 17, N. Y.

HARDMAN CO., INC., H. V., 571 Cortlandt St., Belleville, N. J. ADV. PG. 505.

HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20,
N. Y. ADV. PG. 372.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long
Island City 1, N. Y.

Insulatine Co., 1 Broadway, New York, N. Y.

MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.
462. 462.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa. ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32, N. Y. ADV. PG. 517.

### INSULATION MATERIALS Aluminum Oxide

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.

Norton Co., 1 New Bond St., Worcester 6, Mass.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.

Western Gold & Platinum Works, 589 Bryant St., San Francisco. Calif.

### Asbestos

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Def. ADV. PG. 222, 223.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMI-CAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 456.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
Johns-Manville, 22, E. 40th St., New York 16, N. Y.

Keasbey & Mattison, Ambler, Pa.
MITCHELL RAND INSULATION CO., INC., 51 Muy
St., New York 7, N. Y. ADV. PG. 177.
Rogers Corp., Manchester, N. H.
Ruberoid Co., 500 Fifth Ave., New York 18, N. Y.

ISOLANTITE MFG. CORP., Stirling, N. J. ADV. 497.
KIRCHBERGER & CO., INC., M., 1425 37th St., Broom 18, N. Y. ADV. PG. 498.
Martindale Electric Co., Edgewater Branch, Box C. Cleveland 7, Ohio.
Steward Mfg. Co., D. M., 3600 Jerome Ave., Chattand Steward Wig. Co., D. M., 3600 Jerome Ave., Chattand 1, Tenn. Superior Steatlte & Ceramic Corp., 32-49 Gale A Long Island City 1, N. Y. THOR CERAMICS, INC., 225 Belleville Av., Bloomfi N. J. ADV. PG. 510.

## Ceramic Akron Porcelain Co., Akron 14, Ohio. AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., cago 50, III. ADV. PG. 212.
BIRNBACH RADIO CO., INC., 145 Hudson St., New Y. 13, N. Y. ADV. PG. 342.
CENTRALAB DIV. OF GLOBE UNION INC., 914 E. Ke Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
Cook Ceramic Mfg. Co., 501 Prospect St., Trenton N. J. CROWLEY & CO., INC., HENRY L., 1 Central Ave., W. Orange, N. J. ADV. PG. 214. Electrical Refractories Co., 50 Clark St., East Palest Ohio.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Cton, N. J. ADV. PG. 444.
GENERAL CERAMICS & STEATITE CORP., Keask N. J. ADV. PG. 195, 197.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. 497.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brd
lyn 18, N. Y. ADV. PG. 498.
Lapp Insulator Co., Inc., Radio Specialties Div., 31
bert St., Le Roy, N. Y.
LOUTHAN MFG. CO., East Liverpool, Ohio. ADV. Mykroy, Inc., Arlington Heights Airport, Arlington Heigh III.
Star Porcelain So. 61 Muirhead Ave., Trenton 9, N.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Cl.
tanoga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. A.
PG. 228, 229.
Superior Steatite & Ceramic Corp., 32-49 Gale A.
Long Island City 1, N. Y.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfi
N. J. ADV. PG. 510.
Western Gold & Platinum Works, 589 Bryant St.
Francisco, Calif.
Wisconsin Porcelain Co., Sun Prairie, Wis.

BRAND & CO., INC., WILLIAM, 104 Valley St., Wilmantic, Conn. ADV. PG. 166, 167.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEICAL CCRP., 113 E. Centre St., Nutley 10, N. J. Alp. PG. 456.
General Electric Co., Chemical Div., 1 Plastics Alpitsfield, Mass.
Huse Liberty Mica Co., 171 Camden St., Boston, Mail RVINGTON VARNISH & INSULATOR CO., 6 Arg. Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
MITCHELL RAND INSULATION CO., INC., 51 Mur. St., New York 7, N. Y. ADV. PG. 177.
NATVAR CURP., 211 Randolph Ave., Woodbridge, N. ADV. PG. 479.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawan N. Y. N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 55
Pittsburgh 30, Pa. ADV. PG. 109-115.

Baer Co., N. S., 9 Montgomery St., Hillside, N. J. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, D ADV. PG. 222, 223. Franklin Fibre-Lamitex Corp., 411 E. Front St., W mington, Del.
Hawley Products Co., St. Charles, III.
Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
Insulation Manufacturers Corp., 565 W. Washington Blv Insulation Manufacturers Corp., 565 W. Washington Div. Chicago 6, III.
IRVINGTON VARNISH & INSULATOR CO., 6 Arg. Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
MITCHELL RAND INSULATION CO., INC., 51 Muri. St., New York 7, N. Y. ADV. PG. 177.
National Vulcanized Fibre Co., Wilmington, Del. Penn Fibre & Specialty Co., 2020 E. Westmoreland S. Philadelphia 44, Pa.
Rogers Corp., Manchester, Conn.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Par. N. J. Scaulding Fibre Co., Inc., 310 Wheeler St., Tonawand 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.

BIRD CO., RICHARD H., 1 Spruce St., Waltham, Mass. ADV. PG. 244.

BRAND & CO., INC., William, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.

Corning Glass Works, Corning, N. Y.

ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. DC. 456.

Electric Co., Chemical Div., 1 Plastics Ave.,

pittsfield, Mass.

HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St.,
Newark 7, N. J. ADV. PG. 77.
HUSE Liberty. Mica Co., 171 Camden St., Boston, Mass.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J.
ADV. PG. 479.

Pittsburgh Plate Glass Co., 2000 Grant Bldg., Pittsburgh

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229. Thompson Co., H. I., 1733 Cordova St., Los Angeles 7,

Varflex Corp., 308 N. Jay St., Rome, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### Glass Bonded Mica

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave.,

Newport News, Va. BRAND & CO., INC., WILLIAM, 104 Valley St., Willi-mantic, Conn. ADV. PG. 166, 167. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223 ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444. General Electric Co., Chemical Div., 1 Plastics Ave.,

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 130, 131.
Mykroy, Inc., Arlington Heights Airport, Arlington Heights, III.

National Electric Coil Co., Columbus 16, Ohio.

### Glass Fibre

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEM-

ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 456.
Glass Fibers, Inc., 1810 Madison Ave., Joledo 2, Ohio. Hawley Products Co., St. Charles, III.
Huse Liberty Mica Co., 171 Camden St., Boston, Mass. IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
OWENS-CORNING FIBERGLAS CORP., 16 E. 56th St., New York 22, N. Y. ADV. PG. 178, 179.
Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24 Sylvan Ave., Toledo 6, Ohio.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

N. Y. Taylor Fibre Co., Morristown, Pa. Thompson Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.

Varflex Corp., 308 N. Jay St., Rome, N. Y.

### Glass Mica—Woven or Laminated

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.

DOW CORNING CORP., Midland, Mich. ADV. PG. 382.

ELECTRONICS MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

General Electric Co., Chemical Div., 1 Plastics Ave.,

Pittsfield, Mass. Huse Liberty Mica Co., 171 Camden St., Boston, Mass. Insulation Manufacturers Corp., 565 W. Washington Blvd.,

Mica Insulator Co., Schenectady 1, N. Y.
MITCHELL RAND INSULATION CO., INC., 51 Murray
St., New York 7, N. Y. ADV. PG. 177.
National Electric Coil Co., Columbus 16, Ohio.

### Laminates, Woven Glass

Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove,
N. J. ADV. PG. 273.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223. Cortland Industries, Inc., 4545 Cortland St., Chicago DOW CORNING CORP., Midland, Mich. ADV. PG. 382.

EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35. Formica Co., The, 4614 Spring Grove Ave., Cincinnati 32, Ohio.

Electric Co., Chemical Div., 1 Plastics Ave.,

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass. General Tire & Rubber Co., Silentbloc Div., Wabash, Ind. Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio. Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio. Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y. Huse Liberty Mica Co., 171 Camden St., Boston, Mass. 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. 177. National Vulcanized Fibre Co., Wilmington, Del. Panelyte Div., St. Regis Sales Co., 230 Park Ave., New York 17, N. Y.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471. Stevens Products, Inc., 86-88 Main St., East Orange, N. J.

Stevens Products, N. J.
Synthane Corp., Oaks, Pa.
Taylor Fibre Co., Norristown, Pa.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. 109-115.

Asheville-Schoonmaker Mica Co, 900 Jefferson Ave., Newport News, Va.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.
General Electric Co., Chemical Div., 1 Plastics Ave.,

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Huse Liberty Mica Co., 171 Camden St., Boston, Mass. Industrial Mica Corp., 947 61st St., Brooklyn, N. Y Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.

Mica Insulator Co., Schenectady 1, N. Y.
MITCHELL-RAND INSULATION CO., INC., 51 Murray
St., New York 7, N. Y. ADV. PG. 177.

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223.
Cottrell Paper Co., 88 Purchase St., Fall River, Mass.

Cottrell Paper Co., 88 Purchase St., Fall River, Mass. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.

ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 456.

General Electric Co., Chemical Div., 1 Plastics Ave.,

Pittsfield, Mass. Huse Liberty Mica Co., 171 Camden St., Boston, Mass. Insulation Manufacturers Corp., 565 W. Washington Blvd.,

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, III.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
Johns-Manwille, 22 E. 40th St., New York 16, N. Y.
Mica Insulator Co., Schenectady 1, N. Y.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
Mosinee Paper Mills Co., Mosinee, Wis.
Rogers Corp., Manchester, Conn.
Ruberoid Co., 500 Fifth Ave., New York 18, N. Y.
Schweitzer, Inc., Peter J., 405 Lexington Ave., New York 17, N. Y.
Stevens Paner Mills. Inc., Windsor, Conn.

TI, N. T.

Stevens Paper Mills, Inc., Windsor, Conn.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

Willson Camera Co., Inc., 1401 Lawrence Rd., Haver-17, N. evens P

town, Pa.

Wilmington Fibre Specialty Co., P. O. Drawer 1028,
Wilmington 99, Del.

### Plastic

### See Plastic Materials

American Hard Rubber Co., 11 Mercer St., New York American Hard Rubber Co., 11 Wercer St., New York 13, N. Y. BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove, N. J. ADV. PG. 273. Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn. General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass. General Tire & Rubber Co., Silentbloc Div., Wabash, Goodrich Chemical Co., B. F., Rose Bldg., Cleveland 15, Ohio.
Lavelle Rubber Co., 424 N. Wood St., Chicago 22, III.
Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258.
Songe Rubber Products Co., The, 469 Derby Place, Shelton, Conn.
U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
Western Felt Works, 4029 Ogden Ave., Chicago, III.

### Rubber—Conductive

American Hard Rubber Co., 11 Mercer St., New York 13, N. Y. Connecticut Hard Rubber Co., 407 East St., New Haven General Tire & Rubber Co., Silentbloc Div., Wabash, Ind. HARDMAN CO., INC., H. V., 571 Cortlandt St., Belleville, N. J. ADV. PG. 505.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 462.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4,
N. J. ADV. PG. 258.
U. S. Rubber Co., 1230 Avenue of the Americas, New
York 20, N. Y.

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV.

### Steatite

BIRNBACH RADIO CO., INC., 145 Hudson St., New York N. J.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West
Orange, N. J. ADV. PG. 214.
GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. 497.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn
18, N. Y. ADV. PG. 498.
Lapp Insulator Co., Inc., Radio Specialties Div., 31 Gilbert St., Le Roy, N. Y.
LOUTHAN MFG. CO., East Liverpool, Ohio. ADV. PG. 102.
Maryland Lava Co., Bel Air, Md.
Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chatta-Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chatta-nooga 1, Tenn. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.
Superior Steatite & Ceramic Corp., 32-49 Gale Ave.,
Long Island City 1, N. Y. Long Island City 1, N. Y.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield,
N. J. ADV. PG. 510.
Wisconsin Porcelain Co., Sun Prairie, Wis.

### INSULATION PARTS Bead Insulation Parts

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95. CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave Milwaukee 1, Wis. ADV. PG. 71-74. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.
Corning Glass Works, Corning, N. Y. Corning Glass Works, Corning, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St.,

Newark 7, N. J. ADV. PG. 77.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG.

497.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.
Laconia Corp., 37 S. 6th St., Newark 7, N. J.
Martindale Electric Co., Edgewater Branch, Box 617,
Classical 7, Obje.

Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
Maryland Lava Co., Bel Air, Md.
Mykroy, Inc., Arlington Heights Airport, Arlington Heights, III.
Sealtron Co., 9701 Reading Road, Cincinnati 15, Ohio.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.
Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 499.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG. 486.

PG. 486. Wisconsin Procelain Co., Sun Prairie, Wis.

### Capacitor Boxes

ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. 497. Moore Co., Howard J., 266 William St., New York, N. Y. Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.

## Capacitor Films

Industrial Mica Corp., 947 61st St., Brooklyn, N. Y. Mica Fabricating Co., 53 Central Ave., Rochelle Park,

Mica Insulator Co., Schenectady 1, N. Y.
Mica Insulator Co., Schenectady 1, N. Y.
Mica Insulator PRODUCTS, INC., 703 McCarter Highway,
Newark 5, N. J. ADV. PG. 526.
U. S. GASKET Co., Fluorocarbon Products Div., P. 0.
Box 93, Camden, N. J. ADV. PG. 472.

### **Ceramic Insulation Parts**

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
CENTRALAB DIV. OF GLOBE UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
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. 214.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. 497. 497.
KIRCHBERGER & CO., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.
Laconia Corp., 37 S. 6th St., Newark 7, N. J.
Lapp Insulator Co., Inc., Radio Specialties Div., 31
Gilbert St., Le Roy, N. Y.
LOUTHAN MFG. CO., East Liverpool, Ohio. ADV. PG. 102. 102.

Maryland Lava Co., Bel Air, Md.

Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.

Mykroy Inc., Arlington Heights Airport, Arlington Heights, Ill.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

Sealtron Co., 9701 Reading Road, Cincinnati 15, Ohio. Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J. Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229. PG. 228, 229.
Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Superior Steatite & Ceramic Copp., 2010.
Long Island City 1, N. Y.
SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 499.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.
Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif. Francisco, Calif. Wisconsin Porcelain Co., Sun Prairie, Wis.

## Insulating Cord

MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 409.

**Insulating Sleeves** AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV. PG. 366.

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantle, Conn. ADV. PG. 166, 167.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 261.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222 223 ADV. PG. 222, 223.

Forman Insulating Screw Corp., 401 Broadway, New York 13, N. Y.

General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.

Industrial Synthetics Corp., 225 North Ave., Garwood, N. J. Insulating Fabricators, Inc., 150 Union Ave., East Ruther-Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, III.

IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.

Laconia Corp., 37 S. 6th St., Newark 7, N. J.

Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.

Maryland Lava Co., Bel Air, Md.

Mica Fabricating Co., 53 Central Ave., Rochelle Park,
N. J. N. J. MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177. Moore Co., Howard J., 266 William St., New York, N. Y.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J.
ADV. PG. 479.
Polymer Corp., The, Reading, Pa.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9,
N. J. ADV. PG. 471.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif. Stevens Products, Inc., 86-88 Main St., East Orange, N. J.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park,
III. ADV. PG. 66.
SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 499.
Synthane Corp., Oaks, Pa.

Thompson Co., H. I., 1733 Cordova St., Los Angeles 7, Calif. 7, Calif. U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472. Varflex Corp., 308 N. Jay St., Rome, N. Y. Wilmington Fibre Specialty Co., P.O. Drawer 1028, Wilmington 99, Del.

### Plastic Insulation Parts

1. Extruded 2. Fabricated 3. Laminated 4. Molded Aerolite Electronics Corp., 507 26th St., Union City, N. J. 2-3.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 497.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. 2-3-4. ADV. PG. 24.

AMERICAN LAVA CORP., Cattanooga 5, Tenn. 1-2. ADV. PG. 95.

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, III. 4. ADV. PG. 326.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. 2-3-4.

Anchor Industrial Co., 533 Canal St., New York 13, N. Y. 1.

Anchor Plastics Co., Inc., 533-541 Canal St., New York 13, N. Y. 1.

Auburn Button Works, Inc., Auburn, N. Y. 4.

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn. 2-3.

Baer Co., N. S., 9 Montgomery St., Hillside, N. J. 2-3.

BIWAX CORP., 3445 Howard St., Skokie, III. 4. ADV. PG. 436. BIWAX CORP., 3445 Howard St., Skokie, III. 4. ADV. PG. 436.

BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. 2. ADV. PG. 402.

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. 1. ADV. PG. 166, 167.

CENTRALAB DIV. 0F GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. 1-4. ADV. PG. 71-74.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 26, III. 3-4. ADV. PG. 234, 235.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. 2-3. ADV. PG. 512.

CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. 2-3. ADV. PG. 261.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. 2-4.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. 2-3-4. ADV. PG. 222, 223. 2-3-4. ADV. PG. 222, 223.
Cortland Industries, Inc., 4545 Cortland St., Chicago 39, III. 2-3.
Crane Packing Co., 1800 Cuyler Ave. Chicago 13, III. Packing Co., 1800 Cuyler Ave., Chicago 13, III. Crane Packing Co., 1000 Coyler No.,
1-2-4.
Dimco-Gray Co., 207 E. Sixth St., Dayton 2, Ohio. 4.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia
44, Pa. 4. ADV. PG. 156.
Electrical Refractories Co., 50 Clark St., East Palestine, Ohio. 1.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. 1-2-3-4. ADV. PG. 444.

Electronic Reasearch & Mfg. Co., 434 Midland Ave., Gar-Electronic Reasearch & Wifg. Co., 434 Wildland Ave., Garfield, N. J. 2.

EMELOID CO., INC., THE, 1239 Central Ave., Hillside, 5, N. J. 2. ADV. PG. 405.

EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. 2-3-4. ADV. PG. 35.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 4.

ADV. PG. 271 ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 4. ADV. PG. 271.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. 2-4.
FORMAN CO., B. G., 238 William St., New York 38, N. Y. 3-4. ADV. PG. 505.
Forman Insulating Screw Corp., 401 Broadway, New York 13, N. Y. 1-2-4.
Formica Co., The, 4614 Spring Grove Ave., Cincinnati 32, Ohio. 2-3-4.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y. 2-3-4.
Franklin Fibre-lamitex Corp., 411 E. Front St., William And City, Insulator Corp., 411 E. Front St., William Franklin Fibre-lamitex Corp., 411 E. Front St., William ADV. City, N.Y. 2-3-4.
Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del. 3-4.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. 2-4. ADV. PG. 507.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield. Mass. General Electric Co., Pittsfield, Mass. GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. 2. ADV. PG. 525. General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III. 1-2-3. Chicago B. Wabash, Ind. Chicago 8, III. 1-2-3.
eneral Tire & Rubber Co., Silentbloc Div., Wabash, Ind. Gits Molding Corp., 4600 W. Huron St., Chicago 14, TII Gries Reproducer Corp., 100 Willow Ave., New York 54,

N. Y. 4.

Hawley Products Co., St. Charles, III. 4.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y. 2-3. Huse Liberty Mica Co., 171 Camden St., Boston, Mass.

Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.

2-4.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. 2-3. ADV. PG. 441.
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.

Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J. 1-2-3.

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 4, 111, 2-3. Chicago 6, Ill. 2-3.
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. 477.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. 1-3. ADV. PG. 62, 63, ISOLANTITE MFG. CORP., Stirling, N. J. 1. ADV. PG. Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. 1-23.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. 1. ADV. PG. 144, 145.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. 1. ADV. PG. 498.
Kulka Electric Mfg. Co., Inc., 30 South St., Mount Vernon, N. Y. 4. Vernon, N. Y. 4. LOUTHAN MFG. CO., East Liverpool, Ohio. 1. ADV. PG. 102. Luzerne Rubber Co., Muirhead Ave., Trenton, N. J. 1-4. Mica Fabricating Co., 53 Central Ave., Rochelle Park N. J. 1-2-3-4. N. J. 1-2-3-4.

Mica Insulator Co., Schenectady 1, N. Y. 2-3.

Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill. 2-3.

MICACRAFT PRODUCTS INC., 703 McCarter Highway, Newark 5, N. J. ADV. PG. 526.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 4. Mass. 4.
MITCHELL-RAND INSULATION CO., INC., 51 Murray
St., New York 7, N. Y. 2. ADV. PG. 177.
Molded Insulation Co., 335 E. Price St., Philadelphia Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 2-4.
Molding Corp. of America, Inc., 58 Weybosset St., Providence, R. I.
Mykroy, Inc., Arlington Heights Airport, Arlington Heights, III. 1-2-4.
National Vulcanized Fibre Co., Wilmington, Del. 2-3.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. 1. ADV. PG. 479.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4.
N. J. 2-4. ADV. PG. 258.
Panelyte Div., St. Regis Sales Co., 230 Park Ave., New York 17, N. Y. 2-3-4.
Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa. 2-3.
Photocircuits Corp., Glen Cove, N. Y. 3.
Polymer Corp., The, Reading, Pa. 1-2-4.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41.
Elm St., Stoneham 80, Mass. 2. ADV. PG. 287.
Quality Components, Inc., St. Marys, Pa. 4.
Remier Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. 4.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, Calif. 4.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. 1-2-3-4. ADV. PG. 471.

RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. 2-3-4. ADV. PG. 66.

ROGAN BROS., 2500 W. Irving Park, Chicago 18, III. 2-4. ADV. PG. 511.

Rogers Corp., Manchester, Conn. 2-3.

Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J. 2-3.

Sillock-Smiller Co. 10 Parker Ave. W. So Orange. Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y. 1-2-3.
Stevens Products Inc., 86-88 Main St., East Orange, N. J. 1-2-3.
N. J. 1-2-3. Stevens Products Inc., 86-88 Main St., East Orange, N. J. 1-2-3. Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn. 1. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. 1. ADV. PG. 228, 229. Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y. 1. Synthane Corp., Oaks, Pa. 2-3. Taylor Fibre Co., Norristown, Pa. 3. THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. 1. ADV. PG. 510. Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, III. 3. III. 3.
D CARR FASTENER CORP., Cambridge, Mass. UNITED UNITED CARR FASTENER CORP., Cambridge, Mass-3-4. ADV. PG. 100.

U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. 1-3-4. ADV. PG. 472.

Varflex Corp., 308 N. Jay St., Rome, N. Y. 1.

Western Felt Works, 4029 Ogden Ave., Chicago, Ill. WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. 3-4. ADV. PG. 109-115.

WHITSO, INC., 2037 Churchill St., Chicago 47, Ill. 4. ADV. PG. 40.

Willison Camera Co., Inc., 1401 Lawrence Road, Havartown, Pa.

Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del. 2-3.

Wisconsin Porcelain Co., Sun Prairie, Wis. 1.

Yates Engineering Services, Box 67, Cranford, N. J. 3.

### Rods

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95. Anchor Industrial Co., 533 Canal St., New York 13, N. Y. N. 1. Anchor Plastics Co., Inc., 533-541 Canal St., New York 13, N. Y. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. CONTINENTAL-DIAMOND TABLE

ADV. PG. 222, 223.

Crane Packing Co., 1800 Cuyler Ave., Chicago 13, III.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd.,

Clifton, N. J. ADV. PG. 444.

Forman Insulating Screw Corp., 401 Broadway, New

York 13, N. Y.

Corp. 411 F. Front St., Wil-

York 13, N. Y.

Franklin Fibre-Lamitex Corp., 411 E. Front St., Wil-

mington, Del. General Electric Co., Chemical Div., 1 Plastics Ave.,

General Electric Co., Chemical Pittsfield, Mass.
Insulating Fabricators of New England Inc., 69 Grove St., Watertown 72, Mass.
Insulating Fabricators, Inc., 150 Union Ave., East

St., Watertown 72, Mass.
Insulating Fabricators, Inc., 150 Union Ave., East
Rutherford, N. J.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG.

497.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn, N. Y. ADV. PG. 498.
Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.
Mica Fabricating Co., 53 Central Ave., Rochelle Park,

N. J.
Mica Insulator Co., Schenectady 1, N. Y.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd.,
Clifton, N. J. ADV. PG. 130, 131.
Mykroy, Inc., Arlington Heights Airport, Arlington
Heights, III.
National Vulcanized Fibre Co., Wilmington, Del.
Panelyte Div., St. Regis Sales Corp., 230 Park Ave.,
New York 17, N. Y.
Penn Fibre & Specialty Co., 2020 E. Westmoreland St.,
Philadelphia 44, Pa.

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
Plax Corp, P. O. Box 1019, Hartford 5, Conn.
Polymer Corp., The, Reading, Pa.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass.
ADV. PG. 377.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66.
Spaulding Fibre Co. Inc., 310 Wheeler St., Tonawanda, N. Y.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.
Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
Synthane Corp., Oaks, Pa.
Taylor Fibre Co., Norristown, Pa.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### Screw Machine Parts

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422. Associated Production Co., 162 N. Clinton St., Chicago 6,

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437. 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. 512.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Calif.
Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
Cortland Industries, Inc., 4545 Cortland St., Chicago

39, III.
Eastern Specialty Co., Philadelphia 40, Pa.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd.,
Clifton, N. J. ADV. PG. 444.
Electronic Research & Mfg. Co., 434 Midland Ave.,

Electronic Research & Mtg. Co., 434 Migiang Ave., Garfield, N. J.
Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
Forman Insulating Screw Corp., 401 Broadway, New York 13, N. Y.
Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
General Laminated Products, Inc., 2857 S. Halstead St. Chicago & Ill

General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.

60MBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 364.

Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 441.

Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, III.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145. Luzerne Rubber Co., Muirhead Ave., Trenton, N. J. MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439. Mica Insulator Co., Schenectady 1, N. Y. National Screw & Mfg. Co., The, Cleveland 4, Ohio. NATIONAL TEL-TRONICS CORP., 35 St. Casimirs Ave., Yonkers, N. Y. ADV. PG. 513. National Vulcanized Fibre Co., Wilmington, Del.

Panelyte Div., St. Regis Sales Corp., 230 Park Ave., New York 17, N. Y. Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa. Polymer Corp., The, Reading, Pa. Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66.
Scovill Manufacturing Co., Waterbury 20, Conn.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Synthane Corp., Oaks, Pa.
Torngren Co., Inc., C. W., 236 Pearl St., Somerville UNITED-CARR FASTENER CORP., Cambridge 42, Mass.

U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
Vitamite Co., 227 W. 64th St., New York 23, N. Y.

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. AMERICAN LAVA CURP., Chattanooga 5, Jenn. ADV. PG. 95.
Anchor Industrial Co., 533 Canal St., New York 13, N. Y.
Anchor Plastics Co., Inc., 533-541 Canal St., New York 13, N. Y.
Baer Co., N. S., 9 Mongomery St., Hillside, N. J.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.
Cortland Industries, Inc., 4545 Cortland St., Chicago 39, III.

39, III.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd.,
Clifton, N. J. ADV. PG. 444.
Franklin Fibre-Lamitex Corp., 411 E. Front St.,

Wilmington, Del.

Wilmington, Del.
General Electric Co., Chemical Div., 1 Plastics Ave.,
Pittsfield, Mass.
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.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.
Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.

NYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 130, 131. Mykroy, Inc., Arlington Heights Airport, Arlington Heights, III.

Clifton, N. J. Auv. 13.

Mykroy, Inc., Arlington Heights Airport, Heights, III.

National Vulcanized Fibre Co., Wilmington, Del.

Panelyte Div., St. Regis Sales Corp., 230 Park Ave., New York 17, N. Y.

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.

Plax Corp., P. O. Box 1019, Hartford 5, Conn.

Polymer Corp., The, Reading, Pa.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.

REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 377.

PLANTAGE OF THE, 2767 Lake St., Melrose Park,

ADV. PG. 377.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park,

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,

Spaulding Fibre Co., Inc., 310 Mississipport of N. Y.

Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.

Synthane Corp., Oaks, Pa.

U. S. GASKET CO., Fluorocarbon Products Div., P. O.

Box 93, Camden, N. J. ADV. PG. 472.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### Stampings & Punchings—Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95. ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422. Associated Production Co., 162 N. Clinton St., Chicago CENTRALAB, DIV. OF GLOBE UNION INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
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. 214. Electrical Refractories Co., 50 Clark St., East Palestine, Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, III.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498. Laconia Corp., 37 S. 6th St., Newark 7, N. J. LOUTHAN MFG. CO., East Liverpool, Ohio. ADV. PG. 102. Mica Fabricating Co., 53 Central Ave., Rochelle Park,

N. J.

NATIONAL TEL-TRONICS CORP., 35 St. Casimirs Ave., Yonkers, N. Y. ADV. PG. 513.

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.

South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.

Star Porcelain Co., 61 Mulrhead Ave., Trenton 9, N. J. Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.

CTIPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

tanooga 1, Tenn. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.
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. 510.
UNITED-CARR FASTENER CORP., Cambridge, Mass.

ADV. PG. 100.

Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

### Stampings & Punchings—Paper—Mica

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va. Auburn Mfg. Co., Pease Ave. & Stack St., Middletown,

Autel Electronics Co., 1946 Farmingdale Rd., Westfield,

N. J.
CITATION PRODUCTS CO., 233 E. 146th St., New
York 51, N. Y. ADV PG. 512.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223. Cortland Industries, Inc., 4545 Cortland St., Chicago 39, III.

9, III. Products Mfg. Co., 1504 W. Carroll Ave., Chl-

Felt Products Mrg. Co., 1504 W. Carroll Ave., Clircago 7, Ill.

Ford Radio & Mica Corp., 436 63rd St., Brooklyn, N. Y.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.

General Laminated Products, Inc., 2857 S. Haistead St., Chicago 8, III.
Huse Liberty Mica Co., 171 Camden St., Boston, Mass. Industrial Mica Corp., 947 61st St., Brooklyn, N. Y. Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, III.
Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 4, III.

Chicago 6, Ill.

JOHNSON & HOFFMAN MFG. CO., 55-65 Ongley St.,
Rockville Centre, N. Y. ADV. PG. 344, 345.

Mica Fabricating Co., 53 Central Ave., Rochelle Park,
N. J.

N. J.
Mica Insulator Co., Schenectady 1, N. Y.
Moore Co., Howard J., 266 William St., New York, N. Y.
National Electric Coil Co., Columbus 16, Ohio.
Penn Fibre & Specialty Co., 2020 E. Westmoreland St.,
Philadelphia 44, Pa.
South River Metal Products Co., Inc., 377-379 Turnpike,
Cauth Diver N.

South River, N. J. Stevens Products, Inc., 86-88 Main St., East Orange,

Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wil-

mington 99, Del. Wisconsin Porcelain Co., Sun Prairie, Wis. Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee

# Stampings & Punchings—Plastics or Laminates

Aerolite Electronics Corp., 507 26th St., Union City, Arronne Electronics Colp., 507 25th St., Onlor City, N. J.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
Auburn Mfg. Co., Pease Ave. & Stack St., Middletown,

Auburn Mig. Co., 1986
Conn.

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24,
III. ADV. PG. 234, 235.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
Calif. 15, Calif.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223. Cortland Industries, Inc., 4545 Cortland St., Chicago

39, III.
Crane Packing Co., 1800 Cuyler Ave., Chicago 13, III.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd.,
Clifton, N. J. ADV. PG. 444.
EMELOID CO., INC., THE, 1239 Central Ave., HJllside
5, N. J. ADV. PG. 405.
Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago
7, III.
Formica Co., The, 4614 Spring Grove Ave., Cincinnati 32,

Franklin Fibre-Lamitex Corp., 411 E. Front St., Wil-mington, Del.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525. General Laminated Products, Inc., 2857 S. Halstead St.,

General Laminated Flouders, No., 200.

Chicago 8, III.

INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 441.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6. III

Chicago 6, III
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
Keystone Electronics Corp., 423 Broome St., New York
12, N. Y.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Magnetic Metals Co., Hayes Ave., 21st St., Camden, N. J.

MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.

Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.

Mica Insulator Co., Schenectady 1, N. Y.

Panelyte Div., St Regis Sales Corp., 230 Park Ave., New York 17, N. Y.

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.

Photocircuits Corp., Glen Cove, N. Y.

Polymer Corp., The, Reading, Pa.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.

RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66.

Rogers Corp., Manchester, Conn.

Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.

South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Standard Metals Corp., 262 Broad St., North Attleboro,

Standard Metals Corp., 262 Broad St., North Attleboro, STAVER CO., INC., Box 431, Bay Shore, N. Y. ADV.

Stevens Products, Inc., 86-88 Main St., East Orange, N. J. Synthane Corp., Oaks, Pa.

Tricraft Products Co., 1535 N. Ashland Ave., Chicago

VAILED CARR FASTENER CORP., Cambridge, Mass. ADV. PG. 100.

Wade Electric Products Co., 400 Jacob St., Sturgis,

Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.
Willson Camera Co., Inc., 1401 Lawrence Road, Havertown, Pa.

### Tapes, Insulating

Accurate Mfg. Co., 44 Hepworth Place, Garfield, N. J. BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove, N. J. ADV. PG. 273.
BRAND & Co., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
Connecticut Hard Rubber Co., 407 East St., New Haven

9, Conn. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223. Crane Packing Co., 1800 Cuyler Ave., Chicago 13, III. du Pont de nemours & Co., Inc., E. I. Wilmington 98,

du Pont de nemours & Co., Inc., E. I. Wilmington 96, Delaware.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 456.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.

Chicago 8, III.
Industrial Synthetic Corp., 225 North Ave., Garwood,

Industrial Tape Corp., U. S. Highway 1, New Brunswick,

N. J.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
Johns-Manville, 22 E. 40th St., New York 16, N. Y.
Mica Fabricating Co., 53 Central Ave., Rochelle Park,
N. J.

N. J.
Mica Insulator Co., Schenectady 1, N. Y.
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. 177.
Moore Co., Howard J., 266 William St., New York,
N. Y.
National Electric Cell Co., Columbus 24, Obic

N. Y.
National Electric Coil Co., Columbus 16, Ohio.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J.
ADV. PG. 479.
New Jersey Wood Finishing Co., Amboy Ave., Woodbridge, N. J.
Polymer Corp., The, Reading, Pa.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
BOX 93, Camden, N. J. ADV. PG. 472.
U. S. Rubber Co., 1230 Avenue of the Americas, New
York 20, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

# INSULATORS—Antenna Insulators & Spring Assemblies

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clif-

ton, N. J. ADV. PG. 444.
Flader, Inc., Frederic, 1330 Laskey Rd., Toledo 12, Ohio.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.
General Laminated Products, Inc., 2857 S. Halstead St.,
Chicago 8, III.

Chicago 8, III.

Chicago 8, III.
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. 477
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. 497.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., BrookIVA. N. Y. ADV. PG. 403, 403, 403

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-

Lapp Insulator Co., Inc., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y.
Locke Dept., of General Electric Co., P. O. Box 57, Baltimore 3, Md.

timore 3, Md.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Mica Insulator Co., Schenectady 1, N. Y.
Millen Mfg. Co., James, 150 Exchange St., Malden,

Millen Mfg. Co., James, 150 Exchange St., Maruen, Mass.
Mykroy, Inc., Arlington Heights Airport, Arlington Heights, III.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
Premax Products Div., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y
Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.

South River Metal Products Co., Inc., 377-379 Jurn-pike, South River, N. J. Steward Mfg. Co., D. M., 3600 Jerrome Ave Chatta-nooga 1, Tenn. SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 499. TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

PG. 448.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.
U. S. GASKET CO., Fluorcarbon Products Div., P. 0. Box 93, Camden, N. J. ADV. PG. 472.

### **INSULATORS—Can Liner**

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, III. ADV. PG. 326. General Laminated Products, Inc., 2857 S. Halstead St.,

Chicago 8, III.

Moore Co., Howard J., 266 William St., New York, N. Y.
Rogers Corporation, Manchester, Conn.

U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472.

## INSULATORS—Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
York 13, N. Y. ADV. PG. 342.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E.
Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
Colonial Insulator Co., 907 Grant St., Akron 11, Ohio.
Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1,
N. J.

Cook Ceramic Mtg. Co., 501 Prospect St., Irenton 1, N. J.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.
Electrical Refractories Co., 50 Clark St., East Palestine,

Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.

Illinois Electric Porcelain Co., Macomb, III.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

ISOLANTITE MFG. CO., Stirling, N. J. ADV. PG. 497.

JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.

KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.

Laconia Corp., 37 S. 6th St., Newark 7, N. J.

Lapp Insulator Co., Inc., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y.

Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.

LOUTHAN MFG. CO., East Liverpool, Ohio. ADV. PG. 102.

102.
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.
Mykroy, Inc., Arlington Heights Airport, Arlington
Heights, III.
National Ceramic Co., 400 Southard St., Trenton 2,
N. J.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. A:DV. PG. 328, 329. Sealtron Co., 9701 Reading Road, Cincinnati 15, Ohio.

Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.
PG. 228, 229.
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. 510.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wisconsin Porcelain Co., Sun Prairie, Wis.

### INSULATORS—Feeder Spreader

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-Ave., Milwaukee 1, Wis. ADV. PG. 71-74. ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

Forman Insulating Screw Corp., 401 Broadway, New York 13, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.

ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-Lapp Insulator Co., Inc., Radio Specialties Div., 31
Gilbert St., LeRoy, N. Y.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y. National Ceramic Co., 400 Southard St., Trenton 2,

N. J.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 328, 329.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield,

N. J. ADV. PG. 510.
U. S. GASKET CO., Fluorocarbon Products Div., P> 0.
Box 93, Camden, N. J. ADV. PG. 472.

### INSULATORS—Fused Quartz

Amersil Co., Inc., Hillside, N. J.
Dallons Labs., 5066 Santa Monica Blvd., Los Angeles,
Calif. Hanovia Chemical & Mfg. Co., 233 N. J. RR Ave., Mica Fabricating Co., 53 Central Ave., Rochelle Park, SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 499. Thermal Syndicate Ltd., 12 E. 46th St., New York 17,

### INSULATORS—High Dielectric Paper

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 261.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 456.

Insulation Manufacturers Corp., 565 W. Washington Blvd.,

Chicago 6, III.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
Mica Fabricating Co., 53 Central Ave., Rochelle Park,

Moore Co., Howard J., 266 William St., New York, N. Y. Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.

## INSULATORS—Strain

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe
Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

Consolidated Wire & Associated Companies, 1635 S.

Clinton St., Chicago 16, Ill.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.

GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.

HEYMAN MFG. CO. 300 Michigan Ave., Kenilworth, N. J. ADV. PG. 195, 197.

HEYMAN MFG. CO., 300 Michigan Ave., Kenilworth, N. J. ADV. PG. 441.

Illinois Electric Porcelain Co., Macomb, III. Illinois Electric Porcelain Co., Macomb, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG.
497. JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.
Lapp Insulator Co., Inc., Radio Specialties DIv., 31
Gilbert St., LeRoy, N. Y.
Locke Dept. of General Electric Co., P. 0. Box 57,
Baltimore 3, Md.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Mykroy Inc., Arlington Heights Airport, Arlington Heights, National Ceramic Co., 400 Southard St., Trenton 2, N. J.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa.
ADV. PG. 228, 229.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield,
N. J. ADV. PG. 510.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wind Turbine Co., Tower & Antenna Div., E. Market St.
& Penna. R. R., West Chester, Pa.
Wisconsin Porcelain Co., Sun Prairie, Wis.

## INSULATORS—Test Clip

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y. N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New
York 13, N. Y. ADV. PG. 342.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison
Ave., New York 17, N. Y.
Keystone Electronics Corp., 423 Broome St., New York
12, N. Y.
Mueller Electric Co., 1583 E. 31st St., Cleveland 14,
Ohio

## INSULATORS—Thermocouple

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95. Bristol Co., The, Waterbury 20, Conn. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Electrical Refractories Co., 50 Clark St., East Palestine, Ohio. Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, III.
ISOLANTITE MFG. CO., Stirling, N. J. ADV. PG. 497.
Laconia Corp., 37 S. 6th St., Newark 7, N. J.
Maryland Lava Co., Bel Air, Md.
Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn. tanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.
SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 499.
Thompson Co., H. I., 1733 Cordova St., Los Angeles 7,
Calif.

## INSULATORS—Tower AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV.

PG. 95.
GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.
Lapp Insulator Co., Inc., Radio Specialties Div., 31
Gilbert St., LeRoy, N. Y.
Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
THOSE CERAMICS INC. 225 Ballaville Ave.. Bloomfield, timore 3, Md.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield,
N. J. ADV. PG. 510.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box
93, Camden, N. J. ADV. PG. 472.
Wind Turbine Co., Tower & Antenna Div., E. Market St.
& Penna. R. R., West Chester, Pa.

## INSULATORS—Transmitting Antenna

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. AMERICAN LAVA CORP., Chattanooga 5, 1enii. ADV. PG. 95.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197. ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-Johnson Co., E. F., Waseca, Millian (25).

Japp Insulator Co., Inc., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y.

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., Arlington Heights Airport, Arlington Heights, III.

Steward Mfq. Co., D. M., 3600 Jerrome Ave., Chat-Heights, III.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfeld, N. J. ADV. PG. 510.

Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa. Wisconsin Porcelain Co., Sun Prairie, Wis.

## INTEGRATORS—Electronic

Arma Corp., 254 36th St., Brooklyn 32, N. Y. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Computer Corp. of America, 149 Church St., New York, N. Y. York, N. Y.
Computing Devices of Canada Ltd., 338 Queen St., Ottawa
4, Ontario.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
Instron Engineering Corp., 2 Hannock St., Quincy 71,
Mass STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

PG. 228, 229.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Freiinghuysen Ave., Newark 5, N. J. ADV. PG. 256. INTERCOMMUNICATION SYSTEMS Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y. Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
Cooper Electronic Products Co., 4500 Meirose St.,
Philadelphia 24, Pa.
Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
Elm Laboratories, 18 South Broadway, Dobbs Ferry,
N. Y. Executione Inc., 415 Lexington Ave., New York 17, N. Y. Farmers Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh 21, Pa Farmers Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh 21, Pa.
PEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Godfrey Mfg. Co., 2642 S. Michigan Ave., Chicago, III. KELLOGG SWITCHBOARD & SUPPLY Co., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.
Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. Loral 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.
Monarch Radio & Television Corp., 61 Crescent St., St., New York 4, N. Y.

Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.

National Intercommunicating Systems, 1130 N. Milvaukee Ave., Chicago 22, III.

North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, III.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th
St., New York, N. Y. ADV. PG. 288.
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.
Talk-A-Phone Mfg. Co., 1512 S. Pulaski Rd., Chicago
23. III. 23, III.

Talk-0 Products., Inc., 42 Allen St., Rochester 6. N. Y.

Telectro Industries Corp., 35-18 37th St., Long Island
City 1, N. Y.

TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262. Park, N. J. ADV. PG. 262.
U. S. Instrument Corp., 409 Broad St., Summit, N. J. Vocaline Co. of America, Inc., Old Saybrook, Conn. Webster Electric Co, 1900 Clark St., Racine, Wis. Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis. Worner Electronic Devices, Rankin, III.

### INVERTERS

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. ADV. PG. 334. CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, III. ADV. PG. 511. Continental Electric Co., Inc., 334 Ferry St., Newark S, N. J.

Control Instrument Co., Sub. of Burroughs Adding Machine Co., 67-35th St., Brooklyn 32, N. Y.

Cook Electric Co., 2700 Southport Ave., Chicago 14, III. III.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Doelcam Corp., 56 Elmwood Ave., Newton 58, Mass.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP.,
Teterboro, N. J. ADV. PG. 127, 128.
EICOR, INC., 1501 W. Congress St., Chicago 7, III. ADV.
PG. 314.
Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, III.
Leland Electric Co., 1501 Webster St., Dayton 1, Ohio.
Mission Electric Mfg. Co., Inc., 132-134 W. Colorado,
Pasadena 1, Calif.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
RED BANK DIVISION, BENDIX AVIATON CORP., Red
Bank, N. J. ADV. PG. 125, 126. Resdel Engineering, 2309 Riverside 239, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TRAD TELEVISION CORP., 1001 First Avn., Asbury Park, N. J. ADV. PG. 262.
Varo Mfg. Co., Inc., Box 638, Garland, Texas.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 9, Mich. Resdel Engineering, 2309 Riverside Drive, Los Angeles

WISTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG.

### ION TRAPS

CLARUSIAI MFG. CO., INC., Dover, N. 1.
162, 163.

DX RADIO PRODUCTS CO., INC., 2300 Armitage Ave., Chicago 47, III. ADV. PG. 294.
Electro Acoustic Industries Ltd., 366 Madison Ave., New York 17, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245. GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245.
Heppner Mfg. Co., P. O. Box 612, Round Lake, III.
INDIANA STEEL PRODUCTS CO., Valparaiso, Indiana. ADV. PG. 78.
MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, III. ADV. PG. 424.
Maryland Lava Go., Bel Air, Md.
Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, III.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Quam Nichols Co., 526 E. 33rd Place, Chicago 16, III.
Mullard Overseas Ltd., Century Hotse, Shaftesbury Ave., London, W.C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

IRONS—Electric Soldering Acme Electric Heating Co., 1217 Washington St., Boston, Mass. American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.

Drake Eiectric Works, 3656 Lincoln Ave., Chicago 13, ELECTRIC SOLDERING IRON CO., W. Elm St., Deep River, Conn. ADV. PG. 466.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Hexacon Electric Company, 130 W. Clay Ave., Roselle Park, N. J. Ideal Industries, Inc., Park & Borden Aves., Sycamore, III.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S.

Cicero Ave., Chicago 38, III. ADV. PG. 274.

Kelnor Mfg. Co., 222 Kearny St., San Francisco 8, Calif.

Kwikheat Mfg. Co., 3732 San Fernando Road, Glendale
4, Calif.

Lenk Mfg. Co., 30 Cummington St., Boston 15, Mass.

Mitchell Industries, Inc., Camp Wolters, Mineral Wells, Texas.
Philoc Corp., Tioga & C Sts., Philadelphia 34, Pa.
Radiocrafters Div. of Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stanley Tools Div., Stanley Works, Elm St., New Britain, Conn. Conn.
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. 90.

Weller Electric Corp., 846 Packer St., Easton, Pa.

Whitaker Cable Corp., Kansas City 16, Mo.

WILDER MFG. CO., INC., Mechanic St. & Erie R.R.,

Port Jervis, N. Y. ADV. PG. 522.

ISOTOPES—Radioactive ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 303.
Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.
Radioactive Products, Inc., 443 W. Congress St., Detrolt Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. Technical Associates, 140 W. Providencia Ave., Burbank, Calif.
Technical Operations, Inc., 16 Court St., Boston, Mass.
Tracerlab, Inc., 130 High St., Boston 10, Mass.
U. S. RADIUM CORP., 535 Pearl St., New York 7,
N. Y. ADV. PG. 272.

## **JACKS**

See Plugs and Jacks

## JEWELS—Glass

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

BIRD CO., RICHARD H., 1 Spruce St., Waltham, Mass-ADV. PG. 244.

Corning Glass Works, Corning, N. Y.
Drake Mfg. Co., 1713 Hubbard St., Chlcago 22, III.
Duotone Co., Inc., Keyport, N. J.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
JOHNSON CO., E. F., Wassea, Minn. ADV. PG. 248-251.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### JUMPERS-Bonding

Kulka Electric Mfg. Co., Inc., 30 South St., Mount Vernon, N. Y. Sittler Corp., 18 N. Ada St., Chicago 7, III. Whitaker Cable Corp., Kansas City 16, Mo.

### KEYERS & COUPLERS

APPLIED SCIENCE CORP. OF PRINCETON, P. 0. Box 44, Princeton, N. J. ADV. PG. 528.
Barber Labs., Alfred W., 32-44 Francis Lewis Blvd., Flushing, N. Y. Flusning, N. Y.
Codetyper Laboratories, 550 Fifth Ave., New York 19,
N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y. Douglaston, N. Y.
Erco Radio Labs. Inc., E. Stewart Ave., Garden City, N. Y.

N. Y.
Gates Radio Co., Quincy, III.
McElroy Mfg. Corp., Littleton, Mass.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St.,
New York 11, N. Y. ADV. PG. 50, 51.
Technical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1,
N. Y. ADV. PG. 499.

### KEYS & CODING EQUIPMENT

Boehme Inc., H. O., 915 Broadway, New York 10, N. Y. Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y. Codetyper Laboratorles, 550 Fifth Ave., New York 19, N. Y. N. Y.

Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.
McElroy Mfg. Corp., Littleton, Mass.
Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1,
N. Y. ADV. PG. 499. N. Y. ADV. PG. 499.
Ultradyne Electronics, Oswego, Oregon.
Vibroplex Co., Inc., 833 Broadway, New York, N. Y.
Wallace & Tiernan Products, Inc., Belleville, N. J.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

Associated Research, Inc., 3788 W. Belmont, Chicago 18,

### KILOVOLTMETERS

BETA ELECTRIC CORP., 333 E 103rd St., New York 29, N. Y. ADV. PG. 466. Brujac Electronic Corp., 103 Lafayette St., New York 13, N. Y. Burlington Instrument Co., Burlington, Iowa.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolls 6, Ind.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 188.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J. MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind Ind.
Oak Ridge Products Mfg. Div. of Video Televislon, Inc., 37-01 Vernon Blvd., Long Island Clty 1, N. Y.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 220.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG 320.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chlcago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers,
N. Y. ADV. PG. 482.

### KLYSTRONS

See Tubes

## KNOBS—Plastic Molded

ALDEN PRODUCTS CO., 112 N. Maln St., Brockton 64, Mass. ADV. PG. 24. American Insulator Corp., New Freedom, Pa.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chl-cago 50, III. ADV. PG. 212. Chicago Die Mold Div. of U. S. Wrlghtwood Ave., Chicago 39, III. Consolidated Molded Products Corp., Davies Molding Co., Harry, 1428 N. Wells St., Chicago

Dimco Gray Co., 207 E. Sixth St., Dayton, Ohio.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia
44, Pa. ADV. PG. 156.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.

FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Gits Molding Corp., 4600 W. Huron St., Chicago 44, III. Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y. JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251. Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1, Ohio. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, III.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Molded Insulation Co., 335 E. Price St., Filiadelphia 44, Pa.

Muirhead & Co., Ltd., Beckenham, Kent, England.

NATIONAL CO., INC., 61 Sherman St., Malden 48,

Mass. ADV. PG. 328, 329.

NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J.

ADV. PG. 258.

Painton & Co., Inc., Ltd., 366 Madison Ave., New York

17, N. Y. Co. of Tangarsen 2005 Century St.

17, N. Patent

Button Co. of Tennessee, 2005 Century St., Patent Button Co. of Tennessee, 2005 Century St., Knoxville, Tenn. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337. ROGAN BROS., 2500 W. Irving Park, Chicago 18, III. ADV. PG. 511. Rohden Manufacturing Company, 4739 Montrose Ave., Chicago 41, III.

Chicago 41, III.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.

TECHNOLOGY INSTRUMENT CORP., 531 Main St.,
Acton, Mass. ADV. PG. 394, 395.

Ther Electric & Machine Works, 15 S. Jefferson St.,

Chicago, III.
WHITSO, INC., 2037 Churchill St., Chicago 47, III.
ADV. PG. 40.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### LABORATORIES, TESTING

Armour Research Foundation, 35 W. 33rd St., Chicago, Armour Research Foundation, 35 W. 33rd St., Chicago, III.
Cook Research Labs., Div. Cook Electric Co., 1457
Diversey Parkway, Chicago 14, III.
Electrical Testing Laboratories, East End Ave. & 79th St., New York, N. Y.
Inland Testing Labs., Div. Cook Electric Co., 2700
Southport, Chicago 14, III.
New York Testing Laboratories, Inc., 80 Washington St., New York 6, N. Y.
Tour & Co., Inc., Sam, 44 Trinity Place, New York, N. Y.
United States Testing Co., Inc., 1550 Park Ave., Hoboken, N. J.

### LACOUER

See Insulating Compounds

### LAMINATIONS-Transformer

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 495. Allegheny Luddum Steel Corp., H. W. Olivet Bidg., Pitts-Allegheny Ludlum Steel Corp., H. W. Olivet Bldg., Pitts-burgh 22, Pa.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Eastern Specialty Co., Philadelphia 40, Pa.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
KOBZY TOOL CO., 1535 N. Dayton Ave., Chicago 22,
III. ADV. PG. 389.
Magnetic Metals Co., Hayes Ave. at 21st St., Camden,
N. I. N. J.
Masonite Corp., 111 W. Washington St., Chicago 2, III.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1,
Calif. Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y. Super E N. J. Electric Products Corp., 46 Oliver St., Newark, N. J.
Telegraph Construction & Maintenance Co., Ltd., Telcon
Works, Greenwich, London, S. E. 10, England.
TEMPEL MFG. CO., 1939 Bryn Mawr Ave., Chicago 26,
III. ADV. PG. 489.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122
E. 23rd St., Indianapolis, Ind. ADV. PG. 434.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34
96th Ave., Queens Village 8, N. Y. ADV. PG. 322.
Wade Electric Products Co., 400 Jacob St., Sturgis,
Mich.

WESTINGHOUSE ELECTRIC CORP., P. 0.
Pittsburgh 30, Pa. ADV. PG. 109-115. O. Box 5578

### LEADS—Test

Aerolite Electronics Corp., 507 26th St., Union City, American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. Autel Electronics Co., 1946 Farmingdale Rd., Westfield, Belling & Lee Ltd., 366 Madison Ave., New York 17, BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y . ADV. PG. 342. Booth Co., Arthur E., 4124 Beverly Blvd., Los Angeles, Caluf. Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohlo. CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chlagae 18 III cago 18, III. ssor (Canada), Ltd., 301-303 Windsor St., Hallfax, Cossor (Canada), Ltd., 301-303 ......

N. S., Canada.
Edison Swan Electric Co., Ltd., (Clix Div.) 366 Madison Ave., New York 17, N. Y.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Montl-cello Ave., Skokie, Ill.

CO., 919 Taylor Ave., Rock-Feiler Engineering & Mfg. Co., Dept. EBG, 8020 N. MUNICICAL Cello Ave., Skokie, Ill.
GENERAL CEMENT MFG. Co., 919 Taylor Ave., Rockford, Ill. ADV. PG. 120.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. 12, N. Y.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Pacific Electricord Co., P. O. Box 15805, Crenshaw
Sta., Los Angeles 8, Calif.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Precision Apparatus Co., Inc., 92-27 Horace Harding
Blvd., Elmhurst, N. Y.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15,
N. Y.
Supreme, Inc., Greenwood, Miss. Supreme, Inc., Greenwood, Miss.
Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
United Technical Laboratories, Box 425-V, Morristown, N. J.

### LEATHERETTE

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

### LENSES—Optical

Bache & Co., Semon, 636 Greenwich St., New York 14, Bausch & Lomb Optical Co., 635 St. Paul St., Rochester Buhi Optical Co., 1009 Beech Ave., Pittsburgh 12, Pa. Camera Equipment Co., 1600 Broadway, New York, N. Y. Farrand Optical Co., Inc., 4401 Bronx Blvd., Bronx 66, N. Y. Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, III.

Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass.

TRAD TELEVISION CORP., 1001 First Ave., Asbury

Park, N. J. ADV. PG. 262.

## LENSES—Television

Bache & Co., Semon, 636 Greenwich St., New York 14, Back Video Corp., F. G., 500 Fifth Ave., New York, N. Y. Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. Camera Equipment Co., 1600 Broadway, New York 19, State St., Rochester 4, N. Y.

ERIE RESISTOR CORP., 644 W. 12th St., Erle, Pa. ERIE RESISTUR CURF., 044 W. 12.11
ADV. PG. 271.
Kennedy & Co., D. S., Cohasset, Mass.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
Television Zoomar Corp., 500 Fifth Ave., Room 2223, New York, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.

### LENSES—Television Magnifying

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

## LENSES-Television Projection

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y. Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 12, Pa.
Camera Equipment Co., 1600 Broadway, New York, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave.,
New York 67, N. Y. ADV. PG. 332, 333.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.

### LIE DETECTORS—Electronic

Electro-Medical Lab., Inc., South Woodstock 8, V Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.

### LIGHTS—Dial, Panel and Pilot

Aerolite Electronics Corp., 507 26th St., Union City, N. J.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
Mass. ADV. PG. 24.
American Electronics Corp., 157 Marconi Blvd., Columbus,

Ohio.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
Cannon Electric Co., 3209 Humboldt St., Los Angeles 31, Calif.
DIAL LIGHT CO. OF AMERICA, INC., 900 Broadway, New York 3, N. Y. ADV. PG. 356.
Drake Mfg. Co., 1713 Hubbard St., Chicago 22, III. Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Lamp Div., Nela Park, Cleveland 12, Ohio. ADV. PG. 1-23.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.
HART MFG. CO., 110 Bartholomew Ave., Hartford 1, Conn. ADV. PG. 260.
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. 248-251.

251. Kinetix Instrument Co., Inc., 902 Broadway, New York

Kinetix Instrument Co., Inc., 902 Broadway, New York 10, N. Y.
10, N. Y.
Kirkland Co., H. R., 8 King St., Morristown, N. J.
Marco Industries Co., 207 S. Helena St., Anaheim, Calif.
NATIONAL CARBON Co., Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
ADV. PG. 264.
Oxford Electric Corp., 3911 S. Michigan Ave., Chicago 15, Ill.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
R.B.M. Div., Essex Wire Corp., Logansport, Ind.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Covers.

RUSSELL & STOLL CO., INC., 125-6 Barclay St., New York 7, N. Y. ADV. PG. 387.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 334A, 334B.

UCINITE CO., DIVISION, UNITED CARR-FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 101.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### LIGHTS—Photoelectric Source

Airmec Laboratories, Ltd., High Wycombe, Buckingham-

Airmec Laudratories, Etc., 1133 Shire, England.

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.

De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta
Place, Chicago 14, III.

Electronic Control Corp., 1573 E. Forest St., Detroit

Mich.
GENERAL ELECTRIC CO., Lamp Div., Nela Park, Cleveland 12, Ohio. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hudson Lamp Co., 528 Elm St., Arlington, N. J.
Industrial Electronics Co., Inc., Hanover, Mass.
Lumenite Electric Co., 407 So. Dearborn St., Chicago 5, III.

5, III.

5, III.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

## LIGHTS—Signal

Aerolite Electronic Corp., 507 26th St., Union City, AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. Amglo Corp., 2037 W. Division St., Chicago 22, Ill.

Cannon Electric Co., 3209 Humboldt St., Los Angeles

Instrument Co., 1320 S. Grand Ave., Los Angeles

DIAL LIGHT CO. OF AMERICA, INC., 900 Broadway, New York 3, N. Y. ADV. PG. 356.

PEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.

Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.

N. Y.
GENERAL ELECTRIC CO., Lamp Div., Nela Park, Cleveland 12, Ohio. ADV. PG. 1-23.
Hetherington, Inc., Sharon Hill, Pa.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-

Z51.

Kemlite Labs., 1819 Grand Ave., Chicago 22, III.

Kirkland Co., H. R., 8 King St., Morristown, N. J.

Marco Industries Co., 207 S. Helena St., Anaheim, Calif.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,

Pittsburgh 30, Pa. ADV. PG. 109-115.

## LIGHTS—Stroboscopic Source

Amglo Corp., 2037 W. Division St., Chicago 22, Ill. Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln,

Mass. GENERAL RADIO CO., GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Huggins Laboratories, 734 Hamilton Ave., Menlo Park,

Kemlite Labs., 1819 W. Grand Ave., Chicago 22, III.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### LINES—Slotted

Andrew Corp., 363 E. 75th St., Chicago 19. III.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

Windray-Bohardi, Inc., 3223 Burton Ave., Burbank, Calif.
Ferris Instrument Co., 110 Cornelia St., Boonton, N. J
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich,

Granam Wig. Co., Inc., 47 Bridge St., Lett distance, R. I.

HEWLETT-PACKARD CO., 395 Page Mill Road, Palo Alto, Calif. ADV. PG. 29-34.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325.

KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.

Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston. Conn. Thomaston, Conn.

### LINKS---Antenna

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.

## LITHIUM COMPOUNDS

See Metals

## LOCKS-Dial

AUGAT BROS., INC., 33 Perry Ave., Attleboro, Mass. ADV. PG. 194.
Bud Radio, Inc., 2119 E. 55th St., Cleveland 3, Ohio. CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Millen Mfg. Co., Ltd., Beckenham, Kent, England. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329. U. S. ENGINEERING CO., 521 Commercial St., Glendale 3, Calif. ADV. PG. 432.

## LOCKS-Shaft

LOCKS—Shaft
CITATION PRODUCTS CO., 233 E. 146th St., New York
51, N. Y. ADV. PG. 512.
IPPOLITO & CO., JAMES, 401 Concord Ave., Bronx 54,
N. Y. ADV. PG. 359.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 328, 329.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41
Elm St., Stoneham 80, Mass. ADV. PG. 287.
U. S. ENGINEERING CO., 521 Commercial St., Glendale
3, Calif. ADV. PG. 432.

## LORAN NAVIGATIONAL DEVICES

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

### LOUDSPEAKER 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. British Industries Corp., 164 Duane St., New York 13, N. Y.

N. Y. Brociner Electronics Laboratory, 1546 Second Ave., New

Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.
Dilks Co., The, Seymour, Conn.
Dukane Corp., 135th & Indiana Sts., St. Charles, III.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
Jensen Mfg. Co., 6601 S. Larmie Ave., Chicago 38, III.
Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los
Angeles 26, Calif.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City,
Calif.

Stromberg-Carlson Co., Rochester 13, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave.,
White Plains, N. Y. ADV. PG. 338.

### LOUDSPEAKERS

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
BEAM INSTRUMENTS CORP., 35') Fifth Ave., New York

1, N. Y. ADV. PG. 471.

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11,
N. J.

N. J.
Bozak Co., R. T., 90 Montrose Ave., Buffalo 14, N. Y.
British Industries Corp., 164 Duane St., New York
13, N. Y.
Brociner Electronics Laboratory, 1546 Second Ave.,
New York 28, N. Y.
Carbonneau Industries, Inc., Grand Rapids, Mich.
Cinaudagraph Speakers, 7334 N. Clark St., Chicago 26,

Cleveland Electronics, Inc., 6611 Euclid Ave., Cleve-

Crescent Industries, Inc., 4140 Belmont Ave., Chicage 41, III.

DX RADIO PRODUCTS CO., INC., 2300 Armitage Ave., Chicago 47, III. ADV. PG. 294.

Delco Radio Div., General Motors Corp., Kokomo, Ind. Dukane Corp., 135th & Indiana Sts., St. Charles, III.

ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.

Electro Acoustic Industries Ltd., 366 Madison Ave., New York 17, N. Y.

Eltran Corp., St. Anne, III.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245.

ADV. PG. 245.
Glenco Corp., Metuchen, N. J.
Goodmans Industries, Ltd., Axlon Works, Wembley, Mid-

Geodemans Industries, Ltd., Axion Works, Wempley, Middlesex, England.
Hartley Co., Ltd., H. A., 152 Hammersmith Rd., London W. 6, England.
Heppner Mfg. Co., P. 0. Box 612, Round Lake, III.
Holf Audio Industries, 5014 N. Encinta Ave., Temple City, Calif.
Horton Machine Products Co., Horton & Rockaway Aves.,

Valley Stream, N. Y.
Industrial Research Products, Inc., 9400 Belmont Ave.,
Franklin Park, III.
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38,

III.
KIIpsch & Associates, Hope, Ark.
Lansing Sound Inc., James B., 2439 Fletcher Drive,
Los Angeles 26, Calif.
Magnavox Co., The, Components Div., Fort Wayne 4,

Ind.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.
Molded Insulation Co., 335 E. Price St., Philadelphia
44, Pa.

44, Pa.

NORTHERN RADIO CO., INC., 143-145 W. 22nd St.,
New York 11, N. Y. ADV. PG. 50, 51.

Oxford Electric Corp., 3911 S. Michigan Ave., Chicago

Oxford Electric Corp., 3911 S. Michigan Ave., Chicago 15, III.

Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, III.

PERMOFLUX CORP., 4900 W. Grand Avenue, Chicago 39, III. ADV. PG. 375.

Philco Corp., Tioga and C. Sts., Philadelphia 34, Pa. Quam Nichols Co., 526 E. 33rd Place, Chicago 16, III. 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 Music Corp., 84 S. Water St., Port Chester, N. Y.

Radio Music Corp., 84 S. Water St., Port Chester, N. Y. Rola Co., Inc., The, 2530 Superior Ave., Cleveland 14,

Ohlo. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Calif.
Stromberg-Carlson Co., Rochester 13, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kenslco Ave.,
White Plains, N. Y. ADV. PG. 338.
Utah Radio Products Co., Inc., 1123 E. Franklin St.,
Huntington, Ind.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

### LOUDSPEAKERS—Flame & Explosion-proof

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y. BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
Carbonneau Industries, Inc., Grand Rapids, Mich. GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245.
Heppner Mfg. Co., P. O. Box 612, Round Lake, III. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y. Rowe Industries, 1702 Wayne St., Toledo 9, Ohio. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Calif.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave.,
White Plains, N. Y. ADV. PG. 338.
Utah Radio Products Co., Inc., 1123 E. Franklin St.,
Huntington, Ind.

## LOUDSPEAKERS—Marine Speaker Systems

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.

Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38,

Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif. Magnavox Co., The, Components Div., Fort Wayne 4,

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
Radiomarine Corp. of America, 75 Vardick St., New York 13, N. Y.
Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Calif.
Stromberg-Carlson Co., Rochester 13, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave.,
White Plains, N. Y. ADV. PG. 338.
Utah Radio Products Co., Inc., 1123 E. Franklin St.,

## LOUDSPEAKERS—Tweeters & Woofers

Huntington, Ind.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Atlas Sound Corp., 1443 39th St., Brocklyn 18, N. Y.
Bozak Co., R. T., 90 Montrose Ave., Buffalo 14, N. Y.
British Industries Corp., 164 Duane St., New York 13, N. Y.

N. Y.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
Eitran Corp., St. Anne, III.
Goodmans Industries, Inc., Axiom Works, Wembley, Middlesex, England.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Gulton Mfg. Corp., Metuchen, N. J.
Holl Audio Industries, 5014 N. Encinta Ave., Temple
City. Callf.

Holl Audio Industries, 5014 N. Encinta Ave., Temple City, Callf.

Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38,

11.
Klipsch & Associates, Hope, Ark.
Lansing Sound, Inc., James B., 2439 Fletcher Drive,
Los Angeles 26, Calif.
Magnavox Co., The, Components Div., Fort Wayne 4,
Ind.
Oxford Electric Corp., 3911 S. Michigan Ave., Chicago
15, III.

Oxford Electric Corp., 3911 S. Michigan Ave., Chicago 15, III.

PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. Quam Nichols Co., 526 E. 33rd Place, Chicago 16, III. 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.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio. Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Stromberg-Carlson Co., Rochester 13, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave.,
White Plains, N. Y. ADV. PG. 338.
Utah Radio Products Co., Inc., 1123 E. Franklin St.,
Huntington, Ind.

## LUGS

### See Terminals

### MACHINES-Blueprint

American Photocopy Equipment Co., 2849 N. Clark St., Paragon-Revolute Corp., 71 S. Seventh Ave., Rochester 4,

N. Y.
Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, III.
Peck & Harvey, 5736-38 N. Western Ave., Chicago 45, III.

## MACHINES—Coil Winding

Associated Production Co., 162 N. Clinton St., Chicago

Boesch Mfg. Co., Danbury, Conn.
British Industries Corp., 164 Duane St., New York 13, N. Y.

N. Y. Stevens Mfg. Co., Inc., Geo., 6022 N. Rogers Ave., Pulaski and Peterson, Chicago 30, III.
Universal Winding Co., P. O. Box 1605, Providence 1, R. I.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth, 89, Mass.

### MACHINES-Coil Winding, Toroidal

Associated Production Co., 162 N. Clinton St., Chicago

6, III.
Boesch Mfg. Co., Danbury, Conn.
Harder Co., Donald C., 2031 Chatsworth Blvd., San Diego
7, Calif.
MICO INTRUMENT CO., 77 Trowbridge St., Cambriáge
38, Mass. ADV. PG. 353.

### MACHINES—Counting (Photoelectric)

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

Industrial Electronics Co., Inc., Hanover, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Hill Rd.,
Great Neck, N. Y. ADV. PG. 278. Production Instrument Co., 710 W. Jackson Blvd., Chicago

6, III. WESTINGHOUSE ELECTRIC CORP., P. 0 Pittsburgh 30, Pa. ADV. PG. 109-115. O. Box 5578,

## MACHINES—Crystal Manufacturing & Finishing

Bassett, Inc., Rex, 307-11 N. W. First Ave., Fort Lauderdale, Fla.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 481.
CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 435.
Distillation Products Div. of Eastman Kodak Co., 755 Ridge Rd., W., Rochester 3, N. Y.
Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.

### 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. 362.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 419.
MARION ELECTRICAL INSTRUMENTS CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.
Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. Y.

### MACHINES—Electronic Balancing

Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver Hathaway Instrument Co., 1970 Stenton Ave., Philadelphia 10, Colo.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

## MACHINES—Electronic Beverage Inspection

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III.
TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. ADV. PG. 464, 529.

## MACHINES—Electronic Computing

APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box APPLIED SCIENCE CURP. OF PRINCEION, P. O. Box 44, Princeton, N. J. ADV. PG. 528.

Arma Corp., 254 36th Ct., Brooklyn 32, N. Y.

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.

Avion Instrument Corp., Paramus, N. J.

Computer Corp. of America, 149 Church St., New York, N. Y.

Computer Research Corp., 3348 W. EL Segundo Blvd., Hawthorne, Calif.

Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md.
DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla,

Calif. ADV. PG. 378.

ELECTRONIC COMPUTER CORP., 160 Avenue of the Americas, New York 13, N. Y. ADV. PG. 298.

Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
International Business Machines Corp., Tube Analysis Laboratory, Poughkeepsie, N. Y.
Librascope, Inc., 1607 Flower St., Glendale, Calif.
Miller Corp., William, 325 N. Halstead Ave., Pasadena R. Calif.

Ninnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn. Phillips Petroleum Co., Instruments Div., Bartlesville,

Order Character Co., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 278. Rutherford Electronics Corp., 3707 S. Robertson Blvd.,

Rutherford Electronics Corp., 3707 S. Robertson Blvd.,
Culver City, Calif.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, Ill.
Tracerlab, Inc., 130 High St., Boston 10, Mass.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14, N. Y.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.

### MACHINES—Electronic Dictating

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.
Edison, Inc., Thomas A., Ediphone Div., 51 Lakeside Ave., West Orange N. J.

West Urange N. J.
Miles Reproducer Co., Inc., 812 Broadway, New York 3,
N. Y.
Fentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
Proctor Soundex Corp., 133 N. 6th Ave., Mt. Vernon,
N. Y.

### MACHINES—Electronic Transcribing

Edison, Inc., Thomas A., Ediphone Div., 51 Lakeside Ave., West Orange N. J.
Gates Radio Co., Quincy, III.
Miles Reproducer Co., Inc., 812 Broadway, New York 3,

Pentron Corp., 221 E. Cullerton St., Chicago 16, 111. Thordarson-Meissner Mfg. Divs., Mt. Carmel, 111.

## MACHINES—Engraving and Profiling

Auto Engraver Co., Ridgefield, Conn.
GREEN INSTRUMENT CO., 385 Putnam Ave., Cambridge, Mass. ADV. PG. 342.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 353.
NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 521.
Preis Engraving Machine Co., H., 649 Highway No. 29, Hillside, N. J.
Radiocrafters Div. of Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.

## MACHINES-Glass Blowing

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362. HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293. KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 419.

## MACHINES—Glass Working

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362. FORTER-TEICHMANN CO., Clark Bldg., Pittsburgh, Pa. ADV. PG. 156.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.

INTERNATIONAL PUMP & MACHINE WORKS, 11-13
Governor St., Newark 2, N. J. ADV. PG. 520.

KAHLE ENGINEERING CO., 1307 Seventh St., North
Bergen, N. J. ADV. PG. 419.

Litton Industries, San Carlos, Calif. Sommer & Maca Glass Machine Co., 3600 S. Oakley Ave., Chicago 9, III.

## MACHINES—Impregnating

Barrett Co., Leon J., P. O. Box 378, Worcester 1, Mass.
PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. ADV. PG. 503.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

### MACHINES-Instrument Shock Testing

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275. BARRY CORP., 700 Pleasant St., Watertown, Mass-ADV. PG. 318, 319.

Ferner Co., R. Y., 110 Pleasant St., Malden, Mass. Glenco Corp., Metuchen, N. J. Gulton Mfg. Corp., Metuchen, N. J.

### MACHINES—Metal and Glass Marking

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Auto Engraver Co., Inc., Ridgefield, Conn.
EISLER ENGINEERING CO., INC., 740 S. 13th St.,
Newark 3, N. J. AV. PG. 362.
KAHLE ENGINEERING CO., 1307 Seventh St., North
Bergen, N. J. ADV. PG. 419.
Markem Machine Co., Keene, N. H.
Matthews Co., James H., 470 Atlantic Ave., Boston 10,
Mass. Mass. Noble & Westbrook Mfg. Co., 27 Westbrook St., East

Hartford 8, Conn.
Popper & Sons, Inc., 300 Fourth Ave., New York 10, N. Y. N. Y. Preis Engraving Machine Co., 649 Highway No. 29, Hill-

## MACHINES—Photocopy & Whiteprint

American Photocopy Equipment Co., 2849 N. Clark St., Chicago, III.

Bruning & Co., Inc., Charles, 125 North St., Teterboro, N. J. N. J.
Haloid Co., The, 6 Haloid St., Rochester, N. Y.
Hunter Photo Copyist Co., 566 Spencer St., Syracuse,
N. Y.
Ozalid Div. of General Anline & Film Corp., 770 Ansco Rd., Johnson City, N. Y.
Paragon-Revolute Corp., 71 S. Chester Ave., Rochester 4,
N. Y. N. Y. Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, Peck & Harvey, 5736-38 N: Western Ave., Chicago 45, Peerless Photo Products, Shoreham, N. Y.

## MACHINES-Record Manufacturing

Poinsettia Co., Inc., 112 Cedar Ave., Pitman, N. J. Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

## MACHINES-Shock Testing

BARRY CORP., 700 Pleasant St., Watertown, Mass. ADV. PG. 318, 319.
Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio. Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.

## MACHINES—Tube Manufacturing

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.
Distillation Products Div. of Eastman Kodak Co., 755 Ridge Rd., W., Rochester 3, N. Y.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362.
Entwistle Co., James L., P. O. Box 176, Providence 7, R. I. HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
International Machine Works, 6904 Madison St., Gutten-

International Machine Works, 0304 Machine Berg, N. J.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 419.
Litton Industries, San Carlos, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.

## MACHINES—Vibration Fatigue Testing

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
CALIDYNE CO., THE, 751 Main St., Winchester, Mass.
ADV. PG. 210.
Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
Gates Radio Co., Quincy, III.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

## MACHINES-Wire Stripping

Artos Engineering Co., 2737 S. 28th St., Milwaukee, Associated Production Co., 162 N. Clinton St., Chicago 6, III.
ELECTRO PRECISION PRODUCTS INC., 119-01 22nd
Ave., College Point, N. Y. ADV. PG. 431.
Electro Wire Service, 5 Beekman St., New York 7,
N. Y. High Speed Hammer Co., Rochester, N. Y.
Ideal Industries, Inc., Park & Borden Aves., Sycamore, Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Rush Wire Stripper Division, The Eraser Co., Inc., 104 S. State St., Syracuse 2, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

## MAGNETIC ANALYSIS EQUIPMENT

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Dicc Co., J. W., Englewood, N. J.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83,
Magnetic Analysis Corp., 42-44 12th St., Long Island City 1, N. Y.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.

## MAGNETIZERS AND DEMAGNETIZERS

Annis Co., R. B., 1101 N. Delaware St., Indianapolis, CARBOLOY Dept. of General Electric Co., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 21. DoAll Co., 254 N. Laurel Ave., Des Plaines, III. Electronic Brazing Co., 140 Glenridge Ave., Montclair, GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Ideal Industries, Inc., Park & Borden Aves., Sycamore, Klein-Electronics, Klein-Electronics, Leo, 2404 S. La Brea Ave., Los Angeles 16, Calif. Luma Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio.
King Electric Equipment Co., 9123 Inman Ave., Cleveland King Electric Equipment of the St., Ohio.
5, Ohio.
Magnafilux Corp., 5900 Northwest Hwy, Chicago 31, III.
Magnetic Analysis Corp., 42-44 12th St., Long Island
City 1, N. Y.
Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
Radio Frequency Labs., Inc., Boonton 2, N. J.
Telvision Laboratories, Inc., 5045 W. Lake St., Chicago
44, III.

### MAGNETOMETERS

See Instruments—Electrical Measuring

### MAGNETRONS

See Tubes

### MAGNETS-Permanent

Arnold Engineering Co., Marengo, III.
CARBOLOY, Dept. of General Electric Co., 11139 E.
Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 21.
CRUCIBLE STEEL CO. OF AMERICA, 405 Lexington
Ave., New York 17, N. Y. ADV. PG. 281.
General Magnetic Corp., 10001 Erwin Ave., Detroit 34, INDIANA STEEL PRODUCTS CO., Valparaiso, Indiana. ADV. PG. 78.
MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 506. Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C.2, England.
RADIO CORES, INC., 9540 Tulley Ave., Oak Lawn, III.
ADV. PG. 220.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 434. VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif.

## MARKERS-Frequency, Microwave

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.

### MARKERS-Wire

Brady Co., W. H., 1612 E. Spring St., Milwaukee 3, Wis.

## MASKS—Television Cortland Industries, Inc., 4545 Cortland St., Chicago 39,

Croname, Inc., 3701 Ravenswood Ave., Chicago, III. DuMont Laboratories, Inc., Allen B., Television Receiver Div., Electronic Parts Dept., 35 Market St., East Paterson, N. J. RIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.

Hawley Products Co., St. Charles, III.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.

Parisian Novelty Co., 3510 So. Western Ave., Chicago 9, III. Philco Corp., Tloga & C Sts., Philadelphia 34, Pa. Precision Plastic Products Inc., 628-30 W. Lake St., Chicago 6, III.

## 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, Chicago 18, Instrument Co., 1320 S. Grand Ave., Los Angeles Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
FREED TRANSFORMER Co., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8, Ohio.
Industrial Instruments, Inc., 17 Pollack Ave., Jersey City
5. N. J.

5, N. J.
KEITHLEY INSTRUMENTS, 3868 Carnegle Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.
MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29,

Mass. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 159, 159.
Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmburst, N. Y.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville. Tenn.

Knoxville, Tenn.
STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 502.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Pall-sades Park, N. J.

### METAL CONES, TELEVISION See Cones, Metal Television

## METAL PARTS-Bushings

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Con Chase Brass & Copper Lo., LNC., 236 Grand St., Waterbury 20, Conn.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
Delco Radio Div., General Motors Corp., Kokomo, Ind. GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
General Laminated Products, Inc., 2857 S. Halstead St., Chicano 8 III. General Laminated Products, Inc., 2037 St. Na. (2037) Chicago 8, Ill.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.

Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, Ill.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

Keystone Carbon Co., Inc., Saint Marys, Pa.

Keystone Electronics Corp., 423 Broome St., New York

Keystone Electronics Corp., 425 brooms Co., 12, N. Y.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
LaMagna Mfg. Co., Inc., East Rutherford, N. J.
MASTER APPLIANCE MFG. Co., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J.
ADV. PG. 160.

PIX MFG. CO., INC., 24 Begiord St., Negala, 11.

ADV. PG. 160.

Powdered Metal Products Corp., Franklin Park, III.

Romac Products Co., 112 Bleecker St., New York 12, N. Y.

South River Metal Products Co., Inc., 377-379 Turnpike,

South River Metal Products Co., Inc., 377-379 Turnpike,
South River, N. J.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
St. Mary's Carbon Co., State Rd., St. Marys Pa.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
UNITED CARR FASTENER CORP., Cambridge, Mass.
ADV. PG. 100.

## METAL PARTS—Castings

Arwood Precision Casting Corp., 70 Washington St., Brooklyn, N. Y. Brooks & Perkins Co., 1950 W. Fort St., Detrolt 16, Mich.
CRUCIBLE STEEL CO. OF AMERICA, 405 Lexington
Ave., New York 17, N. Y. ADV. PG. 281.
Haynes Stellite Co., Div. of Union Carbide & Carbon
Corp., Kokomo, Ind.
Hitchiner Mfg. Co., Inc., P. O. Box 8451, Manchester, 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. Vernon, N. Y.
Precision Castings Co., Matawan, N. Y.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New
York 6, N. Y. ADV. PG. 446.

METAL PARTS—Contacts See Contacts, Electrical

### METAL PARTS—Laminated

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.
Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
South River Metal Products Co., Inc., 377-379 Turnpike,
South River, N. J.
Standard Metals Corp., 262 Broad St., North Attleboro,
Mass.

Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, Ill.

### METAL PARTS—Lead

ALPHA METALS, INC., P. 0. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357.

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, DIVISION LEAD CO., 836 W. Kenzie St., Chicago 22, JIII. ADV. PG. 64, 65.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.

National Lead Co., 111 Broadway, New York 6, N. Y. South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
South River, N. J.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 446.
Vitamite Co., 227 W. 64th St., New York 23, N. Y.

### METAL PARTS—Powdered

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.
Keystone Carbon Co., Inc., Saint Marys, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Powdered Metal Products Corp., Franklin Park, Ill.
RADIO CORES, INC., 9540 Tulley Ave., Oak Lawn, Ill. ADV. PG. 220.
St. Mary's Carbon Co., State Rd., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG.

154, 155. Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J. METAL PARTS—Screw Machine Ace Mfg. Corp., Chalfont, Pa. Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa. American Hinge Corp., 206 Wallabout St., Brooklyn 6,

N. Y.
American Radio Hardware Co., Inc., 152 MacQueston
Pkwy., Mt. Vernon, N. Y.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey
Ave., Brooklyn 14, N. Y. ADV. PG. 422.
Automatic Metal Products Co., 315 Barry St., Brooklyn, N. Y.
Blake & Johnson Co., 1495 Thomaston Ave., Waterville
48. Conn.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437. 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. 512.
Cole Instrument Co., 1320 S. Grand St., Los Angeles 15,

Calif.
Dante Electric Mfg. Co., Bantam, Conn.
Delco: Radio Div., General Motors Corp., Kokomo, Ind.
Eastern Specialty Co., Philadelphia 40, Pa.
ELECTRONIC PARTS MFG. Co., 508 25th St., Union
City, N. J. ADV. PG. 120.
Electronic Research & Mfg. Co., 434 Midland Ave., Garfield N. J.

held, N. J. ENGINEERING CO., 27 Wright St., Newark 11, N. J.

ENGINEERING CU., 2/ Wright St., Newals 11, N. V. ADV. PG. 354.

Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.

Ferner Co., R. Y., 110 Pleasant St., Malden, Mass. GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

GENERAL CEMENT MICH. Co., 717 Taylor Gve., ROCKIOLO, III. ADV. PG. 120.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
General Laminated Products, Inc., 2857 S. Halstead St.,

General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.
GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 364.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. HAYDU BROTHERS, PlaInfield, N. J. ADV. PG. 293.
Hofer Metal Products Corp., J., 383 Kent Ave., Brooklyn 11, N. Y.
Instrument Parts Corp., P. O. 150, Ossining, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Jem-O-Matic, Inc., 530 Cherry Lane, New Hyde Park, N. Y.

N. Y.
Judd Co., H. L., 87 Chambers St., New York 7, N. Y.
Keystone Electronics Corp., 423 Broome St., New
York 12, N. Y.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland,
Ohio.

Ohio.
MASTER APPLIANCE MFG. CO., Fourth & Ontarlo Sts., Racine, Wis. ADV. PG. 439.
Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee,

Molded Insulation Co., 335 E. Price St., Philadelphia 44, NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 513. NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. Plume & Atwood Mfg. Co., 220 Broadway, New York, PRECISION METAL PRODUCTS CO. OF MALDEN, 41
Elm St., Stoneham 80, Mass. ADV. PG. 287.
Quaker City Gear Works, Red Lion & Philmont Rd.,
Bethayres, Pa.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10,
Calif. Calif.
Scovill Manufacturing Co., Waterbury 20, Conn.
South River Metal Products Co., Inc., 377-379 Turnpike
South River, N. J.
Star Stainless Screw Co., 206 Union Ave., Paterson 2,

N. J.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.
Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,
Mass.
Tudor Products Co., 57 E. Alpine St., Newark 5, UNITED-CARR FASTENER CORP., Cambridge 42, Mass. UNITED-CARR FASTENER CURP., Cambridge 42, Mass.
ADV. PG. 100.
United Screw & Bolt Corp., 2513 W. Cullerton St.,
Chicago 8, III.
Vallorbs Jewel Co., Lancaster, Pa.
Vitamite Co., 227 W. 64th St., New York 23, N. Y.

### METAL PARTS—Small Metal Stampings

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 495. Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, III. Ace Mfg. Corp., Chalfont, Pa. Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
Acklin Stamping Co., 1923 Nebraska Ave., Toledo 7, Ohio. Aerolite Electronics Corp., 507 26th St., Union City, AVE., Quincy 69, Mass. ADV. PG. 464.

All Metal Products, 206 McWhorter St., Newark 5,

MERICAN BRASS CO., 25 Broadway, New York 4, N. Y. ADV. PG. 373. American Radio Hardware Co., Inc., 152 MacQueston American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.
Associated Production Co., 162 N. Clinton St., Chicago 6, Auburn Mfg. Co., Pease Ave. & Stack St., Middletown,

AUGAT BROS., INC., 33 Perry Ave., Attleboro, Mass. ADV. PG. 194.
Autel Electronics Co., 1946 Farmingdale Rd., Westfield, Automatic Metal Products Co., 315 Barry St., Brook-

lyn 1, N. Y. BALTIC METAL PRODUCTS CO., 120 Sutton St., Brook-BALTIC METAL PRODUCTS CO., 120 Sutton St., Droom-lyn, N. Y. ADV. PG. 201.

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Chase Brass & Copper Co., Inc., 236 Grand St., Water-

bury 20, Conn. CHURCHILL CORP., 7 North Ave., Wakefield, Mass. ADV.

PG. 396. CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235. CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512. Cole Instrument Co., 1320 S. Grand St., Los Angeles 15,

Calif.
Colgate Mfg. Corp., Lindenhurst, N. Y.
Columbia Metal Box Co., 260 E. 143rd St., New York,

N. Y.
CRAFT MFG. CO., 3949 W. Schubert St., Chicago, III.
ADV. PG. 388.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago

41, III.

Cutler Metal Products Co., 1025 Line St., Camden,

41, III.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Dante Electric Mfg. Co., Bantham, Conn.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.
Donnelly Electric & Mfg. Co., 3050 Washington St., Boston 19, Mass.
Eastern Specialty Co., Philadelphia 40, Pa.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 156.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
Electronic Mfg. Co., 20 Orange St., Newark, N. J.
ELECTRONIC PARTS MFG. Co., 508 25th St., Union City, N. J. ADV. PG. 120.
Eltran Corp., St. Anne, III.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 354.

PG. 354.
Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Louis Park, Minneapolis 16, Minn.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn. Formatic Co., 178 Bridge St., Naugatuck, Conn. Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.

Fryling Mfg. Co., 639 W. 12th St., Erie, Pa.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,
N. Y. Garrett Co., Inc., George K., D and Tioga Sts., Philadelphia 34, Pa. GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, GENERAL CEWIEN I MFG. CU., 919 Taylor Ave., Rockford, III. ADV. PG. 120. GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525. General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.
GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y.
ADV. PG. 516.
Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, III.
Hayden Mfg. Co., 173 N. Peoria, Chicago 7, III.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
HELDOR MFG. Co., Div. of Heldor Bushing & Terminal
Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV.
PG. 238.

N. J. ADV. PG. 441. Hofer Metal Products Corp., J., 383 Kent Ave., Brook-

lyn 11, N. Y.

INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince

INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 441. Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, III. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477. Javex, 921 State, Garland, Texas. Johanson Mfg. Co., Boonton, N. J. JOHNSON & HOFFMAN MFG. Co., 55-65 Ongley St., Rockville Centre, N. Y. ADV. PG. 344, 345. Keystone Electronics Corp., 423 Broome St., New York 12, 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. Kolton Electric Mfg. Co., 123 New Jersey Railroad

Kolton Electric Mfg. Co., 123 New Jersey Railroad Aye., Newark 5, N. J. Kulka Electric Mfg. Co., 30 South St., Mount Vernon,

N. Y.
La Magna Mfg. Co., Inc., East Rutherford, N. J.
LEE MECHANICAL LABORATORIES, 30 Main St., Brooklyn 1, N. Y. ADV. PG. 365.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,
Inglewood, Calif.
MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago
24, III. ADV. PG. 424.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts.,
Racine. Wis. ADV. PG. 439.

Racine, Wis. ADV. PG. 439.

METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 445.

Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chlcago 9, Ill.

Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee, Wis.

Wis.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
Molded Insulation Co., 335 E. Price St., Philadelphia

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 513.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465.

PATTON-MACGUYER CO., 17 Virginia Ave., Providence 5, R. I. ADV. PG. 132. Paul & Beekman Inc., 1801 Cortland St., Philadelphia

40, Pa.
Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
Pilot Radio Corp., 37-06 36th St., Long Island City 1, MFG. CO., INC., 24 Bedford St., Newark, N. J.

ADV. PG 160. Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y. Presto Electric Co., Inc., 600 Fulton St., Elizabeth,

N. J.
Quadriga Mfg. Co., 213 W. Grand Ave., Chicago 11, III.
Raymond Mfg. Co., Div. of Associated Spring Corp.,
226 S. Center St., Corry, Pa.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1,
Calif.
Revere Copper & Brass, Inc., 230 Park Ave., New
York 17, N. Y.

York 17, N. Y.
ROBINSON AVIATION, INC., Teterboro Air Terminal,
Teterboro, N. J. ADV. PG. 257.
Romac Products Co., 112 Bleecker St., New York 12,
N. Y.

N. Y.
SANDSTEEL SPRING DIV., Sandvik Steel, Inc., 145
Hudson St., New York 13, N. Y. ADV. PG. 160.
Scovill Manufacturing Co., Waterbury 20, Conn.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park,

N. J. South River Metal Products Co., Inc., 377-379 Turnpike,

South River, N. J.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.

Spincraft, Inc., 4143 W. State St., Milwaukee 8, Wis.

STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 446. STAVER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG

Steinen Co., William, 43 Bruen St., Newark 5, N. J. Stewart Stamping Co., 630 Central Park Ave., Yonkers 4, N. Y. Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brook-lyn 5, 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. 552-558.
Teleradio Engineering Corp., 99 Wall St., New York 5,

N. Y.
Telrex, Inc., Rutherford & Neptune Highway, Asbury
Park, N. J.
Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,

Mass. icon Mfg. Co., 8008-12 Wallace St., Chicago 20,

Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22,

Till.
Tudor Products Co., 57 E. Alpine St., Newark S, N. J.
UCINITE CO. DIVISION, United-Carr Fastener Corp.,
459 Watertown St., Newtonville, Mass. ADV. PG.

UNITED CARR FASTENER CORP., Cambridge 42, Mass.

ADV. PG. 100. United Screw & Bolt Corp., 2513 W. Cullerton St.,

Chicago B, III.

Universal Chain Co., 92 Burnett Ave., Maplewood, N. J.

Vitamite Co., 227 W. 64th St., New York 23, N. Y.

VOLKERT METAL STAMPINGS INC., JOHN, 222-34

96th Ave., Queens Village 8, N. Y. ADV. PG. 322.

Wade Electric Products Co., 400 Jacob St., Sturgis,

Mich.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn
16, N. Y. ADV. PG. 483.
Whitehead Stamping Co., 1691 W. Lafayette Blvd.,

Detroit 16, Mich.
Worcester Pressed Aluminum Corp., 13-15 Hope Ave.,
Worcester 3, Mass. Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee

7, Wis. erick Mfg. Corp., Beechwood and Rockdale Aves., New Rochelle, N. Y.

### METAL PARTS-Spinnings

All Metal Products, 206 McWhorter St., Newark 5, N. J. Associated Production Co., 162 N. Clinton St., Chicago 6, 111

III.
Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison
Ave.. New York 17, N. Y.
Electronic Mfg. Co., 20 Orange St., Newark, N. J.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St.,
New York 10, N. Y. ADV. PG. 525.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
Industrial Precision Products Co., 315-325 N. Hoyne
Ave., Chicago 12, III.
Kling Metal Spinning Co., 174 Centre St., New York 13,
N. Y.

Newark Spinning & Stamping Co., 472 Bloy St., HillsIde,

& Atwood Mfg. Co., 220 Broadway, New York,

Spincraft, Inc., 4143 W. State St., Milwaukee 8, Wis. Teiner Co., Inc., Roland, 134 Tremont St., Everett 49, Mass

Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,

UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 338.

### METAL PARTS—Trimmings

Associated Production Co., 162 N. Clinton St., Chicago 6,

Edison Swan Electric Co., Ltd., (Clix Div.) 366 Madison Ave., New York 17, N. Y.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293. Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, III.
Minute Man Products, Inc., 430 E. 102nd St., New York,

South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.

### METALLIC PAINTS

See Paints

## METALS

## Aluminum

Aluminum Co. of America, Gulf Bldg., Pittsburgh 30, Pa. Federated Metals Div. American Smelting & Refining Co., 120 Broadway, New York 5, N. Y. Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif

Dalser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.
LUST, HENRY B., 310 W. 85th St., New York 24, N. Y., ADV. PG. 529.
Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

### Alnico

Allegheny Ludium Steel Corp., H. W. Oliver Bidg., Pitts-

Allegheny Ludlum Steel Corp., H. W. Oliver Bidg., Pitts-burgh 22, Pa.
Arnold Engineering Co., Marengo, III.
CARBOLOY, Dept. of General Electric Co., 11139 E.
Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 21.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
Murex, Ltd., Rainham, Essex, England.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122
E. 23rd St., Indianapolis, Ind. ADV. PG. 434.

ALPHA METALS, INC., P. O. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357.

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.

Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.

National Lead Co., 111 Broadway, New York 6, N. Y.

### Barlum

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. KING LABORATORIES, INC., 127 Solar St., Syracuse 4 N. Y. ADV. PG. 463.

### Beryllium and Beryllium Alloys

Beryllium Corp., The, Reading, Pa.
Bram Chemical Co., 820 65th Ave., Philadelphia 26,

Pa. Brush Beryllium Co., The, 4301 Perkins Ave., Cleveland 3, DRIVER CO., WILBUR B, 150 Riverside Ave., Newark 4,

N. J. ADV. PG. 108.

GENERAL PLATE DIVISION, Metals & Controls Corp.,
Attlebaro, Mass. ADV. PG. 270.

Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianopolis 6, Ind.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England. Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42,

### Brass and Bronze

AMERICAN BRASS CO., 25 Broadway, New York 4,

N. Y. ADV. PG. 373. Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn Chase Brass & Copper Co., Inc., 236 Grand St., Water

bury 20, Conn.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.

Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

### Cadmium

ALPHA METALS, INC., P. O. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357, ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y.

ADV. PG. 58.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. DIVISION LEAD CO., 836 W. Kinzle St., Chicago 22, III. ADV. PG. 64, 65.
Federated Metals Div., American Smelling & Refining Co., 120 Broadway, New York 5, N. Y.

### Cesium Compounds

(For Photo-tubes)

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Dow Chemical Co., Midland, Mich. KING LABORATORIES, INC., 127 Solar St., Syracuse 4, N. Y. ADV. PG. 463.

## Chromium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Murex, Ltd., Rainham, Essex, England.

## Coefficient Metals

American Silver Co., Inc., 36-07 Prince St., Flushing 54, Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Carpenter Steel Co., The, 142 W, Bern St., Reading, DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. Y. ADV. PG. 211.

### Columbium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Electro Metallurgical Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, III.

Chicago, III. Metal Hyrides, Inc., Beverly, Mass. Murex, Ltd., Rainham, Essex, England.

AMERICAN BRASS CO., 25 Broadway, New York 4,

N. Y. ADV. PG. 373. Chase Brass & Copper Co., Inc., 236 Grand St., Water-bury 20, Conn.

bury 20, Conn.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Mailory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Plume & Atwood Mfg. Co., 220 Broadway, New York N. Y. Revere Copper & Brass, Inc., 230 Park Ave., New York Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42,

### Electric Sheets-See Steel, Electric

## Foil-Aluminum, Tin & Lead

ALPHA METALS, INC., P. 0. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357.

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.

BISHOP MFG. CORP., 10 Canfield Rd., Cedar Grove, N. J. ADV. PG. 273.

DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III.

ADV. PG. 64, 65.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Johnston Foll Mfg. Co., 6100 S. Broadway, St. Louis

11, Mo. Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.

REPUBLIC FOIL & METAL MILLS, INC., 55 Triangle
St., Danbury, Conn. ADV. PG. 200.

Shopsin Paper Co., 112 Charlton St., New York 14, N. Y.

### Gold and Gold Alloys

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. AUV. PG. 76. American Silver Co., Inc., 36-07 Prince St., Flushing 54,

N. Y.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
BRAININ CO., C. S., 320 Washington St., Mount Vernon, N. Y. AOV. PG. 424.
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.

minroved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465.

Samuel & Co., Inc., J. A., 220 Broadway, New York 38, N. Y.

N. T. SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362. Standard Metals Corp., 262 Broad St., North Attleboro,

Mass.

Mass.
Ticon Mfg. Co., 8008-12 Wallace St., Chicago 20, Jil.
Western Gold & Platinum Works, 589 Bryant St.,
San Francisco, Callf.
WHITE DENTAL MFG. CO., S. S., Industrial Div., 10
E. 40th St., New York, N. Y. ADV. PG. 391.
Wildberg Bros. Smelting & Refining Co., 742 Market St.,
San Francisco 2, Callf.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

High Permeability Alloys

Allegheny Ludium Steel Corp., H. W. Oliver Bidg., Pitts-burgh 22, Pa.
Alloy Metal Wire Co., 13th and Penna Ave., Prospect Park, Pa., American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Arnco Steel Corp., 703 Curtis St., Middletown, Ohio.
Arnold Engineering Co., Marengo, III.
Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J.
ADV. PG. 211.

ADV. PG. Magnetic Metals Co., Hayes Ave. at 21st St., Camden,

N. J.
Plastic Metals Division, National Radiator Co., 169
Bridge St., Johnstown, Pa.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Telegraph Construction & Maintenance Co., Ltd., Telcon

Telegraph Construction & Maintenance Co., Lto., Telegraph Works, Greenwich, London, S. E. 10, England.
THOMAS & SKINNER STEEL PRODUCTS CO., 122 E.
23rd St., Indianapolis, Ind. ADV. PG. 434.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42,

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

## Laminated Metal Parts

American Silver Co., Inc., 36-07 Prince St., Flushing 54,

N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.

GENERAL PLATE DIVISION, METALS & CONTROLS

CORP., Attleboro, Mass. ADV. PG. 270.

Improved Seamless Wire Co., 775 Eddy St., Providence,

Magnetic Metals Co., Hayes Ave. at 21st St., Camden, MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. Standard Metals Corp., 262 Broad St., North Attleboro,

Mass.
THOMAS & SKINNER STEEL PRODUCTS CO., 1123 E.
23rd St., Indianapolis, Ind. ADV. PG. 434.
Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20,

Wilson Co., H. A. 105 Chestnut St., Newark 5, N. J.

ALPHA METALS, INC., P. O. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357.

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y. N. Y.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22,
III. ADV. PG. 64, 65.
Federated Metals Div., American Smelting & Refining Co.,
120 Broadway, New York 5, N. Y.

# Lithium Compounds (for cathode tube screen settling)

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

### Magnesium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. BURGESS BATTERY CO., Battery Div., Freeport, III. ADV. PG. 428. Dow Chemical Co., Midland, MIch. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y. Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.

### Magnetic Iron Oxide (for cores)

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Plastic Metals Division, National Radiator Co., 169
Bridge St., Johnstown, Pa.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
WILLIAMS & CO., C. K., 640 N. 13th St., Easton, Pa.
ADV. PG. 508.

## Magnetic Powdered

ANTARA CHEMICALS DIVISION, GENERAL DYESTUFF CORP., 435 Hudson St., New York 14, N. Y. ADV. PG. 224.

Arnold Engineering Co., Marengo, III.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. 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. 508.

### Magnetostriction

## See Nickels and Nickel Alloys

### Manganese

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Murex, Ltd., Rainham, Essex, England. Plastic Metals Division, National Radiator C., 169 Bridge St., Johnstown, Pa.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2. III.

Goldsmith Bros. Smelling & Renning Co., III N. Wadash Ave., Chicago 2, III. Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo. Western Gold & Platinum Works, 589 Bryant St., San

Western Gold & Platinum Works, 507 Dispute St., 501, Francisco, Calif.
Wildberg Bros. Smelting & Refining Co., 742 Market St., 5an Francisco 2, Calif.

### Molybdenum

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. CROSS CO., H., 15 Beekman St., New York 38, N. Y. ADV. PG. 514.

Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago. III.

Chicago, III.
Murex, Ltd., Rainham-Essex-England.
North American Philips Co., Inc., 100 E. 42nd St., New
York 17, N. Y.
SECON METALS CORP., 228 E. 45th St., New York 17,
N. Y. ADV. PG. 362.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42,
Mass.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

### Nickel and Nickel Alloys

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pitts-burgh 22, Pa. Alloy Metal Wire Co., 13th & Penna Ave., Prospect Park, Pa.

Armco Steel Corp., 703 Curtis St., Middletown, Chio. Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa. Chase Brass & Copper Co., Inc., 236 Grand St., Water-

Chase Brass & Copper Co., 1967, 200, 1979,

ADV. PG. 211. Haynes Stellite Division, 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

Fig. 1. S. N. Y.

Plastic Metals Division, National Radiator Co., 169

Bridge St., Johnstown, Pa.

Revere Copper & Brass Inc., 230 Park Ave., New York

17, N. Y.

17, N. Y.
Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, III.
SECON METALS CORP., 228 E. 45th St., New York 17,
N. Y. ADV. PG. 362.
Telegraph Construction & Maintenance Co., Ltd., Telcon
Works, Greenwich, London, S. E. 10, England.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42,
Mass.

ESTINGHOUSE ELECTRIC CORP., P. O. Pittsburgh 30, Pa. ADV. PG. 109-115. O. Box 5578.

### Nickel Ribbon

Alloy Metal Wire Co., 13th & Penna. Ave., Prospect Park, Pa.
DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4,
N. J. ADV. PG. 108. N. J. ADV. PG. 108.

DRIVER-HARRIS CO., 201 Middlesex St., Harrison N. J. ADV. PG. 211. SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362.

### Palladium

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
BRAININ CO., C. S., 320 Washington St., Mount Vernon, N. Y. ADV. PG. 424.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 486.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass. GENERAL PLATE DIVISION, Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270. Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, III. MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465. Samuel & Co., Inc., J. A. 220 Broadway, New York 38, N. Y.

N. Y.
SECON METALS CORP., 228 E. 45th St., New York 17,
N. Y. ADV. PG. 362.
Tricon Mfg. Co., 8008-12 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., 105 Chestnut St., Newark 5, N. J.

### Phosphor Bronze

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn. Chase Brass & Copper Co., Inc., 236 Grand St., Water-

bury 20, Conn.
Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.
Plume & Atwood Mfg. Co., 220 Broadway, New York,
N. Y.

Copper & Brass, Inc., 230 Park Ave., New York

## Platinum

Platinum

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76. Baker Co., Inc., 113 Astor St., Newark 5, N. J. BRAININ CO., C. S., 320 Washington St., Mount Vernon, N. Y. ADV. PG. 424. COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 486. Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass. GENERAL PLATE DIVISION, Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465.

Samuel & Co., Inc., J. A., 220 Broadway, New York 38,

N. Y. SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362.
Tricon Mfg. Co., 8008-12 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. Canadium Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y. York 20, N. Y.
Technical Associates, 140 W. Providencia Ave., Burbank,

Calif.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N.Y.

ADV. PG. 272.

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y.

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. KING LABORATORIES, INC., 127 Solar St., Syracuse 4, N. Y. ADV. PG. 463.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Metal Hyrides, Inc., Beverly, Mass.
National Lead Co., 111 Broadway, New York 6, N. Y. Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

### Radium

Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y. Technical Associates, 140 W. Providencia Ave., Burbank,

Calif. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 272.

### Silicon

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
BRAININ CO., C. S., 320 Washington St., Mount Vernon, N. Y. ADV. PG. 424.
Eastern Smetting & Refining Corp., 107-109 Brookline St., Boston 18, Mass.
GENERAL PLATE DIVISION, Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270.
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,

mandy & 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. 80.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV.
PG. 465.

SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362. Standard Metals Corp., 262 Broad St., North Attleboro,

Mass. ricon Mfg. Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, III. 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. 105 Chestnut St., Newark 5, N. J.

### Silver Alloys and Compounds

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76. American Silver Co., Inc., 36-07 Prince St., Flushing 54,

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y.

ADV. PG. 58.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
BRAININ CO., C. S., 320 Washington St., Mount Vernon,
N. Y. ADV. PG. 424.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22,
III. ADV. PG. 64, 65.
Eastern Smelting & Refining Corp., 107-109 W. Brookline
St. Raston 18 Mass

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass. GENERAL PLATE DIVISION, Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270. Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, III. Handy & Harman, 82 Fulton St., New York 38, N. Y. Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.

Mallinckrodt Chemical Works, Second and Mallinckrodt Sts., St. Louis 7, Mo.

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Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465.
Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362.
Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, III.
Western Gold & Platinum Works, 589 Bryant St., San Francisco 2, Calif.
WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. ADV. PG. 391.
Wildberg Bros. Smelting & Refining Co., 742 Market Francisco, Calif.
Wilson Co, H. A., 105 Chestnut St., Newark 5, N. J.

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pitts-burgh 22, Pa.
Armoo Steel Corp., 703 Curtis St., Middletown, Ohio.
CRUCIBLE STEEL CO. OF AMERICA, 405 Lexington
Ave., New York 17, N. Y. ADV. PG. 281.
Lukens Steel Co. and Division, By-Products Steel Co. &
Lukenweld, 447 Lukens Bldg., Catesville, Pa.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
Revere Copper & Brass, Inc., 230 Park Ave., New York
17, N. Y.

Ryerson & Son, Inc., J. T., 8000-A, Chicago, Ill.
U. S. Steel Co. (U. S. Steel Corp. Sub.), 525 Wm. Penn Place, Pittsburgh 30, Pa.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.

### Steel, Electric

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pitts-burgh 22, Pa.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio. Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio. Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, III. U. S. Steel Co. (U. S. Steel Corp. Sub.), 525 Wm. Penn Place, Pittsburgh 30, Pa.

### Steel, Stainless

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pitts-

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
Alloy Metal Wire Co., 13th and Pennsylvania Ave., Prospect Park, Pa.
American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio. Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa. CRUCIBLE STEEL CO. OF AMERICA, 405 Lexington Ave., New York 17, N. Y. ADV. PG. 281.
DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 108.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 211.

DRIVER-HARKIS CU., 201 Intelligence of ADV. PG. 211.

Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, III.
U. S. Steel Co. (U. S. Steel Corp. Sub.), 525 Wm.
Penn Place, Pittsburgh 30, Pa.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. CARBOLOY, Dept. of General Electric Co., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 21. KING LABORATORIES INC., 127 Solar St., Syracuse 4, N. Y. ADV. PG. 463. Technical Associates, 140 W. Providencia Ave., Burbank, Calif.

## Tantalum

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. CROSS CO., H., 15 Beekman St., New York 38, N. Y. ADV. PG. 514.
Electro Metallurgical Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, III.

Chicago, III.
Murex, Ltd., Rainham, Essex, England.
Technical Associates, 140 W. Providencia Ave., Burbank,

## Thermostratic Bi-Metals

American Silver Co., Inc., 36-07 Prince St., Flushing 54,

N. Y.

Baker Co., Inc., 113 Astor St., Newark 5, N. J.

BRAININ CO., C. S., 320 Washington St., Mount Vernon,
N. Y. ADV. PG. 424.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Eastern Smelting & Refining Corp., 107-109 W. Brookline
St., Boston 18. Mass.

St., Boston 18, Mass.
GENERAL PLATE DIVISION, Metals & Controls Corp.,
Attleboro, Mass. ADV. PG. 270.
Telegraph Construction & Maintenance Co., Ltd., Telcon
Works, Greenwich, London, S. E. 10 England.

ALPHA METALS, INC., P. O. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357.

ANCHOR METAL CO., 244 Boerum St. Brooklyn 6, N. Y. ADV. PG. 58.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, Ill. ADV. PG. 64, 65.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn, N. Y. National Lead Co., 111 Broadway, New York 6, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. CARBOLOY DEPT. of General Electric Co., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 21. Electro Metallurgical Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Fasteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, III.

Fansteel Metallurgical Corp., 2200 Sheriuan Ru., Notesta Chicago, III.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Murex, Ltd., Rainham-Essex-England.

SYLANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Wilson Co., H. A., 105 Chestnut St., Newark 5, 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. 514.

AUV. PG. 514.

Murex Ltd., Rainham, Essex, England.

SECON METALS CORP., 228 E. 45th St., New York 18,

N. Y. ADV. PG. 362.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,

Pittsburgh 30, Pa. ADV. PG. 109-115.

Canadian Radium & Uranium Co., 630 Fifth Ave., New York 20, N. Y. Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo. Technical Associates, 140 W. Providencia Ave., Burbank,

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y.

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn, N. Y.
New Jersey Zinc Co., 160 Front St., New York 7, N. Y.

## Zirconium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. Electro Metallurgical Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Foote Mineral Co., 18 W. Chelten Ave., Philadelphia 44, Pa

Metal Hyrides, Inc., Beverly, Mass. Murex, Ltd., Rainham, Essex, England. Titanium Alloy Mfg. Co., 111 Broadway, New York 6, M. Y.

WESTINGHOUSE ELECTRIC CORP., P. C Pittsburgh 30, Pa. ADV. PG. 109-115. O. Box 5578,

## METEOROLOGICAL EQUIPMENT—Electronic

Aeronautical Communications Equipment, Inc., 3090
Douglas Rd., Miami 33, Fla.
Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
Friez Instrument Div., Bendix Aviation Corp., Baltimore

4, Md.

McElroy Mfg. Corp., Littleton, Mass.

METAL TEXTILE CORP., 647 E. First Ave., Roselle,

N. J. ADV. PG. 180.

Molded Insulation Co., 335 E. Price St., Philadelphia 44,

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. Northeastern Engineering, Inc., Manchester, N. H.

## METERS, Acceleration See Accelerometers

## METERS—Attenuation

Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y. DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

PG. 121. JOWIL ELECTRONICS INC., 7945 Germantown Ave., Phil-adelphia 18, Pa. ADV. PG. 524. SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa.

ADV. PG. 320.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### METERS—Cable Testing

Associated Research, Inc., 3788 W. Belmont, Chicago 18,

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 502. TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV. PG. 379

P. O. Box 5578,

PG. 379.
WESTINGHOUSE ELECTRIC CORP., P. (
Pittsburgh 30, Pa. ADV. PG. 109-115.

### METERS—Counting Rate

BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV:

PG. 443.
Bristol Co., The, Waterbury 20, Conn.
Cinema-Television Ltd., Worsley Bridge Rd., London,
S. E. 26, England.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Calif.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Georator Corp., 1820 N. Nash St., Arlington, Va. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
MACDONALD & CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

New London Instrument Co., P. O. Box 189, New London,

Conn.
Nuclear Development Lab., Box 70.34, Kansas City, Mo.
Nuclear Instrument & Chemical Co., 223 W. Erie St.,
Chicago 10, III.
Nuclear Measurements Corp., 2460 N. Arlington Ave.,

Chicago 10, 11.

Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.

Nucleonic Corp. of America, The, 497 Union St., Brooklyn 31, N. Y.

Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III.

Technical Associates, 140 W. Providencia Ave., Burbank, Calif.

Technical Associates, 2.1 Calif. Tracerlab Inc., 130 High St., Boston 10, Mass. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### METERS-D'Arsonval

## See Instruments-Electrical Testing

### METERS—Decibel

Audio Instrument Co., Inc., 133 W. 14th St., New York

11, N. Y.
Burlington Instrument Co., Burlington, Iowa.
Clough Brengle Co., 6014 N. Broadway, Chicago, III.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

DAVÉN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.
Electric Design & Mfg. Co., Burlington, Iowa.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 194.

New York 4, N. Y.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20,

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.
Simpson Electric Co., Div of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31, III.
Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio. 0ak kis. 37-01

Ohio. Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-

cago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

## METERS—Distortion and Noise

Audio Instrument Co., Inc., 133 W. 14th St., New York

11, N. Y. WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121. EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61,

N. Y. ADV. PG. 503.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83. 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. 324, 325.

ADV. PG. 324, 325.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

158, 159.
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. 523
BERKELEY SCIENTIFIC CORP, Richmond, Calif. ADV. PG. 443.
Pristol Co., The, Waterbury 20, Conn.
Burlington Instrument Co., Burlington, Iowa.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 400.

EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PA. 451.

Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

HAYDON CO., A. W., 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 198.

HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 226, 227.

ADV. PG. 226, 227.

J B T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.

Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. Pg. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### **METERS**—Electronic Capacitance

## METERS—Field Strength

### METERS-F-M Deviation

See Instruments—Electrical Measuring

### METERS—Flow, Electronic

Balley Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohlo. Bristol Co., The, Waterbury 20, Conn.
Coral Design Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Fischer & Porter Co., 476 County Line Rd., Hatboro, Pa.
Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y.
Hastings Instrument Co., Hampton 9, Va.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUS-

TRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbay Calif. Burbank, Calif. Woodwelding, Inc., 2000 W. Olive Ave., Burbank, Calif.

### METERS-Flutter

## See Meters, Wow and Flutter

## METERS—Footcandle

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 80, Ohio
Photovolt Corp., 95 Madison Ave., New York 16, N. Y. Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago

10, III.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

## METERS—Frequency

## METERS—Impedance

### See Instruments—Electrical Measuring

### METERS-Light

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 183-185. Federal Instrument Corp., 14-02 Broadway, Long Island

City 6, N. Y. CENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### METERS-Microwave

### **METERS**—Modulation

### See Instruments-Electrical Measuring

### METERS-Moisture, Electronic

Beckman Instruments, Inc., 820 Mission St., South

Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.
Canadian Aviation Electronics, Ltd., 8280 St. Lawrence Blvd., Montreal, P. Q.
Delmhorst Instrument Co., 601 Cedar St., Boonton, N. J.
Fielden Instrument Corp., 2920 N. 4th St., Philadelphia 33, Pa.
Foxboro Co., The, Foxboro, Mass.
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. 355. MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

159. Precision Scientific Co., 3737 W. Cortland St., Chicago 111

47, III.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philladelphia 44, Pa.
WESTON ELECTRICAL INSTRUMENTS CORP., 614

ESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### METERS-Null

### METERS-Output

### METERS-Panel

### See Instruments—Electrical Measuring

## METERS—pH Meters, Recorders & Comparators

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio.
Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Central Scientific Co., 1700 Irving Park Rd., Chicago 13, III.

Coleman Instruments, Inc., 318 Madison St., Maywood,

Foxboro Co., The, Foxboro, Mass. LaMotte Chemical Products Co., Towson 4, Baltimore,

Md.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.

10 HOMESWELL REGILLATOR CO., INDUS-

44, Pa.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Muirhead & Co., Ltd., Beckenham, Kent, England.
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.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

## METERS—Phase Angle

## See Instruments—Electrical Measuring

## METERS-Photoelectric Reflection

Beckman Instruments, Inc., 820 Mission St., South Pasadena. Calif. Electronic Control Corp., 1573 E. Forest St., Detroit, Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
G-M LABORATORIES, INC., 4336 Knox Ave., Chicago,
III. ADV. PG. 470.
Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

### **METERS**—Power Factor

## METERS-Q

## METERS-RF Power

### See Instruments—Electrical Measuring

### METERS-Sound Level

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y. Feller Engineering & Mfg. Co., Dept EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83. PRECISION ELECTRONICS, 643 Milwaukee Ave., Chicago 22, Ill. ADV. PG. 358.

Scott, Inc., Hermon Hosmer, 395 Putnam Ave., Cambridge 39, Mass.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

10, III. ESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256. 10, III WESTON

### METERS—Standing Wave Ratio See Instruments-Electrical Measuring

## METERS---Thermocouple

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Farrand Optical Co., Inc., 4401 Bronx Blvd., New York

Farrand Optical Co., Inc., 4401 Bronx Blvd., New York 66, N. Y.
Foxboro Co., The, Foxboro, Mass.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954
New Haven 15, Conn. ADV. PG. 194.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Millivac Instrument Corp., 444 Second St., Box 997,

Minimal Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42. Mass.

Rawson Electrical Instrument Co., 111 Potter St., Canabridge 42, Mass.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
Simpson Electric Co. Div., American Gage & Machine Co., 5218 Kinzle St., Chicago 44, III.
Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
Welch Scientific Co., W. M., 1515 Sedkwick St., Chlcago 10. III.

Cago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

## METERS—Vibration

CALIDYNE CO., THE, 751 Main St., Winchester, Mass.

CALIDYNE CO., THE, 751 Main St., Winchester, Mass. ADV. PG. 210.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. ADV. PG. 413.
GENERAL ELECTRIC CO., Apparatus Sales DIv., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 459.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.

## METERS—Viscosity, Electronic

Fischer & Porter Co., 476 County Line Rd., Hatboro,

Foxboro Co., The, Foxboro, Mass.
Precision Scientific Co., 3737 W. Cortland St., Chicago
47, III.

Rich-Roth Laboratories, East Hartford, Conn.
Tech Laboratories, Inc., Bergen & Edsalf Blvds., Pallsades Park, N. J.

## METERS-Wave

## See Instruments—Electrical Measuring

## METERS—Wow and Flutter

Furst Electronics, 10 S. Jefferson St., Chicago 6, III. KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325. ADV. PG. 324, 325.
Minnesota Electronics Corp., 47 W. Water St., St. Paul

## METERS—X-Ray Intensity See Instruments—Electrical Measuring

### MICA

See Insulation Materials

### MICROAMMETERS

### MICROFARADMETERS

See Instruments-Electrical Measuring

### MICROMETERS-Electronic

Dice Co., J. W., Englewood, N. J.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave.,
Chicago 40, III. ADV. PG. 413.
FREQUENCY STANDARDS, Box 66, Eatontown, N. J.
ADV. PG. 380.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley
Ave., Stamford, Conn. ADV. PG. 180.
Simpson Electric Co. Div., American Gage & Machine Co.,
5218 W. Kinzie St., Chicago 44, III.
Standard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31,
III.

Wilmotte Inc., Raymond M., 1469 Church St., N. W., Washington 5, D. C.

### MICRO-MICROAMMETERS See Instruments-Electrical Measuring

### MICROPHONES—Aircraft Type

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif. ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485. Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Marconi Wir New York Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
Telephonics Corp., Park Ave., Huntington, N. Y.
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. Astatic Corp., The, Conneaut, Ohio. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III.

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S.
Cicero Ave., Chicago 38, III. ADV. PG. 274.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, Philmore Mfg. Co.,. Inc., 113 University Place, New York 3, N. Y. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 306.

Roflan Co., Everett, Mass.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago
10, III. ADV. PG. 414. Soundscriber Corp., 146 Munson St., New Haven 4, Soundscriber Corp., 146 Munson St., New Haven 4, Conn.
Telephonics Corp., Park Ave., Huntington, N. Y.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 425.
UNIVERSITY LOUDSPEAKERS INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 338.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

# MICROPHONES—Condenser

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

### MICROPHONES—Contact

American Microphone Co., 370 So. Fair Oaks Ave., Pasadena 1, Calif.

Astatic Corp., The, Conneaut, Ohio.

ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.

Miles Reproducer Co., Inc., 812 Broadway, New York 3,
N. Y. TURNER CO., THE, 909 17th St., N. E., Cedar Raplds, Iowa. ADV. PG. 425.

# MICROPHONES—Crystal

American Microphone Co., 370 So. Fair Oaks Ave., Pasa-American Microphone Co., 3/0 So. Fair Uass Ave., Fasted dena 1, Calif.
Astatic Corp., The, Conneaut, Ohio.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Dyna Labs., Inc., 132 Lafayette St., New York 13, N. Y.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J. Miles Reproducer Co., Inc., 812 Broadway, New York 3,

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, III. ADV. PG. 414. Sonotone Corp., P. O. Box 200, Saw MIII Rd., Elmsford,

N. Y. Tibbetts Industries, Inc., Camden, Maine. TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 425.

### 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. 58.

Astatic Corp., The, Conneaut, Ohlo.

ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245.

ADV. PG. 245.
Miles Reproducer Co., Inc., 812 Broadway, New York 3,

N. Y.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
Philmore Mfg. Co., Inc., 113 University Place, New York
3. N. Y.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back

Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, III. ADV. PG. 414.

Soundscriber Corp., 146 Munson St., New Haven 4, Conn. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Telephonics Corp., Park Ave., Huntington, N. Y.

TURNER CO., THE, 909 17th St., N. E. Cedar Rapids, Iowa. ADV. PG. 425.

### MICROPHONES—Magnetic

Astatic Corp., The Conneaut, Ohio.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J.
ADV. PG. 245.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers. 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, III. AD. PG. 414.
Telephonics Corp., Park Ave., Huntington, N. Y.

# MICROPHONES—Noise Cancelling

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375. ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 306. Telephonics Corp., Park Ave., Huntington, N. Y. TURNER CO., THE, 909 17th St., N. E., Cedar Raplds, Iowa. ADV. PG. 425.

### 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. ANTERNIE CU., 561 Broadway, New York 12, N. Y.
ADV. PG. 58.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
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. Covers.
TURNER CO., THE, 909 17th St., N. E. Cedar Rapids,
Iowa. ADV. PG. 425.

# MICROSCOPES—Electron

Farrand Optical Co., Inc., 4401 Bronx Blvd., New York 66, 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 TRANSMISSION LINES

AIKIRUN, INC., 25 E. Elizabeth Ave., Linden, N. J. ADV. PG. 360.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. ELECTRO PRECISION PRODUCTS INC., 119-01 22nd Ave., College Point, N. Y. ADV. PG. 431.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
N. R. K. MFG. & ENGINEERING CO., 4601 W. AddIson St., Chicago 41, III. ADV. PG. 522.
PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave., Kearney, N. J. ADV. PG. 515. Kearney, N. J. ADV. PG. 515.
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., Linden-

AIRTRON, INC., 25 E. Elizabeth Ave., Linden, N. J.

hurst, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Technicraft Laboratories, Inc., Thomaston-Waterbury Rd.,

Thomaston, Conn.
Terpening Co., L. H., 16 W. 61st St., New York 23,

N. Y.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5,
N. J. ADV. PG. 399.
Waveline, Inc., North Caldwell, N. J.
Weymouth Instrument Co., 1440 Cemmercial St., East
Weymouth 89, Mass.

### MILLIAMMETERS

### MILLIVOLTMETERS

See Instruments-Electrical Measuring

### MILLIVOLTMETERS

Airmec Laboratories, Ltd., High Wycombe, Bucking-hamshire, England. Assembly Products, Inc., Chagrin Falls 6, Ohio. Associated Research, Inc., 3788 W. Belmont, Chicago 18, III. Associated Research, Inc., 3788 W. Belmont, Chicago 18, III.
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., Los Angeles
15, Calif.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long
Island City 1, N. Y. ADV. PG. 183-185.
Electric Design & Mfg. Corp., Burlington, Iowa.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolls,
Ind. Ind. Ind.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. 1-23.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohlo.
INDUSTRIAL CONTROL CO., Straight Path & ArlIngton Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 194.
Manning, Maxwell & Moore, Inc., Stratford, Conn. MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Millivac Instrument Corp., 444 Second St., Box 997, Schenectady. N. Y.

MilneApolis-Honeywell Regulator Co., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Oak Ridge Products Mfg. Div. Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.

Rawson Electrical Instruments Co., 111 Potter St., Cambridge 42, Mass.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

Roller-Smith Corp., Bethlehem, Pa.

Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.

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, Taxes.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill. Supreme, Inc., Greenwood, Miss.

Syl-VANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohlo.

Waveforms, Inc., 333 Sixth Ave., New York 14, N. Y.

Triplett Electrical Instrument Co., Harmon Rd., Bluff-ton, Ohlo. Waveforms, Inc., 333 Sixth Ave., New York 14, N. Y. Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,

Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### MIRRORS—Special Purpose

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 12, Pa.

Liberty Mirror Div., Libbey-Owens-Ford Glass Co., Tarentum, Pa. Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles

39, Calif.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.

Zenith Optical Laboratory, 1940 Great Neck Rd.,
Copiague, N. Y.

### MIRRORS—Television

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 497.
Bache & Co., Semon, 636 Greenwich St., New York 14, Buhl Optical Co., 1009 Beech Ave., Pittsburgh 12, Pa. Liberty Mirror Div., Libbey-Owens-Ford Glass Co., Tarentum, Pa. Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.

Zenith Optical Lab., 1940 Great Neck Rd., Copiague, N. Y.

### MIXERS—Portable

See Amplifiers, Audio Frequency

# MODULATORS—Magnetic

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford,
Conn. ADV. PG. 454.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.

T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. ADV. PG. 499.

### MONITORS—AM-FM Transmitter

Du Mont Laboratories, Inc, Allen B, Television Transmitter
Du Mont Laboratories, Inc, Allen B, Television Transmitter Div., 1500 Main Ave, Clifton, N. J.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 161.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers. Covers.
Standard Electronics Corp., 285 Emmet St., Newark, N. J. RAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

Biddle Co., James G., 1316 Arch St., Philadelphia 7,

# MONITORS—Frequency

Cinema-Television Ltd., Worsley Bridge Rd., London, Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.

Du Mont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, III. ADV. PG. 161. DV. PG. 161. LABORATORIES, INC., Bradenton 1, Fla. LAMPKIN LAMPKIN LABORATORIES, INC., Bradenton 1, Fla. ADV. PG. 529.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.
Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
MOTORIAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 50, 51.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
RADIO CORP. OF AMERICA, Engineering Products Dept., Carnden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Radio Mfg. Engineers, Inc., 300-302 First Ave. Province. Mfg. Engineers, Inc., 300-302 First Ave., Peoria

6, III.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.

Standard Crystal Co., 400 Armstrong Ave., Kansas City

1, Kans. Standard Electronics Corp., 285 Emmet St., Newark,

### MONITORS—Modulation

Chester, Mass. ADV. PG. 46.

Du Mont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

Gates Radio Co., Quincy, III.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34. Calif. ADV. PG. 29-34.
LAMPKIN LABORATORIES, INC., Bradenton 1, Fla.
ADV. PG. 529.
Monitor Products Co., 815 Fremont Ave., So. Pasadena, Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second
Ave., Mt. Vernon, N. Y. ADV. PG. 507.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.
Standard Electronics Corp., 285 Emmet St., Newark,
N. J.

BROWNING LABORATORIES, INC., 750 Main St., Win-

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.

# MONITORS—Television, Transmitter

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
Conrac, Ltd., Glendora, Calif.
Cutler Metal Products Co., 1025 Line St., Camden, Cutler Metal Products Co., 1025 Line St., Camden, N. J.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. New York 4, N. Y.

Monarch Radio & Television Corp., 61 Crescent St.,

Brooklyn 8, N. Y. Brooklyn 8, N. Y.
Standard Electronics Corp., 285 Emmet St., Newark, Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
Television Utilities Corp., 1315 Jericho Turnpike, New
Hyde Park, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV, PG. 262.

# MOTORS—Fractional hp

AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. 263.
AIR-MARINE MOTORS, INC., 2183 Jackson Ave., Seaford, N. Y. ADV. PG. 504.
Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio.
Arma Corp., 254 36th St., Brooklyn, N. Y.
Atlas Coil Winders, Inc., Stamford, Conn.
Barber-Colman Co., Rockford, III.
Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, III. Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, III.
Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
Dalmotor Co., Santa Clara, Calif.
Delco Appliance Div., General Motors Corp., 391 Lyell
Ave., Rochester, N. Y.
Diehl Mfg. Co., 1129 Finderne Ave., Somerville, N. J.
Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17,
N. Y. Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y.
EICOR, INC., 1501 W. Congress St., Chicago 7, III.
ADV. PG. 314.
ELECTRIC INDICATOR CO., Camp Ave., Springdale, Conn. ADV. PG. 418.
Electric Specialty Co., 211 South St., Stamford, Conn. Fasco Industries, Inc., Rochester 2, N. Y.
FORD INSTRUMENT DIV., The Sperry Corp., 31-10 Thomson Ave., Long Island City, N. Y. ADV. PG. 486. 486. G-M LABORATORIES, 4336 N. Knox Ave., Chicago, III. ADV. PG. 470. Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Industries Co., Taylor & Olive Sts., Elyria, Ohio. Gleason-Avery Co., Auburn, N. Y.
Globe Industries, Inc., 125 Sunrise Place, Dayton 7, Ohio. HAYDON CO., A. W., 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 198.
HEINZE ELECTRIC CO., 685 Lawrence St., Lowell, Mass. ADV. PG. 374.
Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. 11, Ohio. Holtzer-Cabot Div. of National Pneumatic Co., Inc., 125 Amory St., Boston 19, Mass. HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 327.

Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y. Kollsman Instrument Corp., 80-08 45th St., Elmhurst, N. Y.
Leland Electric Co., 1501 Webster St., Dayton 1, Ohio.
Marathon Electric Mfg. Corp., Randolph & Cherry Sts.,
Wassau, Wis.
The American Logistrias Inc. 788 Terrace Blvd., Depew, N. Y. Wassau, Wis.
Marco Industries, Inc., 788 Terrace Blvd., Depew, N. Y.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts.,
Racine, Wis. ADV. PG. 439.
Mission Electric Mfg. Co., Inc., 132-134 W. Colorado, Mission Electric IMTg. Uo., Inc., 132-134 W. Colorado, Pasadena, Calif.
Oster Mfg. Co., John, Racine, Wis.
Pioneer Electric & Research Corp., 7212 Circle Ave., Forest Park, III.
Piqua Machine & Mfg. Co., Young & College Sts., Piqua Machine Piqua, Ohio. Piqua, Ohio.

Rae Motor Corp., Box 291, Racine, Wis.

RED BANK DIVISION, Bendix Aviation Corp., Red Bank,

N. J. ADV. PG. 125, 126.

Redmond Co., Inc., Owosso, Mich.

Reynolds Electric Co., 3000 River Rd., River Grove, Ill.

Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio.

ROTRON MFG. CO., 7-9 Schoonmaker Lane, Woodstock,

N. Y. ADV. PG. 76.

SERVO-TEK PRODUCTS CO., 4 Godwin Ave., Paterson,

N. J. ADV. PG. 230. N. J. ADV. PG. 230.
Small Motors Inc., 2076 Elston Ave., Chicago 14, Ill.
SPECIALTY BATTERY CO., Madison 4, Wis. ADV. PG. Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, III.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
United Pressed Products Co., 741 W. Harrison St., United Pressed Products Co., 741 W. Harrison St., Chicago 7, III.
U. S. Electrical Motors, Inc., 200 E. Slauson Ave., Los Angeles 64, Calif.
Universal Electric Co., 300 E. Main St., Owosso, Mich. Victor Electric Products, Inc., 2950 Robertson Ave., Cincinnati 9, Ohio.
Wagner Electric Corp., 6400 Plymouth Ave., St. Louis, Mo. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. Wincharger Corp., E. 7th & Division Sts., Sioux City,

# MOTORS—Phonograph

Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio. Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III. General Industries Co., Taylor & Olive Sts., Elyria,

HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 327.

Redmond Co., Inc., Owosso, Mich.
United Pressed Products Co., 741 W. Harrison St.,
Chicago 7, III.

### MOTORS—Remote Control

AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. AIR ASSUCIATES INC., Teterbolo, N. 263.
Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Diehl Mfg. Co., 1129 Finderne Ave., Somerville, N. J.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17,
N. Y. N. Y.
FORD INSTRUMENT DIV., The Sperry Corp., 31-10
Thomson Ave., Long Island City, N. Y. ADV. PG.

Induction Motors Corp., 55-15 37th Ave., Woodside

//, N. Y.
Mission Electric Mfg. Co., Inc., 132-134 W. Colorado,
Pasadena 1, Calif.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, III.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis

Wincharger Corp., 7th Division Sts., Sioux City, Iowa.

### MOTORS—Servo

AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. 263.
AIR-MARINE MOTORS, INC., 2183 Jackson Ave., Seaford, N. Y. ADV. PG. 504.
American Electric Motors, Inc., 4811 Telegraph Rd.,
Los Angeles, Calif.
Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Atlas Coil Winders, Inc., Stamford, Conn.
Avion Instrument Corp., Paramus, N. J.
Dalmotor Co., Santa Clara, Calif.
Diehl Manufacturing Co., 1129 Finderne Ave., Somerville, N. J. ville, N. J.
Eastern Air Devices Inc., 585 Dean St., Brooklyn 17, N. Y.

N. Y.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill.
ADV. PG. 314.

A DV. PG. 314.

ELECTRIC INDICATOR CO., Camp Ave., Springdale, Conn. ADV. PG. 418.

Electric Specialty Co., 211 South St., Stamford, Conn. FORD INSTRUMENT DIV., The Sperry Corp., 31-10 Thomson Ave., Long Island City, N. Y. ADV. PG.

G-M LABORATORIES, 4336 N. Knox Ave., Chicago, III., G-M LABOURT 10. Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Globe Industries, Inc., 125 Sunrise Place, Dayton 7, Ohio.
Hansen Mfg. Co., Inc., Princeton 10, Indiana.
Hertner Electric Co., 12690 Elmwood Ave., Cleveland

11, Ohio.

Holzer-Cabot Div. of National Pneumatic Co., Inc., 125

Amory St., Boston 19, Mass.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor
Corp., Electric Motor Corp., Racine, Wis. ADV.
PG. 327.

Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y.

Kearfott Co., Inc., 1150 McBride Ave., Little Falls,

Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst, N. Y.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUS-

TRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Mission Electric Mfg. Co., Inc., 132-134 W. Colorado,

Mission Electric Mfg. Co., Inc., 132-134 W. Colorado, Pasadena 1, Calif.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Oster Mfg. Co., John, Racine, Wis.
SERVO-TEK PRODUCTS CO., 4 Godwin Ave., Paterson 1, N. J. ADV. PG. 230.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, Ill. ADV. PG. 59.
TRANSICOIL CORP., 107 Grand St., New York 13, N. Y.
ADV. PG. 37.

ADV. PG. 37.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis

### MOTORS—Synchronous

AIR-MARINE MOTORS, INC., 2183 Jackson Ave., Seaford, N. Y. ADV. PG. 504. Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1,

Atlas Coil Winders, Inc., Stamford, Conn. Barber-Colman Co., Rockford, III. Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,

N. J. ADV. PG. 153.
Bristol Motor Co., Old Saybrook, Conn.
Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
Continental Electric Co., Inc., 334 Ferry St., Newark

CRAMER CO., INC. R. W., Box 13, Centerbrook, Conn. ADV. PG. 400.

Eastern Air Devices Inc., 585 Dean St., Brooklyn 17,

EICOR, INC., 1501 W. Congress St., Chicago 7, III. ADV. PG. 314.

ADV. PG. 314.

ELECTRIC INDICATOR CO., Camp Ave., Springdale, Conn. ADV. PG. 418.
Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.
Electric Products Co., 1725 Clarkstone Rd., Cleveland

12, Ohio.

Electric Specialty Co., 211 South St., Stamford, Conn.
Electyme Motor Products Corp., 565 W. Washington
Blvd., Chicago 6, III.
Gleason-Avery Co., Auburn, N. Y.
Globe Industries, Inc., 125 Sunrise Place, Dayton 7,

Ohio.

Ohio.

Gorell & Gorell, Haworth, N. J.

Hagen Mfg. Co., Inc., Baraboo, Wis.

Hansen Mfg. Co., Inc., Princeton 10, Indiana.

Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. Holtzer-Cabot Div. of National Pneumatic Co., Inc., 125

Amory St., Boston 19, Mass.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor
Corp., Electric Motor Corp., Racine, Wis. ADV. PG.
327.

Induction Motors Corp., 55-15 37th Ave., Woodside 77,

N.

Ingraham Co., E., Bristol, Conn. Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst, MINNEAPOLIS-HONEYWELL REGULATOR CO.,

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Ave., Philadelphia 44, Pa. ADV. PG. 304, 305.
Mission Electric Mfg. Co., Inc., 132-134 W. Colorado, Pasadena, Calif.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Reynolds Electric Co., 3000 River Rd., River Grove, III.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, III.
TELECHRON DEPT., General Electric Co., Ashland, Mass. ADV. PG. 23.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa.

### MOTORS—Timing

Amglo Corp., 2037 W. Division St., Chicago 22, III. Bristol Motor Co., Old Saybrook, Conn. Eagle Signal Corp., Moline, III.

Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y.

Lastern Air Devices, Inc., 585 Dean St., Drowlyn Ly,
N. Y.
Electyme Motor Products Corp., 565 W. Washington
Blvd., Chicago 6, 111.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,
N. Y.
Gleason-Avery Co., Auburn, N. Y.
Hagen Mfg. Co., Inc., Baraboo, Wis.
Hansen Mfg. Co., Inc., Princeton 10, Ind.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury,
Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 Elm St., Torrington,
Conn. ADV. PG. 226, 227.
Holtzer-Cabot Div. of National Pneumatic Co., Inc., 125
Amory St., Boston 19, Mass.
Induction Motors Corp., 55-15 37th Ave., Woodside 77,
N. Y.

N. Y.
Motoresearch Co., 1600 Junction Ave., Racine, Wis.
TELECHRON DEPT., General Electric Co., Ashland,
Mass. ADV. PG. 23.
Wallace & Tiernan Products, Inc., Belleville 9, N. J.

### MOUNTINGS

See also Bases

# MOUNTINGS-Meter Back

BARRY CORP., 700 Pleasant St., Watertown, Mass. ADV. PG. 318, 319.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, 111. ADV. PG. 66.

### MOUNTINGS—Vibration and Shock

Aerolite Electronics Corp., 507 26th St., Union City, Ames Co., W. R, 150 Hooper St., San Francisco 7,

Calif.
BARRY CORP., THE, 700 Pleasant St., Watertown, Mass. ADV. PG. 318, 319.
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.

Finn & Company, Inc., 1. R., 333 Vacabase, 2007 Sept. 10 York 54, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
General Tire & Rubber Co., Silentbloc Div., Wabash, Ind.
Industrial Precision Products Co., 315-325 N. Hoyne
Ave., Chicago 12, III.
LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 269. Mayfair Molded Products Corp., 4440 N. Elston Ave.,

Chicago 30, Ill.

METAL TEXTILE CORP., 647 E. First Ave., Roselle,
N. J. ADV. PG. 180.

Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10,

Calif.
ROBINSON AVIATION INC., Teterboro Air Terminal,
Teterboro, N. J. ADV. PG. 257.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
South River Metal Products Co., Inc., 377-379 Turnpike,

South River, N. J.
Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y.
UCINITE CO., DIVISION, UNITED-CARR FASTENER
CORP., 459 Watertown St., Newtonville, Mass. ADV.
PG. 101. INITED-CARR FASTENER CORP., Cambridge 42, Mass.

ADV. PG. 100. Linted States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

# MOUNTS—Antenna

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island
City 1, N. Y.
Camera Equipment Co., 1600 Broadway, New York, N. Y.
Clear Beam Television Antenna Co., 100 Prospect Ave.,

Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.
Cutler Metal Products Co., 1025 Line St., Camden, N. J. GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, Ill. ADV. PG. 120.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
Industrial Precision Products Co., 315-325 N. Hoyne Ave., Chicago 12, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
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.
Philco Corp., Tioga & C Sts., Philadelphia, Pa.
Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
Premax Products Div., Chisholm-Ryder Co., Inc., Niagara-Falls 2, N. Y.
Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
Rostan Corp., 383 Kent Ave., Brooklyn 11, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
South River Metal Products Co., Inc., 377-379 Turnpike,
South River, N. J.

TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

PG. 448.
Telrex, Inc., Rutherford & Neptune Highway, Asbury Park, N. J.
Transco Products, Inc., 12210 Nebraska Ave., Los Angeles

Varren Mfg. Co., Inc., 250 East St., New Haven, Conn. Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd., Needham Heights 94, Mass.

### MOUNTS—Thermistor

Cubic Corp., 2841 Canon St., San Diego 6, Calif. De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, De Mornay-Bonardi, Inc., 3223 Burton Ave., Burpank, Calif. General Communication Co., 530 Commonwealth Ave., Boston 15, Mass. ADV. PG. 160.

### MULTIPLIERS-Crystal

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
NUCLEAR RESEARCH CORP., 2563 Grays Ferry Ave.,
Philadelphia 46, Pa. ADV. PG. 301.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.

### MULTIPLIERS—Frequency

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
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. 50, 51.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.
Radio Engineering Labs., Inc., 36-40 37th St., Long
Island City 1, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.

### MULTIPLIERS—Meter

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 90.
Burlington Instrument Co., Burlington, Iowa.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

Calif.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis,

Esterline-Angus Co., Inc., P. U. Box 590, Audienaporto, Ind.
Ind.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. ADV. PG. 146, 147.
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
Precision Resistor Co., 334 Badger Ave., Newark 8, N.J. Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, III.

12, III. Sensitive Research Instrument Corp., 9 Elm Ave., Mt.

Vernor, N. Y.
Supreme, Inc., Greenwood, Miss.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578.
Pittsburgh 30, Pa. ADV. PG. 109-115.

# MULTITESTERS

See Testers-Multitesters

# MULTIVIBRATORS

See Vibrators—Multivibrators

### MUSIC SYSTEMS—Industrial and Commercial

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
Breloo Electronics Corp., 55 Vandam St., New York 13, N. Y.

N. Y. Electronic Development Lab., 43-07 23rd Ave., Long

Electronic Development Lab., 43-07 23rd Ave., Long Island City 5, 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.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
Newcomb Audio Products Co., 6824 Lexington Ave.,
Hollywood 38, Calif.
RADIO CORP. OF AMERICA., Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inslde Back & Back
Covers.

Rauland-Borg Corp., 3515 W. Addison St., Chicago 18,

Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

### NAILS—Special

Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y. Atlas Tack Corp., Pleasant St., Fairhaven, Mass. ELASTIC STOP NUT CORP., 2330 Vauxhall Rd., Union, N. J. ADV. PG. 291. Hassall, Inc., John, Clay & Oakland Sts., Brooklyn 22, N. Y. Tinnerman Products, Inc., P. O. Box 6688 Dept. No. 16, Cleveland 1, Ohio.

### NAME PLATES

See Plates, Name—Metal or Plastic

# **NEEDLES—Cutting**

American Laubscher Corp., 333 W. 52nd St., New American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y. ADV. PG. 289.

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. & Seventh Ave., Whitestone, N. Y.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y.

Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago, III.

Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 15, III. Permo, Inc., 6415 Ravenswood Ave., Chicago 26, III.
Recordisc Corp., 395 Broadway, New York, N. Y.
Recoton Corp., 251 Fourth Ave., New York 10, N. Y.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10,
III. ADV. PG. 414.

Acton Co., Inc., H. W., 370 7th Ave., New York 1,

# NEEDLES-Playback

Acton Co., Inc., H. W., 370 7th Ave., New York 1, American Laubscher Corp., 333 W. 52nd St., New York American Laubscher Corp., 333 W. Schloder, 19, N. Y.
19, N. Y.
Astatic Corp., The, Conneaut, Ohio.
Audak Co., 500 Fifth Ave., New York, N. Y.
AUDIO DEVICES, INC., 444 Madison Ave., New York
22, N. Y. ADV. PG. 289.
Capps & Co., Inc., Frank L., 244 W. 49th St., New
York 19, N. Y.
Clarkstan Corp., 11921 SW. Pico Bivd., Los Angeles 64,
Calif.

Calif.
Duotone Co., Inc., Keyport, N. J.
Electrovox Co., Inc., 60 Franklin St., East Orange, N. J.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, Ill. ADV. PG. 120.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee

5, Wis.
Jensen Industries Inc., 329 S. Wood St., Chicago, III.
Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 15,

III.
Permo, Inc., 6415 Ravenswood Ave., Chicago 26, III.
Pfanstiehl Chemical Co., Metallurgical Div., 104 Lake
View Ave., Waukegan, III.
Recordisc Corp., 395 Broadway, New York, N. Y.
Recoton Corp., 251 Fourth Ave., New York 10, N. Y.
Royal Diamond Tool Co., 403 Statler Bldg., Boston 16,
Mass.

Mass.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago
10, III. ADV. PG. 414.
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, III.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.
Gates Radio Co., Quincy, III.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248251. Scotter Root MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347. Standard Electronics Corp., 285 Emmet St., Newark,

N. J.
Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.

# **NETWORKS—Matching**

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 484.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Gates Radio Co., Quincy, Ill.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Cal.
Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320. Standard Electronics Corp., 285 Emmet St., Newark,

Standard Electronics Corp., 200 Elimino N. J.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Technical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave.,
White Plains, N. Y. ADV. PG. 338.

### **NETWORKS—Pulse Forming**

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

Corson Electric Mfg. Corp., 540 39th St., Union City, N. J.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

DEUTSCHMANN CORP., TOBE, 921 Providence Highway, Norwood, Mass. ADV. PG. 280. Millen Mfg. Co., James, 150 Exchange St., Malden,

Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.

Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Sprague Electric Co., 125 Marshall St., North Adams,

Yonkers, N. Y. ADV. PG. 347.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.

ADV. PG. 311.

Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

# NUTS

Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.

Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa. American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y. 19, N. Y. Anti-Corrosive Metal Products Co., Castleton-on-Hudson,

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. 342.
Central Screw Co., 3501 Shields Ave., Chicago 9, III.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20. Conn.

bury 20, Conn.
Continental Screw Co., New Bedford, Mass.
Dial Screw Products Co., Inc., 32-21 58th St., Wood-

Dial Screw Products Co., Inc., 22-21 Soul St., Visual Side, N. Y.

FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 498. Ferner Co., R. Y., 110 Pleasant St., Malden, Mass. GENERAL CEMENT MFG. Co., 919 Taylor Ave., Rockford, Ill. ADV. PG. 120.

Gries Reproducer Corp., 100 Willow Ave., New York St., N. Y.

ford, III. ADV. 1G. ADV. New York 54, N. Y. Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, III. INSULINE CORP. 0F AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Obio

Ohio.

National Screw & Mfg. Co., The, Cleveland 4, Ohio.

Pheoli Mfg. Co., 5700 Roosevelt Rd., Chicago 50, III.

Progressive Mfg. Co., 50 Norwood St., Torrington, Conn.

Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.

Russell, Burdsall & Ward Bolt & Nut Co., Port Chester,

N. Y.

N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Shakeproof, Inc., Div. of Illinois Tool Works, 2501 N.
Keeler Ave., Chicago 39, Ill.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,

N. Y.
Standard Locknut & Lockwasher, Inc., 501 N. Capitol
Ave., Indianapolis 4, Ind.
Star Stainless Screw Co., 206 Union Ave., Paterson 2,
N. J.

Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, III. Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, III. United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, III.

United Screw & Bott Corp., Chicago 8, Ill.
Waltham Screw Co., 77 Rumford Ave., Waltham, Mass.
Westfield Metal Products Co., Inc., Elm & Burton Sts., Westfield, Mass.

### **NUTS—Self-Locking**

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.

Boots Aircraft Nut Corp., 55 John St., Stamford, Conn. ELASTIC STOP NUT CORP., 2330 Vauxhall Road, Union, N. J. ADV. PG. 291

N. J. ADV. PG. 291.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland,

Ohio.
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, Inc., Div. of Illinois Tool Wks., 2501 N.
Keeler Ave., Chicago 39, III.
Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, III.
Stronghold Screw Products, Inc., 216-222 West Hubbard
St., Chicago 10, III.

St., Chicago 10, III.
Thompson-Bremer Co., 1640 W. Hubbard St., Chicago, III.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 100.

### NUTS-Self-Sealing

Radio Frequency Labs, Inc., Boonton 2, N. J.

### OHMMETERS

See Instruments—Electrical Measuring

# OPTICAL EQUIPMENT AND SPECIALTIES

Bache & Co., Semon, 636 Greenwich St., New York 14, Baird Associates, 33 University Rd., Cambridge 38, Mass. Bausch & Lomb Optical Co., 635 S. Paul St., Rochester 2, N. Y.

Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36,

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 12, Pa. Clarkstan Corp., 11921 S.W. Pico Blvd., Los Angeles 64,

Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
Farrand Optical Co., Inc., 4401 Bronx Blvd., New York

Farrand Optical Co., Inc., 4401 Brond Cover, Ren 1918
66, N. Y.
Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, III.
Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda

Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass.
Liberty Mirror Div., Libbey-Owens-Ford Glass Co., Tarentum, Pa.
Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 220.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

N. Y. Viewlex, Inc., 35-01 Queens Blvd., Long Island City 1,

N. Y. Zenith Optical Co. Div. Polan Industries, Huntington 19,

Zenith Optical Lab., 1940 Great Neck Rd., Copiague, N. Y.

### OSCILLATORS—Audio Fork Controlled

Doelcam Inc., 56 Elmwood St., Newton 58, Mass. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
PHILAMON LABORATORIES, 5717 Third Ave., Brooklyn 20, N. Y. ADV. PG. 244.
Riverbank Laboratories, Dept. of Engineering, Geneva, Ill. TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 526.
Varo Mfg. Co., Inc., Box 638, Garland, Texas.

# OSCILLATORS—Audio Frequency

Audio Products Corp., 2265 Westwood Blvd., Los Angeles

Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

BENDIX AVIATION CORP., PACIFIC DIVISION, 1160 Sherman Way, North Hollywood, Calif. ADV. PG. 129.

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49.
British Industries Corp., 164 Duane St., New York 13, N. Y.

N. Y.
Brown Electro-Measurement Corp., 4637 Southeast Hawthorne Blvd., Portland 15, Ore.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England. Clarkstan Corp., 11921 S.W. Pico Blvd., Los Angeles 64, Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
N. S., Canada.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.

DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 474.
ELECTRONIC MEASUREMENTS COMPANY, Red Bank, N. J. ADV. PG. 488.
Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y. EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Color. 10, Color.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 41.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. New York 4, N. Y. Measurement Engineering, Ltd., Arnprior, Ontario, MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. ADV. PG. 516.

Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, III.

Muirhead & Co., Inc., Beckenham, Kent, England.

Oak Ridge Products Mfg. Div., Video Television Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y. Radex Corp., 2076 N. Elston Ave., Chicago 14, III.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers. Covers.

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.

Supreme, Inc., Greenwood, Miss.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. ADV. PG. 464, 529.

Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

Walkirt Co., 145 W. Hazel, Inglewood, Calif.

Weinschel Engineering Co., 919 Jesup Blair Dr., Silver Springs, Md. Covers.

Springs, Md.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

OSCILLATORS—Cavity

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Decimeter, Inc., 1430 Market St., Derwer 2, Colo.
General Communication Co., 530 Commonwealth Ave., General Communication Co., 530 Communication Boston 15, Mass.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

Telewave Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y.

VECTONIA MIC. 235 High St., Waltham, Mass. ADV.

Brooklyn 11, N. Y.
VECTRON, INC., 235 High St., Waltham, Mass. ADV.
PG. 384.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

# OSCILLATORS—Crystal

Bassett Inc., Rex, 307-311 N. W. First Ave., Fort Lauderdale, Fla.
BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa.
ADV. PG. 283.
CLARK CRYSTAL CO., 2 Farm Rd., Mariboro, Mass. ADV. PG. 481.

CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.

DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 474. Eldson Electronic Co., 1802 N. Third St., Temple,

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn 13, N. Y.
NORRMAN LABORATORIES, ERNST, Williams Bay, WIS.
ADV. PG. 434. Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y. ADV. PG. 434.

NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 50, 51.

Piezo Products Co., Whitney St., Framingham, Mass. Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. Standard Electronics Corp., 285 Emmet St., Newark, N. J.
Standard Piezo Co., 127 Cedar St., Carlisle, Pa.
Technical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

OSCILLATORS, GRID DIP-High Frequency & vhf

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG.

158, 159.
Short Wave Plastic Forming Co., 2921 W. Alameda St.,
Burbank, Calif.
Sylvan Electronic Labs., Inc., Broadalbin, N. Y.
Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

OSCILLATORS-Microwave Power

Decimeter, Inc., 1430 Market St., Denver 2, Colo. General Communication Co., 530 Commonwealth Ave.,

General Communication Co., 530 Commonwealth Ave., Boston 15, Mass. GENERAL RADIO CO., 275 Massachusetts Ave., Cam-bridge 39, Mass. ADV. PG. 82, 83. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34. Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

LABORATORY FOR ELECTRONICS, INC., 43 Leon St.,

LABORATORY FOR ELECTRONICS, INC., 43 Leon St., Boston 15, Mass. ADV. PG. 239.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 232, 233.

Radiation, Inc., Melbourne, Fla.
Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213.

VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.

PG. 384.
Waveline, Inc., North Caldwell, N. J.
Waveline, Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass. Wheeler Laboratories, Inc., Great Neck, N. Y.

# OSCILLATORS—Oven Crystal Control

BLILEY ELECTRIC CO., Union Station Bldg., Erle, Pa.

BLILEY ELECTRIC CO., Union Station Bidg., Erie, Pa. ADV. PG. 283.
Gates Radio Co., Quincy, III.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
NORRMAN LABORATORIES, ERNST, Williams Bay, Wis.

ADV. PG. 434. Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

Standard Crystal Co., 400 Armstrong Ave., Kansas City

1, Kans.
Technical Materiel Corp., P. O. Box 142, 121 Spencer Place, Mamaroneck, N. Y.

# OSCILLATORS—Radio Frequency

AMERICAN ELECTRONEERING CORP., 5025-29 W.
Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.
BARKER & WILLIAMSON, 235 Falrfield Ave., Upper
Darby, Pa. ADV. PG. 397.
Bassett Inc., Rex., 307-311 N. W. First Ave., Fort
Lauderdale, Fla.
RENDLY AVIATION. CORP. DACISIO DAVISION.

Lauderdale, Fla.
BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, North Hollywood, Calif. ADV. PG. 129.
Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Callf.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas. CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. ADV. PG. 515.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J.

ADV. PG. 474.
Eldico of New York, Inc., 44-31 Douglaston Pkwy, Douglaston, N. Y.
Electronic Processes Corp., 328 N. Market, San Jose

ELECTRONIC MEASUREMENTS COMPANY, Red Bank, N. J. ADV. PG. 488.
Electronic Measurements Corp., 280 Lafayette St., New

York 12, N. Y.
Essex Electronics, Berkeley Heights, N. J.
Gates Radio Co., Quincy, III.
General Communication Co., 530 Commonwealth Ave.,

General Communication Co., Boston 15, Mass.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, Ill. HAYDU BROTHERS, Plainfeild, N. J. ADV. PG. 293.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Calif. ADV. PG. 29-34. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio. Jackson Electrical Instrument Co., 16 S. Patterson

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, III.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 41.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.
MEASUREMENTS CORP. Boonton, N. J. ADV. PG. 158, 159.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ACV. PG. 50, 51.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

& Back Lovers.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
Standard Electronics Corp., 285 Emmet St., Newark, N. J.

Standard Electronics Corp., 200 School, N. J.
N. J.
Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
Supreme, Inc., Greenwood, Miss.
Technical Materiel Corp., The, P. O. Box 142, 121
Spencer Place, Mamaroneck, N. Y.
TECHNOLOGY INSTRUMENT CORP.,
Acton, Mass. ADV. PG. 394, 395.
Telectro Industries Corp., 35-18 37th St., Long Island
City 1, N. Y.

City 1, N. Y.
Thordarson-Meissner Mfg. Divisions, Mt, Carmel, III.
Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio. Weitronic Co., 19500 West Eight Mile Rd., Detroit 19,

Mich.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

### OSCILLATORS-Ultra-Low Frequency

BORG EQUIPMENT DIVISION, The George W. Borg Corp., BORG EQUIPMENT DIVISION, The George W. Borg Corp., Janesville, Wls. ADV. PG. 492, 493. HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293. 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. 41. MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355. Muirhead & Co., Ltd., Beckenham, Kent, England. Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

# OSCILLATORS—Ultrasonic

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 523.
Bludworth Marine Div., Natlonal-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Dhio. ADV. PG. 312, 313.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HEWLETT-PACKARD CO., 395 Page Mtill Rd., Palo Alto Calif. ADV. PG. 29-34.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London W. C. 2, England.
Plezo Products Co., Whitney St., Framingham, Mass. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.
Rich-Roth Laboratorles, East Hartford, Conn.

Rich-Roth Laboratories, East Hartford, Conn.

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.
Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.

### **OSCILLOGRAPHS** See Oscilloscopes

# OSCILLOGRAPHS—Direct Writing See Oscillographs, Recording

# OSCILLOGRAPHS—Cathode Ray Camera

Airmec Laboratories, Ltd., High Wycombe, Buckinghamssor (Canada) Ltd., 301-303 Windsor St., Halifax, Cossor (Canada) Ltd., 301-303 Windsor St., Halitax, N. S., Canada. Du Mont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J. Electro-Medical Lab., Inc., South Woodstock 8, Vt. Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, Ill. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9. Colo. ADV. PG. 480. Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmurst, N. Y.

Telethrome Inc., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.

### OSCILLOGRAPHS—Cathode Ray Recording, Multichannel

Central Research Laboratories, Inc., Red Wing, Mich. 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., 1500 Main Ave., Clifton, N. J.
Electro-Medical Lab., Inc., South Woodstock 8, Vt. Electro-Medical Lab., Inc., South Woodstock 8, Vt. delphia 18, Pa.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.

Monticello Ave., Skokie, III.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.
Milfer Corp., William, 325 N. Halstead St., Pasadena

9, Colo. ADV. PG. 480. Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif. Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

# OSCILLOGRAPHS—Direct Writing

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass. Hathaway Instrument Co., 1315 S. Clarkson St., Denver

October 10, Colo.

Offiner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, III.

Photron Instrument Co., 6516 Detroit Ave., Cleveland

# OSCILLOGRAPHS—Multi-Element

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.
EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.
Electrofax Corp., 30 Burtis Ave., New Canaan, Conn. Electro-Medical Lab., Inc., South Woodstock 8, Vt. Halthaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.
Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla. BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York

Tulsa, Okla.

Miller Corp., William, 325 N. Halstead St., Pasadena 8,

Calif.
Photron Instrument Co., 6516 Detroit Ave., Cleveland

2, Ohio.
Southwestern Industrial Electronics Co., 2831 Post Oak
Rd., P. O. Box 13058, Houston 19, Texas.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### OSCILLOGRAPHS—Recording

BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Oklahoma.
Cinema-Television Ltd., Worsley Bridge Rd., London, Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Calif.
EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 441.
Electrofax Corp., 30 Burtis Ave., New Canaan, Conn. Electro-Medical Lab., Inc., South Woodstock 8, Vt. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Geotronic Labs., Inc., Dallas 8, Texas.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9,

Colo. ADV. PG. 480.
Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.

8, Laiii. Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y. Offiner Electronics, Inc., 5320 N. Kedzie Ave., Chicago

Offiner Electronics, Inc., 5320 N. Reuzle Ave., Cincago 25, III.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.
SOUND APPARATUS CO., Stirling, N. J. ADV. PG.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# OSCILLOGRAPHS—Transient Study See Oscilloscopes—Cathode Ray

### OSCILLOSCOPES

See Oscillographs 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. ADV. PG. 471.

Cinema-Television Ltd., Worsley Bridge Rd., London,
S.F. 26 Fonland. 1, N. Y. ADV. PG. 471.
Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.
Brujac Electronic Corp., 103 Lafayette St., New York 13, N. Y.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Du Mont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 149.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Mfg. Co., 2961 E. Colorado St., Pasadena 8,

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Jackson Electrical Instrument 60., 10 3. Fatterson Sivu.,
Dayton 1, Ohio.
JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.
LABORATORY FOR ELECTRONICS, INC., 43 Leon St.,
Boston 15, Mass. ADV. PG. 239.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG.

LINEAR EQUIPMENT LABS., Brightwater Place, Massa-pequa, N. Y. ADV. PG. 518. Millen Mfg. Co., James, 150 Exchange St., Malden,

Mass.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W.C. 2, England.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.
Precision Apparatus Co., Inc., 92-27 Horace Harding
Blvd., Eimhurst, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
ADV. PG. 295, Inside Back & Back Covers.
Radiomarine Corp. of America, 75 Varick St., New
York 13, N. Y.
Resdel Engineering, 2309 Riverside Drive, Los Angeles
39, Calif.

39, Calif.
Simpson Electric Co. Div., American Gage & Machine
Co., 5218 W. Kinzie St., Chicago 44, III.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts
Ave., Cambridge 39, Mass. ADV. PG. 351.
Supreme, Inc., Greenwood, Miss.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.
Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
Television Equipment Corp., 238 William St., New York 7, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
Triplett Electrical Instrument Co., Harmon Rd., Bluffton. Ohio.

ton, Ohio.
WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St.,
Philadelphia 25, Pa. ADV. PG. 52, 53.

# OSCILLOSCOPES, Cathode Ray-Multiple

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York
1, N. Y. ADV. PG. 471.
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.,
1500 Main Ave., Clifton, N. J.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
Resdel Engineering, 2309 Riverside Drive, Los Angeles
39, Calif.

Resdel Engineering, 2509 Riverside Drive, Los Angeles 39, Calif. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 52, 53.

### OSCILLOSCOPES—Portable

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York I. Y. ADV. PG. 471. Electronic Corp., 103 Lafayete St., New York Brujac Electronic Corp., 103 Lafayete St., New York 13, N. Y. Cossor (Canada), Ltd., 301-303 Windsor St., Halifax,

Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Du Mont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clinton, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
LABORATORY FOR ELECTRONICS, INC., 43 Leon St., Boston 15, Mass. ADV. PG. 239.

Boston 15, Mass. ADV. PG. 239.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG.

Jago LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 518.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.
Radio City Products Co., Inc., 152 W. 25th St., New
York, N. Y. Mass.

Radio City Products Co., Inc., 132 W. Basic Corp., N. Y.
ADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
ADV. PG. 295, Inside Back & Back Covers.
Radiomarine Corp. of America, 75 Varick St., New
York 13, N. Y.
Resdel Engineering, 2309 Riverside Drive, Los Angeles

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif. Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III. Supreme, Inc., Greenwood, Miss. SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558. Tektronix, Inc., P. O. Box 831, Portland 7, Oregon. Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena. Calif.

Gardena, Calif.

Television Equipment Corp., 238 William St., New York 38, N. Y.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

Triplett Electrical Instrument Co., Harmon Rd., Bluff-ton Ohio.

ton, Ohio.
WATERMAN PRODUCTS CO., INC., 2445-63 Emerald
St., Philadelphia 25, Pa. ADV. PG. 52, 53.

# OSCILLOSCOPES—Portable Projection

BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 466.
Brujac Electronic Corp., 103 Lafayette St., New York 13, N. Y.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DuMont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J.
Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. ADV. PG. 464, 529.

Television Equipment Corp., 238 William St., New York 7, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

### OVENS-Crystal

BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 283.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass.
ADV. PG. 481.
KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, III.
ADV. PG. 161.
Litton Industries, San Carlos, Calif.
Miller Labs., August E., 9226 Hudson Blvd., North
Bergen, N. J.
Marker Products Co., 815 Framont Ave. South Pasadosa

Bergen, N. J. Monitor Products Co., 815 Fremont Ave., South Pasadena,

Calif.

OHMWEVE CO., Darcy St., West Hartford 6, Conn.
ADV. PG. 342.

Soreng Mfg. Corp., 9555 Eden Ave., Schiller Park, III.
Standard Crystal Co., 400 Armstrong Ave., Kansas City Standard Piezo Co., 127 Cedar St., Carlisle, Pa.

Acme Electric Heating Co., 1217 Washington St., Boston,

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. Buck Engineering Co., Inc., 37-41 Marcy St., Freehold,

N. J.
EISLER ENGINEERING CO., INC., 740 S. 13th St.,
Newark 3, N. J. ADV. PG. 362.
GRIEVE-HENDRY CO., 1101 N. Paulina St., Chicago 22,
III. ADV. PG. 463.
Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago

37, III.

Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio. Miskella Infra-Red Co., E. 73rd & Grand Ave., Cleve-

land 4, Ohio.

Precision Scientific Co., 3737 W. Cortland St., Chicago

STEINER-IVES CO., 16 Avenue L, Newark 5, N. J.

ADV. PG. 390.
Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
Ther Electric & Machine Works, 15 S. Jefferson St., Chi-

cago, III.
Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.
Young Brothers Co., 1829 Columbus Rd., Cleveland, Ohio.

### 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.

Radiocrafters Division of Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass. Ther Electric & Machine Works, 15 S. Jefferson St., Chi-

### PAINTS—Conductive (For Printed Circuits)

Acheson Colloids Co., 1950 Washington St., Port Huron,

du Pont de Nemours & Co., Inc., E. I., Wilmington 98,

Delaware.

EMERSON & CUMING CO., 126 Massachusetts Ave.,
Boston 15, Mass. ADV. PG. 35.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

Handy & Harman, 32 Fulton St., New York 38, N. Y.

Hanovia Chemical & Mfg. Co., 233 NJRR Ave., Newark,
N. 1

N. J.
Horn Co., Inc., A. C., 10th St. & 44th Ave., Long
Island City 1, N. Y.
Javex, 921 State, Garland, Texas.
Metaplast Process, Inc., 3451 56th St., Woodside, N. Y.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.

# PANELS—Instrument

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 495.
Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J. Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
Ames Co., W. R., 150 Hooper St., San Francisco 7, Calif.

Anderson & Sons Inc., N. Elm & Notre Dame Sts.,

Anderson & Sons Inc., N. Elm & Notre Dame Sts., Westfield, Mass.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.
Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 402.
Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles Cole Instrument Co., 1320 S. Grand Arc., Los Colleges
15, Calif.
Colgate Mfg. Corp., Lindenhurst, N. Y.
Corry Jamestown Mfg. Co., Corry, Pa.
Cortland Industries, Inc., 4545 Cortland St., Chicago

Cortland Industries, Inc., 4545 Cortland St., Chicago 39, III.
Croname, Inc., 3701 Ravenswood Ave., Chicago, III.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Etched Products Corp., 39-01 Queens Blvd., Long Island
City, N. Y.
Falstrom Co., 44 Falstrom Court, Passaic, N. J.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Laminated Products, Inc., 2857 S. Halstead St.,
Chicago 8, III.

General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.
Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
Lansky Die Cutting Co., 1921/2 Greene St., New York
12, N. Y.
Lojack Precision Corp., 32-60 62 St., Woodside, N. Y.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
Inglewood, Calif.
Masonite Corp., 111 W. Washington St., Chicago 2, III.
Minute Man Products, Inc., 430 1. 102nd St., New York,
N. Y.

N. Y.
New England Etching & Plating Co., 25 Spring St.,
Holyoke, Mass.
Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 2, Calif.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park,
III. ADV. PG. 66.
Roller-Smith Corp., Bethlehem, Pa.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,
N. Y.

N. Y. Telephonics

N. Y.
Telephonics Corp., Park Ave., Huntington, N. Y.
U. S. RADIUM CORP., 535 Pearl St., New York 7,
N. Y. ADV. PG. 272.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn
16, N. Y. ADV. PG. 483.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wheelco Instruments Div., Barber-Colman Co., Rockford,
III.

### PANELS-Receiver & Transmitter

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464. Ames Co., W. R., 150 Hooper St., San Francisco 7,

Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey
Ave., Brooklyn 14, N. Y. ADV. PG. 422.
BALTIC METAL PRODUCTS Co., 120 Sutton St.,
Brooklyn, N. Y. ADV. PG. 201.
Buck Engineering Co., Inc., 37-41 Marcy St., Freehold,

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohlo. Cole instrument Co., 1320 S. Grand Ave., Los Angeles

Colgate Mfg. Corp., Lindenhurst, N. Y.
Columbia Metal Box Co., 260 E. 143rd St., New York
N. Y.

Croname, Inc., 3701 Ravenswood Ave., Chicago, III.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Donnelly Electric & Mig. Co., 3050 Washington St.,
Boston, Mass.

Electro Craft Inc., 68 Jackson St., Stamford, Conn. Etched Products Corp., 39-01 Queens Blvd., Long Island

City, N. Y.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn.
Lojack Precision Corp., 32-6062 St., Woodside, N. Y.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,

Magna Electronics Co., 9810 Anza Ave., P. U. 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.
New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
Par-Metal Products Corp., 32-62 49th St., Long Island

City 3, N. Y.
Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 2, Calif.
Standard Electronics Corp., 285 Emmet St., Newark,

N. J.
Telephonics Corp., Park Ave., Huntington, N. Y.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn
16, N. Y. ADV. PG. 483.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

# PANELS-Relay Rack

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 495.
AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Ames Co., W. R., 150 Hooper St., San Francisco 7, Calif.

Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422.
BALTIC METAL PRODUCTS CO., 120 Sutton St., Brooklyn, N. Y. ADV. PG. 201.
Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.

CHURCHILL CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 396. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15,

Cole Instrument Co., 1320 S. Grand Att., Color Callf.
Callf.
Colgate Mfg. Corp., Lindenhurst, N. Y.
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.
Etched Products Corp., 39-01 Queens Blvd., Long Island
City N. Y

City, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-

Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati

25, Ohio.
Lojack Precision Corp., 32-60 62 St., Woodside, N. Y.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
Inglewood, Calif.
Masonite Corp., 111 W. Washington St., Chicago 2, III.
Minute Man Products, Inc., 430 E. 102nd St., New York,
N. Y.

Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. Par-Metal Products Corp., 32-62 49th St., Long Island

City 3, N. Y.
Phoenix Electronics, Inc., 50 Island St., Lawrence,

PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 506. Standard Electronics Corp., 285 Emmet St., Newark,

N. J.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16,
N. Y. ADV. PG. 483.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### PAPER

### See Insulation Materials

### PAPER—Facsimile Recording

Altax Paper & Engineering Co., Washington St., P. 0.
Box 125, Westboro, Mass.
Eastman Kodak Co., Industrial Photographic Div., 343
State St., Rochester 4, N. Y.
Haloid Co., 6 Haloid St., Rochester, N. Y.
Hogan Laboratories, Inc., 155 Perry St., New York 14,
N. Y.
Standard Talach

N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.

### PERMEAMETERS-High H

Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29,

# PHENOLIC MOLDING COMPOUNDS

See Insulating Compounds

### PHONOGRAPHS—Electric Phonographs & Record Players

Admiral Corp., 3800 Cortland St., Chicago 47, III. Ansley Mig. Co., Arthur, Doylestown, Pa. Audio Industries, Michigan City, Ind. Audio-Master Corp., 341 Madison Ave., New York 17,

N. Y. Autocrat Radio Co., 5024 Elm St., Skokle B, III. Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.

Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III. Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41,

Davis & Co., J. W., 9212 Denton Drive, Dallas, Texas. Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, 111.

III.
Elex Co., 69-19 215th St., Bayside, N. Y.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17,
N. Y. ADV. PG. 274.
Fairchild Recording Equipment Co., 154th St. and 7th
Ave., Whitestone, N. Y.
Fidelity Amplifier Co., 703 Willow St., Chicago 14, III.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

N. Y.
Gates Radio Co., Quincy, III.
Gates Radio Co., Taylor & Olive Sts., Elyrla, Ohlo.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Hartley Co., Ltd., H. A., 152 Hammersmith Rd., London
W. 6, England.
M. P. Concert Installations, Fairfield 10, Conn.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,
Inglewood, Calif.
Meck Industries, John, Liberty at Pennsylvania, Plymouth,
Ind.

Ino.
Metropolitan Electronics & Instrument Co., 106 Fifth
Ave., New York 11, N. Y.
Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee,

Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J.

# 1952-1953 DIRECTORY of

Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Covers.

Rek-O-Kut Co., Inc., 38-03A Queens Blvd., Long Island City, N. Y.

Scott, Inc., Hermon bridge 39, Mass.
Shevers, Inc., Harold, 123 West 64th St., New York 23, N. Y.

Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. Sonic Industries, Inc., 221 W. 17th St., New York 11, N. Y.

Symphonic Radio & Electronic Corp., 160 Washington St., Boston 14, Mass. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,

N. J. ADV. PG. 262.
United Pressed Products Co., 741 W. Harrison St., Chicago 7, III.
V-M Corp., Benton Harbor, Mich.
Video Corp. of America, 229 W. 28th St., New York 1, N. Y.

Waters Conley Co., 501 First St. N. W., Rochester, Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago

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.

# PHOTOFLASH EQUIPMENT-Electronic

Amglo Corp., 2037 West Division St., Chicago 22, III. Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge,

Dormitzer Electric Co., Mass.

Mass.
Eastman Kodak Co., Industrial Photographic Div., 343
State St., Rochester 4, N. Y.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn
17, N. Y. ADV. PG. 274.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

CORP. 130 F. 5th Ave., Denver

Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.

Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.

Calif.
Jen Products, Inc., 419 W 42nd St., New York, N. Y.
Kemlite Labs., 1819 Grand Ave., Chicago 22, III.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
Photocon Research Products, 421 N. Foothill Blvd.,
Pasadena, Calif.
Photographic Products, Inc., 6916 Romaine St., Hollywood 38, Calif.
Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, III.
West Coast Electronics Co., 1601 S. Burlington St.,
Los Angeles 6, Calif.

# PHOTOGRAPHIC MATERIALS—Films and Papers For Recording Instruments

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.

Delaware.

Eastman Kodak Co., Industrial Photographic Div., 343
State St., Rochester 4, N. Y.

Haloid Co., The. 6 Haloid St., Rochester, N. Y.

Peerless Photo Products, Shoreham, N. Y.

### PHOTOGRAPHIC MATERIALS—Spectographic Instruments

Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y. State St., Rochester 4, N. Y. Jarrel-Ash Co., 165 Newberry St., Boston 16, Mass.

### 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.

X-Ray Dept. of General Electric Co., 4855 Electric Ave.,
Milwaukee 14, Wis.

### **PHOTOMETERS**

Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.

Farrand Optical Co., Inc., 4401 Bronx Blvd., New York

66, N. Y. 66, N.

Patwin Instruments a Div. of The Patent Button Co., Waterbury 88, Conn.

### PH METERS, RECORDERS AND COMPARATORS See Meters

**PHOTOCOPYERS** See Machines

### PHOTOTUBES AND PHOTOCELLS See Tubes

# PICKUPS—Crystal See Crystal Cartridges

### PICKUPS—Industrial

Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. Glenco Corp., Metuchen, N. J. Gulton Mfg. Corp., Metuchen, N. J. INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Phillips Petroleum Co., Instruments Div., Bartlesville,

Radio Music Corp., 84 S. Water St., Port Chester, N. Y.

### PICKUPS—Magnetic

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. Astatic Corp., The, Conneaut, Ohio. Audak Co., 500 Fifth Ave., New York, N. Y. Clarkstan Corp., 11921 SW. Pico Blvd., Los Angeles 64,

DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla,

DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.

Doelcam Inc., 56 Elmwood St., Newton 58, Mass. Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul Minn.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Hartley Co., Ltd., H. A., 152 Hammersmith Rd., London W. 6, England.
M. B. MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 459.

ADV. PG. 459.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.

Okla.

PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 412.

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., 13331 Linwood Ave., Detroit 6. Mich.

### PICKUPS—Photoelectric

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Industrial Electronics Co., Inc., Hanover, Mass.
Photobell Company, 116 Nassau St., New York 7, N. Y.

# PICKUPS—Quartz Crystal

Commercial Research Laboratories, Inc., 20 Bartlett Ave., Commercial Research Laboratories, Inc., 20 Bartlett Ave.,
Detroit 3, Mich.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
Sperry Products, Inc., Danbury, Conn.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

# PICKUPS—Transcription and Phonograph

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. American Microphone Co., 370 S. Fair Oaks Ave., Pasa-

dena 1, Calif.
Astatic Corp., The, Conneaut, Ohio.
Audak Co., 500 Fifth Ave., New York, N. Y.
Califone Corp., 1041 N. Sycamore Ave., Hollywood 38,
Calif.

Clarkstan Corp., 11921 SW. Pico Blvd., Los Angeles 64,

ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.

Ave., Whitestone, N. Y.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

Glenco Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

Pfanstiehl Chemical Co., Metallurgical Div., 104 Lake View Ave., Waukegan, III.

PICKERING & CO., 309 Woods Ave., Oceanside, N. Y.

ADV. PG. 412.

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.

N. Y.
Proctor Soundex Corp., 133 N. 6th Ave., Mt. Vernon, N. Y. PRESTO RECORDING CORP., Paramus, N. J. ADV. PG.

Radio Music Corp., 84 S. Water St., Port Chester, N. Y. Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.

Weathers Industries, 510 Richey Ave., West Collingswood,

### PILOT LIGHT ASSEMBLIES

Aerolite Electronics Corp., 507 26th St., Union City, ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. American ADV. PG. 24. Electronics Corp., 157 Marconi Blvd., Colum-

bus, Ohio.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Bardwell & McAlister, Inc., 2950 Ontario, Burbank,

Bardwell & McAlister, Inc., 2950 Ontario, Burbank, Calif.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
DIAL LIGHT CO. OF AMERICA, INC., 900 Broadway, New York 3, N. Y. ADV. PG. 356.
Drake Mfg. Co., 1713 Hubbard St., Chicago 22, Ill. Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 498.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, Ill. ADV. PG. 120.
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. 248-251.

Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chl-

Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chlcago 40, III.

MONOWATT DEPT., General Electric Co., 66 Bissell St., Providence, R. I. ADV. PG. 22.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. RUSSELL & STOLL CO., INC., 125 Barclay St., New York 7, N. Y. ADV. PG. 387.

UCINITE CO., DIVISION, UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 101.

UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 100.

## PILOTS—Automatic

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

### PINS—Tubular

BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 503.

See Insulating Compounds

# PLASTIC INSULATION PARTS See INSULATION PARTS—Plastic Insulation

### PLASTIC MATERIALS Allvis

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, 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.
Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.

Delaware.

Delaware.

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. Plastic Process Co., Inc., 366 Madison Ave., New York 17, N. Y. Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Tennessee Eastman Co., Kingsport, Tenn.

### Cellulose Acetate Butvrate

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
Eastman Kodak Co., Industrial Photographic Div., 343
State St., Rochester 4, N. Y. State St., Rochester 4, IN. Y.
Fidellty Chemical Products Corp., 472 Frelinghuysen
Ave., Newark, N. J.
Gering Products, Inc., N. Seventh St. at Monroe Ave.,
Kenilworth, N. J.

Plastic Process Co., Inc., 366 Madison Ave., New York 17, N. Y.
Tennessee Eastman Co., Kingsport, Tenn.

### 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,

Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Delaware. 99, Delaware.

Monsanto Chemical Co., Plastics Div., Springfield, Mass.

### 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.

Dow Chemical Co., Midland, Mich.

Fidelity Chemical Products Corp., 472 Frelinghuysen Ave., Newark, N. Y.

Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.

Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.

99. Del. Panelyte Div., St. Regis Sales Corp., 230 Park Ave., New York 17, N. Y.

### Melamine Formaldehyde

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223.
Formica Co., The, 4614 Spring Grove Ave., Cincinnati

Formica Co., The, 4614 Spring Grove Ave., Cincinnati 32, Ohio.

Monsanto Chemical Co., Plastics Div., Springfield, Mass. National Vulcanized Fibre Co., Wilmington, Del. Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24 Sylvan Ave., Toledo 6, Ohio.
Synthane Corp., Oaks, Pa. Taylor Fibre Co., Norristown, Pa.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### Methyl Methacrylate

American Molding Powder & Chemical Corp., 703
Bedford Ave., Brooklyn 6, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98,
Delaware.

lastic Process Co., Inc., 366 Madison Ave., New York

# Phenol Fermaldehyde—(Phenolics)

Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Borden Co., The, Chemical Div., 350 Madison Ave., New York 17, N. Y. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223.

Durez Plastics & Chemicals, Inc., 1921 Walck Rd.,
N. Tonawanda, N. Y.

Formica Co., The, 4614 Spring Grove Ave., Cincinnati

Formica Co. 32, Ohio. General Ele

Primica Co., The, 4614 Spring Grove Ave., Cincinnati 32, Ohio.

General Electric Co., Chemical Dept., 1 Plastics Ave., Pittsfield, Mass.

Monsanto Chemical Co., Plastics Div., Springfield, Mass.

National Vulcanized Fibre Co., Wilmington, Del.

Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York 17, N. Y.

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.

Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24 Sylvan Ave., Toledo 6, Ohio.

Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis 4, Ind.

Rogers Corp., Manchester, Conn. Synthane Corp., Oaks, Pa.

Taylor Fibre Co., Norristown, Pa.

Valite Corp., Whitney Bldg., New Orleans 12, La.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

**Polyethylene** 

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.

Del.

EMERSON & CUMING CO., 126 Massachusetts Ave.,
Boston 15, Mass. ADV. PG. 35.

Gering Products, Inc., N. Seventh St. at Monroe Ave.,
Kenilworth, N. J.

IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63. Plastic Process Co., Inc., 366 Madison Ave., New York

### 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. 212.

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.

Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
Dow Chemical Co., Midland, Mich.
EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.
Formica Co., The, 4614 Spring Grove Ave., Cincinnati 32, Ohio.
Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa.
Monsanto Chemical Co., Plastics Div., Springfield, Mass.
Plastic Process Co., Inc., 366 Madison Ave., New York 17, N. Y. 17, N. Y.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

### Polytetrafluoroethylene

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223. du Pont de Nemours & Co., Inc., E. I., Wilmington 98,

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.

BLECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.

KINGS ELECTRONICS, 40 Marbiedale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.

Polymer Corp., The, Reading, Pa.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.

U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.

### Polytrifluorochlorethylene

Polytrifluorochlorethylene

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.

KELLOGG CO., M. W., P. O. Box 469, Jersey City 3, N. J. ADV. PG. 247.

Plax Corp., P. O. Box 1019, Hartford 5, Conn. Polymer Corp., The, Reading, Pa.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.

U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.

American Products Mfg. Co., Inc., 8127-33 Oleander St., American Products Mfg. Co., Inc., 8127-33 Uleander St.,
New Orleans 18, La.
American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
Bakelite Co., A Div. of Union Carbide & Carbon Corp.,
30 E. 42nd St., New York 17, N. Y.
Borden Co., The, Chemical Div., 350 Madison Ave., New
York 17, N. Y.
Catalin Corp. of America, 1 Park Ave., New York 16,
N. Y.

Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.

N. Y.

CIBA COMPANY, INC., 627 Greenwich St., New York 14, N. Y.

ADV. PG. 421.

Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.

EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.

FORMAN CO., B. G., 238 William St., New York 38, N. Y.

ADV. PG. 505.

General Electric Co., Chemical Dept., 1 Plastics Ave., Pittsfield, Mass.

Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144

E. Market St., Akron 16, Ohio.

Halowax Products Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.

Hercules Powder Co., Inc., 900 Market St., 199, Del.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
Melpar, Inc., 452 Swann Ave., Alexandria, Va. Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24
Sylvan Ave., Toledo 6, Ohio.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass.
ADV. PG. 377.
Taylor Fibre Co., Norristown, Pa.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
Valite Corp., Whitney Bidg., New Orleans 12, La.
ZOPHAR MILLS, INC., 112-130 26th St., Brooklyn 32, N. Y. ADV. PG. 517.

### 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.
Borden Co., The, Chemical Div., 350 Madison Ave., New York 17, N. Y.
Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24 Sylvan Ave., Toledo 6, Ohio.

# Vinyl Compounds

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.

American Resinous Chemical Co., 103 Foster St., Peabody, Mass.

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.

Dow Chemical Co., Midland, Mich.

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.

Del.
Goodrich Chemical Co., B. F., Rose Bidg., Cleveland 15,

Ohio.

Ohio.

Goodyear Tire & Rubber Co., Chemical Div., 1144 E. Market St., Akron 16, Ohio.

Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.

Kenilworth, N. J.
Houghton Laboratories Inc., 322 Bush St., Olean, N. Y.
Houghton Laboratories Inc., 322 Bush St., Olean, N. Y.
HYNGTQN VARNISH & INSULATOR CO., 6 Argyle
Terrace, Irvington 11, N. J. AFV. PG. 62, 63.
Monsanto Chemical Co., Plastics Div., Springfield, Mass.
Plastic Process Co., Inc.,
17, N. Y.
Radiocrafters Division of 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., The, Akron 9, Ohio.

# PLATES—Instruction

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J. Anderson & Sons, Inc., N. Elm & Notre Dame Sts., Westfield, Mass.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.

39, III.
Croname Inc., 3701 Ravenswood Ave., Chicago, III.
DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La
Jolla, Calif. ADV. PG. 378.
EMELOID CO., INC., THE, 1239 Central Ave., Hillside
5, N. J. ADV. PG. 405.
Etched Products Corp., 39-01 Queens Blvd., Long Island
City, N. Y.
General Laminated Products, Inc., 2857 S. Halstead St.,
Chicago 8 III.

Chicago 8, III.

Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
Insulating Fabricators Inc., 150 Union Ave., East Ruther-

Insulating Faurications Allow, 256
ford, N. J.
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. 477.
Matthews & Co., James H., 470 Atlantic Ave., Boston
10, Mass.

New Fooland Etching & Plating Co., 25 Spring St.,

10, Mass. w England Etching & Plating Co., 25 Spring St.,

New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.

Trans-Gel Products, Inc., 212-40 Jamaica Ave., Queens Village, N. Y.

U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 272.

Willson Camera Co., Inc., 1401 Lawrence Road, Haverton, Pa.

PLATES—NAME—Metal or Plastic

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Anderson & Sons, Inc., N. Elm & Notre Dame Sts.,
Westfield, Mass.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New
York 20, N. Y.
Croname, Inc., 3701 Ravenswood Ave., Chicago, III.
EMELOID CO., INC., THE, 1239 Central Ave., Hillside
5, N. J. ADV. PG. 405.
Franklin Airloop Corp., 43-20 34th St., Long Island
City, N. Y.

Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y. General Electric Co., Chemical Dept., 1 Plastics Ave., Pittsfield, Mass. Glts Molding Corp., 4600 W. Huron St., Chicago 44, III. General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III. Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J. Hopp Press, Inc., 460 W. 34th St., New York, N. Y. Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

12, N. Y. Matthews & Co., J. H., 470 Atlantic Ave., Boston 10,

Parisian Novelty Co., 3510 S. Western Ave., Chicago 9, Silicocks-Miller Co., 10 Parker Ave., W., So. Orange,

N. J.
U. S. RADIUM CORP., 535 Pearl St., New York 7,
N. Y. ADV. PG. 272.
Willson Camera Co., Inc., 1401 Lawrence Rd., Havertown, Pa.

### PLUGS—Terminal

Aerolite Electronics Corp., 507 26th St., Union City, N. J.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
Mass. ADV. PG. 24.
AMERICAN BRASS CO., 25 Broadway, New York 4,
N. Y. ADV. PG. 373.
American Radio Hardware Co., Inc., 152 MacQueston
Pkwy., Mt. Vernon, N. Y.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 503.
Belling & Lee Ltd., 366 Madison Ave., New York 17,
N. Y. N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
Brilhart Plastics Corp., Old Country Rd., Mineola, N. Y.
Cannon Electric Co., 3209 Humboldt St., Los Angeles General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III.
GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 364.
HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark 7, N. J. ADV. PG. 77.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251. Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KINGS ELECTRONICS, 40 Marbledale Road, Tuckahoe, KINGS ELECTRONICS, 40 Marbledale Road, Tuckahoe, N. Y. ADV. PG. 144, 145.

MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.

METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 445.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Molded Insulation Co., 335 E. Price St., Philadelphia 44. Pa. 44, Fa.

MATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave.,
Yonkers, N. Y. ADV. PG. 513.

Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta.,
Los Angeles 18, Calif. Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y. Painton & Co., Ltu., Soo history
N. Y.
Philoc Corp., Tioga & C Sts., Philadelphia 34, Pa.
PRODUCTION TOOL & FIXTURE CO., 37 W. Main St.,
Oyster Bay, N. Y. ADV. PG. 488.
RUSSELL & STOLL CO., INC., 125 Barclay St., New
York 7, N. Y. ADV. PG. 367.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
States Co., 19 New Park Ave., Hartford 6, Conn.
UCINITE CO. DIVISION, UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV.
Vector Electronic Co. 2350 Electronic Co., 3352 San Fernando Rd., Los

### PLUGS AND JACKS See Terminals

Angeles 65, Calif.

### POINTERS-Dial

Anderson & Sons, Inc., N. Elm & Notre Dame St., Westfield, Mass.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15. Calif 15, Calif. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.
Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y. Parisian Novelty Co., 3510 South Western Ave., Chicago 9, III.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
UCINITE CO. DIVISION, UNITED-CARR FASTENER
CORP., 459 Watertown St., Newtonville, Mass. ADV.
PG. 101.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass.

### POSTS

D-86

See Terminals

POTENTIOMETERS Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
Bristol Co., Inc., Waterbury 20, Conn.
Brown Electro-Measurement Corp., 4637 S. E. Hawthorne
Blvd., Portland 15, Oregon.
Carter Parts Co., 213 Institute Pl., Chicago 10, III.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E.
Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
Burbank, Calif. ADV. PG. 386.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG.
162. 163. 162, 163.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
CORNELL ELECTRONICS CORP., 40-33 Main Ave., Douglaston, N. Y. ADV. PG. 502.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. DEJUR-AMSCO CORP., Northern Blvd., at 45th St., Long Isalnd City 1, N. Y. ADV. PG. 183-185. Electro-Mec Laboratory, 19 Murray St., New York 7, N. Y.
Foxboro Co., The, Foxboro, Mass.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Giannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena 1, Calif.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, HELIPOT CORP., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 67-70. International Resistance Co., 401 N. Broad St., Phil-adelphia 8, Pa. Javis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, III. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, III. ADV. PG. 79.
Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.
Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y. N. Y.
Philoc Corp., Tioga & C Sts., Philadelphia 34, Pa.
Philmore Mfg. Co., Inc., 113 University Place, New
York 3, N. Y.
Precision Electronic Components, Ltd., 560 King St.,
West, Toronto, Ont., Canada.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Pali-Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.

WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 173, 174.

WESTON ELECTRICAL INSTRUMENTS CORP., 614

Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

Wheelco Instruments Div., Barber-Colman Co., Rockford, III.

# POTENTIOMETERS—Induction

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.

Doelcam Inc., 56 Elmwood St., Newton 58, Mass.

REEVES INSTRUMENT CORP., 215 E. 91st St., New

York, N. Y. ADV. PG. 473.

WESTON ELECTRICAL INSTRUMENTS CORP., 614

Frelindhuysen Ave., Newark 5, N. J. ADV. PG. 256.

### POTENTIOMETERS—Linear & Non Linear Precision Wire Wound

BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 492, 493.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 162, 163 CORNELL CORNELL ELECTRONICS CORP., 40-33 Main Ave., Douglaston, N. Y. ADV. PG. 502. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles DE JUR-AMSCO CORP., Northern Blvd., at 45th St. Long Island City 1, N. Y. ADV. PG. 183-185. Electro-Mec Laboratory, 19 Murray St., New York 7, N. Y.
Electronic Associates, Inc., Long Branch, N. J.
FAIRCHILD CAMERA & INSTRUMENT CORP., 88-06
Van Wyck Blvd., Jamaica 1, N. Y. ADV. PG. 416.
Ford Engineering Co., 129 East A St., Upland, Calif.
GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 367.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Giannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena 1, Calif.
HELIPOT CORP., 916 Merlden Ave., South Pasadena, LIPOT CORP., 916 Merlden Ave., South Pasadena, Calif. ADV. PG. 67-70.

Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, III. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. 44, Pa.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn, N. Y. ADV. PG. 491.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
Painton & Co., Ltd., 366 Madison Ave., New York 17,
N. Y.
Rattray & Co., Inc., George, 92-32 Union Hall St.,
Jamaica 5, N. Y.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass. bridge 42, Mass.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton. Mass. ADV. PG. 394, 395. Waters Mfg. Co., Waltham, Mass.

### POTENTIOMETERS—Portable Instrument

Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E.
Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 162, 163. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, CORNELL ELECTRONICS CORP., 40-33 Main Ave., Doug-CORNELL ELECTRONICS CORP., 40-33 Main Ave., Douglaston, N. Y. ADV. PG. 502.

Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Georator Corp., 1820 N. Nash St., Arlington, Va. Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, III.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y.

Rubicon Co., Ridge Ave. at 35th St. Philadelphia 29. Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Fa. Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. Wheelco Instruments Div., Barber-Colman Co., Rockford, Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### POTS—Soldering

Acme Electric Heating Co., 1217 WashIngton St., Bos-Acme Electric Heating 60., 121, Maningston, Mass.
DEE ELECTRIC CO., 1101 N. Paulina St., Chicago 22, III. ADV. PG. 296.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362.
ELECTRIC SOLDERING IRON CO., W. Elm St., Deep River, Conn. ADV. PG. 466.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, III. III.
Sta-Warm Electric Co., Ravenna, Ohio.
Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif.
Tech Laboratories, Inc., Bergen and Edsall Blvds., Palisades Park, N. J.
VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 90
Waage Electric Inc., 720 Colfax Ave., Kenilworth, N. J.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### POTS AND TANKS—Heating

Acme Electric Heating Co., 1217 Washington St., Boston, Mass. Lukens Steel Co. and Divisions, By-Products Steel Co. & Lukenwald, 447 Lukens Bldg., Coatesville, Pa. Sta-Warm Electric Co., Ravenna, Ohio. Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.

# POWER SUPPLIES

1. AC 2. DC 3. High Voltage 4. Microwave

Acro Products Co., 369 Shurs Lane, Philadelphia 28, AIR ASSOCIATES, INC., Teterboro, N. J. 1-2-3-4-5-6. AIR ASSOCIATES, INC., Teterboro, N. J. 1-2-3-4-5-6. ADV. PG. 263.
AIR ADV. PG. 263.
Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England. 2-3-5-6.
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-2-3-5-6. ADV. PG. 343.
ALCO ELECTRONICS MFG. CO., 102 Marston St., Lawrence, Mass. 2-3-4-5-6. ADV. PG. 436.
Altec-Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 2-3-5.
AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 1-2. ADV. PG. 334.
Amplifier Corp. of America, 398 Broadway, New York 13, N. Y. 5. ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. 3-5. ADV. PG. 303.
Associated Engineering Corp. of Boston, 38 Euston Road, Brighton 35, Mass. 2-5.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. 5. ADV. PG. 461.
Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y. 2-5-6.
Barry Electronics Corp., 136 Liberty St., New York 6, N. Y. 2.

N. Y. 2.

BETA ELECTRIC CORP., 333 E. 103rd St., New York
29, N. Y. 2-3-5. ADV. PG. 466.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson
3, N. J. 1-2-3-4-5-6. ADV. PG. 153.

Bogue Railway Equipment Div., Bogue Electric Mfg.
Co., 52 Iowa Ave., Paterson 3, N. J. 1-2-3-4-5-6.

Booth Co., Arthur E., 4124 Beverly Blvd., Los Angeles,
Calif. 1-2-6.

Co., 52 Iowa Ave., Paterson 3, N. J. 1-2-3-4-5-6.
Booth Co., Arthur E., 4124 Beverly Blvd., Los Angeles, Calif. 1-2-6.
BRACKE-SEIB X-RAY CO., INC., 293 Third Ave., New York, N. Y. 1-3-5-6. ADV. PG. 424.
Bristol Engineering Corp., Lincoln Ave. & Pont St., Bristol, Pa. 1-2-3-4-5-6.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. 5. ADV. PG. 46.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. 5. ADV. PG. 312, 313.
Brujac Electronic Corp., 103 Lafayette St., New York 13, N. Y. 3-5.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y. 4.
CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. 3-5. ADV. PG. 96, 97.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. 2. ADV. PG. 386.
Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England. 2-3-6.
Clark Electronic Labs., Box 165, Palm Springs, Calif. 2-5.

COMMUNICATION MEASUREMENTS LAB., INC., 120 Greenwich St., New York, N. Y. 2-5-6. ADV. PG.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. 1-2.
Computer Corp. of America, 149 Church St., New York, N. Y. 5.

N. Y. 5.

Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario. 5.

Condenser Products Co., 7517 N. Clark St., Chicago 26,

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittania S., Meriden, Conn. 2. ADV. PG. 292. Cornell-Dubilier Electric Corp., South Plainfield, N. J. 1-2-3-4-5-6.

Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada. 5.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. 4-5.

Doelcam Inc., 56 Elmwood St., Newton 58, Mass. 1-5.
Douglas Radio Labs., 176 Norfolk Ave., Boston 19,

Douglas Radio Labs., 176 Norfolk Ave., Dostoli 17, Mass. 5.

Dresser Electric Co., 942 E. Larned St., Detroit 7, Mich. 1-2.

DuMont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J. 3.

Du Mont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J. 5.

EDIN COMPANY, INC., 207 Main St., Worcester, Mass. 1-2. ADV. PG. 441.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. 1-2-3-5.

Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio. 1-2.

Electro Craft Inc., 68 Jackson St., Stamford, Conn. 2-3-6.

2-3-6.
ELECTRO PRODUCTS LABS., INC., 4501 N. Ravenswood Ave., Chicago 40, III. 2-6. ADV. PG. 413.
ELECTRO-TECH EQUIPMENT CO., 55 Lispenard St., New York 13, N. Y. 1-2. ADV. PG. 354.
ELECTRONIC MEASUREMENTS COMPANY, Red Bank,

New York 13, N. Y. 1-2. ADV. PG. 354.
ELECTRONIC MEASUREMENTS COMPANY, Red Bank, N. J. 2-5-6. ADV. PG. 488.
EL-TRONICS INC., 2649 N. Howard St., Philadelphia 33, Pa. 2-3-5. ADV. PG. 451.
Embassy Engineering Corp., 224 E. 204th St., New York 58, N. Y. 3.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. 1-2. ADV. PG. 274.
Essex Electronics, Berkeley Heights, N. J. 3.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 1-2-4-5. ADV. PG. 189-193 Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III. 2-3-5-6.
FLUKE ENGINEERING CO., JOHN, Box 755, Springdale, Conn. 2-4-56. ADV. PG. 268.
Francon Mfg. & Sales Corp., 161 Washington St., New York, N. Y. 1.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. 1-2. ADV. PG. 297.
Furst Electronics, 10 S. Jefferson St., Chicago 6, III. 1-2-3-4-5-6.
Gates Radio Co., Quincy, III. 3-5.

1-2-3-4-5-6.
Gates Radio Co., Quincy, III. 3-5.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. 1-2-3-4-5-6. ADV. PG. 1-23.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St.,
New York 10, N. Y. 1-2-3-5-6. ADV. PG. 525.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J. 5.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 2-6. ADV. PG. 82, 83.
General Transformer Co., 18240 Harwood Ave., Homewood, III. 2.
Gorrell & Gorrell, Haworth, N. J. 1-2-6.

Gorrell & Gorrell, Haworth, N. J. 1-2-6.

Green Electric Co., W., 130 Cedar St., New York, N. Y. 3-5. HEATH CO., Benton Harbor, Mich. 6. ADV. PG. 492. Hivolt Ltd., 34A Pottery Lane, London W. 11, England.

Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif. 1-2.

Calif. 1-2.

Inductograph Products, Inc., 83-56 Victor Ave., Elm-hurst 73, N. Y. 2-3-5-6.

Industrial Electronics Co., Inc., Hanover, Mass. 1-2-3-

4-5-6.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. 1-2-3-5-6. ADV. PG. 122, 123.
INDUSTRIAL RECTIFIER CO., 120 Cedar St., New York, N. Y. 2-5-6. ADV. PG. 500, 501.
Industrial Transformer Co., Gouldsboro, Pa. 1-2.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. 1-2-3-5-6.

Inet, Inc., 8 1-2-3-5-6.

James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18,

JUL 2.

JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. 1-2-3-4-5-6. ADV. PG. 524.

K-V Transformer Corp., 4414 Park Ave., New York 57,

N. Y. 2.
KEPCO LABS, INC., 131-38 Sanford Ave., Flushing 55, N. Y. 1-2-3-4-5-6. ADV. PG. 236, 237.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. 2-3-5-6. ADV. PG. 510.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. 1-2-3-5-6. ADV. PG. 438.
Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 1-2-5-6.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa. 5-6.
McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif. 2-5-6.
MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass. 5.

MacLeon & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass. 5.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind. 1-2-3-4-5-6.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 1-2-3-5-6.

Manson Laboratories, 76 Stage St., Stamford, Conn. 1-2-3-5-6.

Manufacturers Battery Co. Div. of Ray-O-Vac Co., Madi-

Manufacturers Battery Co. Div. of Ray-U-vac Co., magn-son, Wis. 2-3.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York, 4, N. Y. 5.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada. 5.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. 5. ADV. PG. 516.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. 1-2.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 3.
MODEL RECTIFIER CORP., 557 Roggers Ave., Brooklyn

Mass. 3.

MODEL RECTIFIER CORP., 557 Roggers Ave., Brooklyn 25, N. Y. 2-5-6. ADV. PG. 523.

Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J. 3.

Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill. 2-3-5-6.

Bloomington, III. 2-3-5-6.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. 3.

Northeastern Engineering, Inc., Manchester, N. H. 1-2-3-4-5-6.

2-3-4-0-0.

Nuclear Development Lab., Box 7034, Kansas Cuy, Mo. 3.

NUCLEAR RESEARCH CORP., 2563 Grays Ferry Ave., Philadelphia 46, Pa. 2-3-5-6. ADV. PG. 301.

Nuclear Research & Development, Inc., 1094 Sutter Ave., C+ Louis 5. Mo. 3.

Nuclear Research & Development, Inc., 1075 States (No., St. Louis 5, Mo. 3.)
OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. 2-5-6. ADV. PG. 520.
Oregon Electronic Mfg. Co., 2232 E. Burnside St., Portland 15, Ore. 2-5-6.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. 1-2-3-5. ADV. PG. 362.
Pedersen Electronics Co., Mount Diablo Blvd., Lafayette, Calif. 5.4

Calif. 5-6.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. 3-5-6. ADV. PG. 141.
Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y. 1-2-3-5-6.
Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y. 3.

N. Y. 3.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. 2-5. ADV. PG. 218, 219.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
55 Johnson St., Brooklyn 1, N. Y. 4. ADV. PG. 232,

55 Johnson St., proving 2, 233.
Power Conversions, 2635 W. Grand Ave., Chicago 12, III. 1-2-5-6.
Power Equipment Co., 55 Antoinette St., Detroit 2,

Mich. 2-5.
PRECISE MEASUREMENTS CO., 942 Kings Highway,
Brooklyn 23. N. Y. 3. ADV. PG. 220. Brooklyn 23, N. Y. 3. ADV. PG. 220.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,
N. Y. 5.

N. Y. 5. Radar Engineers, 110 University St., Seattle 1, Wash.

5-6.
Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III. 2-3-5-6.
Radiart Corp., The, 3571 W. 62nd St., Cleveland 2, Ohio. 2.

No. 2.
Rapid Electric Co., 2881 Middletown Rd., New York 61,
N. Y. 2-5-6.
Ray-0-Vac Co., Madison, Wisconsin. 2-3.
RAYTHEON MFG. Co., Equipment Sales Div., Waltham
54, Mass. 2-3-5. ADV. PG. 336, 337.
RED BANK DIVISION, Bendix Aviation Corp., Red Bank,
N. J. 2-5. ADV. PG. 125, 126.

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif. 1-2-3-4-5-6.
Rutherford Electronics Corp., 3707 S. Robertson Blvd., Culver City, Calif. 3-5-6.
"S" CORRUGATED QUENCHED GAP CO., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J. 3. ADV. PG. 54, 55.
Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio. 2.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass. 1-2-5-6.
Senn Corp., New Augusta, Ind. 2-3.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. 2-6. ADV. PG. 320.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y. 1-2-3-5-6.
Sierra Electronic Corp., San Carlos, Calif. 3-5.
SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. 1-5-6. ADV. PG. 317.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 1-2-5-6. ADV. PG. 168, 169.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. 1-2-3-5-6. ADV. PG. 332, 333.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. 5. ADV. PG. 351.
SPERRY GYROSOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. 4. ADV. PG. 139, 140.
Standard Electronics Corp., 285 Emmet St., Newark, N. J. 5-6.
Standard Transformer Corp., Elston, Kedzie and Addison, Chicago 18, Ill. 2-6.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif. 1-2.
SUPERIOR ELECTRIC CO., THE, 4000 Church St., Bristol, Conn. 1-2. ADV! PG. 133-135.

Calif. 1-2.
SUPERIOR ELECTRIC CQ., THE, 4000 Church St., Bristol, Conn. 1-2. ADV| PG. 133-135.
T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1, N. Y. 3. ADV. PG. 499.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. 2.3-4-5-6. ADV. PG. 311.
Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif. 1-2-5-6.
TELETRONICS LABORATORY, INC., 352 Maple Ave., Westbury, N. Y. 5. ADV. PG. 464, 529.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 1-2-3-5-6. ADV. PG. 262.
TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. 1-2-3. ADV. PG. 379.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III. 3-5.

3-5.

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.

VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. 2-3-4-5-6. ADV. PG. 213.

Varo Mfg. Co., Inc., Box 638, Garland, Tex. 1-2-3-5-6. Vickers, Inc., 1815 Locust St., St. Louis 3, Mo. 2.

VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. 2-3-5. ADV. PG. 348, 349.

Video Corp. of America, 229 W. 28th St., New York 1, N. Y. 1-2-3-4-5-6.

N. Y. 1-2-3-4-5-6. West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif. 5. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 4. Wurlitzer Co., Rudolph, North Tonawanda, N. Y. 1-2. Teleradio Engineering Corp., 99 Wall St., N. Y., N. Y.

# PRE-AMPLIFIERS for COMMUNICATION RECEIVERS

RECEIVERS

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74. Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.

LANGEVIN MFG. CORP., 37 W. 65 St., New York 23, N. Y. ADV. PG. 438. Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Ind.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Mass.

Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.

RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back

dio Mfg. Engineers Inc., 300-302 First Ave., Peorla

Radio Mfg. Engineers Inc., 200 5...
6, III.
Radiomarine Corp. of America, 75 Varick St., New 13. N. Y. ABC INC., 186 Massachusetts

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 351.
Stromberg-Carlson Co., Rochester 13, N. Y.
Sylvan Electronic Labs., Inc., Broadalbin, N. Y.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

# PRE-AMPLIFIERS for OSCILLOSCOPES

Airmec Laboratories, Ltd., High Wycombe, Buckingham-shire, England.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York Type Electronics Corp., 103 Lafayette St., New York 13, N. Y. 13, N. Y.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Cossur (Canaga), Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Electrodyne Co., 32 Oliver St., Boston, Mass. Ellis Associates, Box 77, Pelham 65, N. Y. Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III. Furst Electronics, 10 S. Jefferson St., Chicago 6, III. Glenco Corp., Metuchen, N. J. Glenco Corp., Metuchen, N. J. INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 206, 505. KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45. POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Scott, Inc., Hermon Hosmer, 385 Putnam Ave. Cam-

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.
Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
TRAD TELEVSION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262

### PRE-SELECTORS

AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. 263.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.
Radiomarine Corp. of America, 75 Varick St., New York TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

### PRESSES—Metal Forming

Acromark Co., 9-13 Gorrell St., Elizabeth 4, N. J. Hydraulic Press Mfg. Co., Mt. Gilead, Ohio. Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa. Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,

# PRINTED OR STAMPED CIRCUITS See Circuits

# PROBES

Aerolite Electronics Corp., 507 26th St., Union City, American Radio Hardware Co., Inc., 152 MacQueston Pkw., Mt. Vernon, N. Y. Belling & Lee Ltd., 366 Madison Ave., New York 17, N. Y. Budd-Stanley Co., Inc., 43-01 22nd St., Long Island
City 1, N. Y. City 1, N. Y.

DuMont Laboratories, Inc., Allen B., Instrument Div.,
1500 Main Ave., Clifton, N. J.

GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160.

Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, III.

Haledy Electronics Co., 57 William St., New York 5,
N. Y. INSULINE CORP. OF AMERICA, 3602 35th Ave., Long Island City, N. Y. ADV. PG. 477. Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,
Dayton 1, Ohio.
Javex, 921 State, Garland, Texas.
Keystone Electronics Corp., 423 Broome St., New York
12, N. Y.
LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 518.
NUCLEAR RESEARCH CORP., 2563 Grays Ferry Ave.,
Philadelphia 46, Pa. ADV. PG. 301.
Pacific Electricord Co., P. 0. Box. 15805, Cranshaw
Sta., Los Angeles 8, Calif.
Roflan Co., Everett, Mass.
Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15,
N. Y.
Tektronix, Inc., P. O. Box 831 Portland 7, One Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
Television Equipment Corp., 238 William St., New York United Technical Labs., Box 425-V, Morristown, N. J.
Waveline, Inc., North Caldwell, N. J.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers,
N. Y. ADV. PG. 482.

# PROBES—High Frequency

Aerolite Electronics Corp., 507 26th St., Union City, N. J.

AMERICAN ELECTRONEERING CORP., 5025-29 West
Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St.,
Brooklyn 11, N. Y. ADV. PG. 149.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488.

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61,
N. Y. ADV. PG. 503.

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III. GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 160. Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

Javex, 921 State, Garland, Texas.

JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.

Keystone Electronics Corp., 423 Broome St., New York

I.2, N. Y.

KINGS ELECTRONICS, 40 Marbladal.

N. Y. ADV. PG. 40 Marbladal. 12, N. Y.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 518.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 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. Radio City Products Co., Inc., 152 W. 25th St., New York I, N. Y.
Scala Radio Co., 2814 19th St., San Francisco 10, Calif. Tektronix, Inc., P. O. Box 831, Portland 7, Oregon. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
United Technical Labs., Box 425-V, Morristown, N. J. YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

### PROBES-High Voltage

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y. CITATION PRODUCTS CO., 233 E. 146th St., New York

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 149.
Feiler Engineering & Mfg. Co., Dept. EBG, 2026 N. Monticelle Ave., Skokie, III.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J. Industrial Transformer Co., Gouldsboro, Pa.
INSULINE CORP. OF AMERICA., 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.

delphia 8, Pa.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

Javex, 921 State, Garland, Texas.

JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.

Keystone Electronics Corp., 423 Broome St., New York
12, N. Y.

12, N. Y.
LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 518.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
PRECISE MEASUREMENTS CO., 942 Kings Highway,
Brooklyn 23, N. Y. ADV. PG. 220.
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.

York 1, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back

Covers.
Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262. YONKERS INDUSTRIES, INC., 28 School St., Yonkers,

ADV. PG. 482.

### PROBES---Microwave

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokle, III.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston JOWIL ELECTRONICS INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
KINGS MICROWAVE CO., INC., 719 Main St., New
Rochelle, N. Y. ADV. PG. 142, 143.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 232,
233 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140. Technicraft Laboratories, Inc., Thomaston-Waterbury Rd.,

Thomaston, Conn.
Waveline, Inc., North Caldwell, N. J.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.
Wheeler Laboratories, Inc., Great Neck, N. Y.

# PROJECTION TUBES

See Tubes, Television Projection

# PROTECTIVE SEALERS

See Insulating Compounds

### **PSYCHOGALVANOMETERS**

Electro-Medical Lab., Inc., South Woodstock 8, Vt. Maico Co., Inc., 21 N. 3rd St., Minneapolis 1, Minn. Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, III.

### PUBLIC ADDRESS SYSTEMS See also Sound Systems, Complete

Audio-Master Corp., 341 Madison Ave., New York 17, Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.

Boom Electric & Amplifier Co., 1227 W. Washington
Blvd., Chicago 7, III.

### PUMPS—Metering

Hinckley Technical Associates, Inc., 75 Orchard St., Belmont 78, Mass.
ROBINSON INC., EDWARD E., 95 Park Ave., Nutley 10,
N. J. ADV. PG. 403.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10,

### PUMPS—Vacuum See Vacuum Pumps

### PUSHBUTTONS

Ohio.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 492.
Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Davies Molding Co., Harry, 1428 N. Wells St., Chicago
10, Ill.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa.
ADV. PG. 271. ERIE RESISION CUNP., 644 W. 12th St., Life, 14.
ADV. PG. 271.
GENERAL ELECTRIC CO., Apparatus & Sales Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, III.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, III. cago 41, III.

RUSSELL & STOLL CO., INC., 125-6 Barclay St., New
York 7, N. Y. ADV. PG. 387.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### OUARTZ-Raw

Breon Laboratories, 1520 Evergreen Rd., Williamsport, Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Diamond Drill Carbon Co., 53-63 Park Row, New York 7, N. Y. Murray American Corp., 95 Summit Ave., Summit, N. J. PAN AMERICAN TRADE DEVELOPMENT CORP., 2 Park Ave., New York 16, N. Y. ADV. PG. 156.

# **OUARTZ—Unfinished Crystals**

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass.
ADV. PG. 481.
Dallons Labs., 5066 Santa Monica Blvd., Los Angeles,

Calif.

Eidson Electronics Co., 1802 N. Third St., Temple, Texas.

Kaar Engineering Co., 2995 Middlefield Rd., P. 0. Box
1320, Palo Alto, Calif.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill.

ADV. PG. 161.

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.

# RACKS—Relay

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. Ames Co., W. R., 150 Hooper St., San Francisco 7, Calif. ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 422. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. Chicago 7, III.
BALTIC METAL PRODUCTS CO., 120 Sutton St., Brook-Jyn, N. Y. ADV. PG. 201.

Buck Engineering Co., Inc., 37-41 Marcy St., Free-hold, N. J.

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.

CHURCHILL CORP., 7 North Ave., Wakefield, Mass.

ADV. PG. 396.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif

Colgate Mfg. Corp., Lindenhurst, N. Y.
Corry Jamestown Mfg. Co., Corry, Pa.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.

Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada. 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.

City 3, N. Y.
PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet,

PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 506.

REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.

Raiway Communications, Inc., Smith Road & Glenwood, Paytons Mo.

Raytown, Mo.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16,
N. Y. ADV. PG. 483.

### RADAR NAVIGATIONAL DEVICES

Airborne Instruments Lab., Inc., 160 Old Country Rd.,

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.

Allison Radar Corp., 11 W. 42nd St., New York 18, N. Y.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

Avion Instrument Corp., Paramus, N. J.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York
1, N. Y. ADV. PG. 471.
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4,

Md.
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. ADV. PG. 153.
General Communication Co., 530 Commonwealth Ave.,
Pastro

Boston 15, Mass.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6,

Calif.

H. M. R. Electronics, Inc., Grove St., New Canaan, Conn.
Hastings Instrument Co., Hampton 9, Va.
Leru Laboratories, Inc., Black Oak Ridge Rd., Wayne,
N. J.

Loral Electronics Corp., 794 E. 140th St., New York 54,

N. Y.
Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
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.
Radiomarine Corp. of America, 75 Varick St., New York

13, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337.
Resdel Engineering, 2309 Riverside Drive., Los Angeles

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140. Waveline, Inc., North Caldwell, N. J.

### RADAR SYSTEMS AND EQUIPMENT-Aircraft Landing

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y. Avion Instrument Corp., Paramus, N. J. Bendix Radio Division, Bendix Aviation Corp., Baltimore

Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Federal Telecommunication Labs., Inc., 500 Washington

Federal Telecommunication Laus, Inc.,
Ave., Nutley, N. J.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6,

Magnavox Co., The, Components Div., Fort Wayne 4, Ind. Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Waveline, Inc., North Caldwell, N. J.

# RADAR SYSTEMS AND EQUIPMENT—Altimeters

Automatic Signal Div., Eastern Industries, Inc., 100 Regent St., East Norwalk, Conn. Avion Instrument Corp., Paramus, N. J. Cubic Corp., 2841 Canon St., San Diego 6, Calif. GENERAL ELECTRIC CO., Electronics Div., Park, Syracuse, N. Y. ADV. PG. 1-23.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Waveline, Inc., North Caldwell, N. J.

# RADAR SYSTEMS AND EQUIPMENT—Receivers

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Airborne Instruments Lab., Inc., 160 Old Country Rd.,
Mineola, N. Y.
Avion Instrument Corp., Paramus, N. J.
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4,

Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
General Communication Co., 530 Commonwealth Ave.,

Boston 15, Mass.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6,

Leru Laboratories, Inc., Black Oak Ridge Rd., Wayne, N. J. Loral Electronics Corp., 794 E. 140th St., New York 54,

Magnavox Co., The, Components Div., Fort Wayne 4,

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,

Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14, N. Y.

Waveline, Inc., North Caldwell, N. J.

### RADAR SYSTEMS AND EQUIPMENT—Trainers

Avion Instrument Corp., Paramus, N. J.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
N. S., Canada.
GENERAL ELECTRIC CO., Electronics Div., Electronics

Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
Gilfilian Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.

Hillyer Instrument Co., Inc., 54 Lafayette St., New York 13, N. Y. Hycon, Mfg. Co., 2961 E. Colorado St., Pasadena 8,

MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 361. Resdel Engineering, 2309 Riverside Drive, Los Angeles

39, Calif.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14, N. Y.

### RADAR SYSTEMS AND FOUIPMENT-Transmitters

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Airborne Instruments Lab., Inc., 160 Old Country Rd.,
Mineola, N. Y.
Avion Instrument Corp., Paramus, N. J.
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4,

Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

Calif.

General Communication Co., 530 Commonwealth Ave.,

Boston 15, Mass.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.

Leru Laboratories, Inc., Black Oak Ridge Rd., Wayne, N. J. Magnavox Co., The, Components Div., Fort Wayne 4,

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. Resdel Engineering, 2309 RiversIde Drive, Los Angeles 39,

Resdel Engineering, 2309 Riverside Drive, Cos Angeles 27, Calif.

SPERRY GYROSCOPE CO., Div., of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

Waveline, Inc., North Caldwell, N. J.

### RADIO ISOTOPES See Isotopes, Radioactive

### RADIOSONDES

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. Friez Instrument Div., Bendix Aviation Corp., Baltimore

4, Md.
Molded Insulation Co., 335 E. Price St., Philadelphia
44, Pa.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 328, 329.
Northeastern Engineering, Inc., Manchester, N. H.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.

### RATIOMETERS

See Instruments-Electrical Measuring

See also Chokes and Coils, Choke

### REACTORS—Saturable

Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
Acro Transformer Mfg. Corp., 26-02 4th St., Astorla

2, N. Y.
AIRCRAFT TRANSFORMER CORP., West & Willow Aves.,
Long Branch, N. J. ADV. PG. 276.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby,
Pa. ADV. PG. 517.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 368.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. I. ADV. PG. 153.

appolis /, winn. ADV. PG. 368.
BOGUE ELECTRIC MFG. CO., 52 lowa Ave., Paterson 3, N. J. ADV. PG. 153.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, III.
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 W. Addison St., Chicago 18, III. ADV. PG. 56.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 188.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Blocmfield Ave., Bloomfield, N. J.

General Magnetics, Inc., 139 Glockman, Glob, N. J. HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412. HYCOR COMPANY, INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 172. Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

Brooklyn, N. Y. ADV. PG. 491.
Magnavox Co., The, Components Div., Fort Wayne 4,

Ind.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 361.

Magnetics, Inc., Box 230-E, Butler, Pa.
Parmeko, Ltd., 366 Madison Ave., New York 17, N. Y.
Radionic Transformer Co., 411 S. Sangamon St., Chlcago 7, III.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

Rollins Corp., P. O. Box 213, Lewes, Del.

SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 168, 169.

Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.

Transformer Engineers, 389 S. Arroyo Parkway, Pasadena, Calif.

TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV. PG. 379.

PG. 379.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
Varo Mfg. Co., Inc., Box 638, Garland, Texas.

# RECEIVERS-Aircraft

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 477. AMERICAN ELECTRONEERING CORP., 5025-29 West Jefferson Bivd., Los Angeles 16, Calif. ADV. PG. 396. ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461. Avion Instrument Corp., Paramus, N. J. Belmont Radio Corp., DIV. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, III.

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. Continental Corp., 553 W. Randolph St., Chicago 6,

III.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., Los Angeles 25, Calif. ADV. PG. 449.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chlcago 39, III.

cago 39, III. ar, Inc., 110 Ionia Ave., N. W., Grand Rapids 2,

Lear, II Mich. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,

National Aeronautical Corp., 180 S. Maln St., Ambler,

Pa.
Northeastern Englneering, Inc., Manchester, N. H.
Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,

Callf.

Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.

Standard Telephones & Cables, Ltd., Connaught House,

Aldwych, London, W. C. 2, England.

Sylvan Electronic Labs., Inc., Broadalbin, N. Y.

# RECEIVERS—a-m Fixed Frequency

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.
Applied Electronics Company, Inc., 1246 Folsom St., San Francisco 3, Calif.

San Francisco 3, Calif. Automatic Radio Mfg. Co., 112 Brookline Ave., Boston,

Mass.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Bassett, Inc., Rex, 307-311 N. W. First Ave., Fort Lauderdale, Fla.
Belmont Radio Co., Div., Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, III.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4. Md.

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Brelco Electronics Corp., 55 Vandam St., New York

13, N. Y.
Clarke Instrument Div., National Electrical Machine
Shops., Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86,

Communications Co., Inc., 300 Greco Ave., Coral Gables

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Continental Corp., 553 W. Randolph St., Chicago 6, Ill. 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. ADV. PG. 451.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.

N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Gates Radio Co., Quincy, III.
Heintz & Kaufman Equipment Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif. Kaar Engineering Co., 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.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,

Marconi Wireless Lelegraph Lo., Ltd., 23-25 beaver St., New York 4, N. Y.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.

National Aeronautical Corp., 180 S. Main St., Ambler, Pa.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.

NATIONAL Co., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

Northeastern Engineering, Inc., Manchester, N. H. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.

SPERRY GYROSCOPE CO., Div., of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Technical Materiel Corp., P. O. Box 142, 121 Spencer Place, Mamaroneck, N. Y.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

N. J. ADV. PG. 262.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

West Coast Electronics Co., 1601 S. Burlington St., Los

Angeles 6, Calif.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,

# RECEIVERS-a-m/f-m Communication

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif.
AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.
Approved Electronic Instrument Corp., 928 Broadway,
New York 10. N. Y.

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4,

Communications Co., Inc., 300 Greco Ave., Coral Gables

Continental Corp., 553 W. Randolph St., Chicago 6,

DeWald Radio Mfg. Corp., 35-15 37th Ave., Long Island

City, N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Erco Radio Labs., Inc., East Stewart Ave., Garden City,

N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Heintz & Kaufman Equipment Div. of The Robert Dollar
Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box
1320, Palo Alto, Calif.
Link Radio Corp., 125 W. 17th St., New York, N. Y.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
Inglewood, Calif.

Inglewood, Calif.

Magnavox Co., The, Components Div., Fort Wayne 4, Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,

New York 4, N. Y.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Car-

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill. Northeastern Engineering, Inc., Manchester, N. H.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 50, 51.

Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.

olis 3, Ind.
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 Mfg. Engineers, Inc., 300-302 First Ave., Peoria

6, III.
SPERRY GYROSCOPE CO., Div., of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV.
PG. 164.
Therefore Maissage Mfg. Divisions, Mt. Carmel, III.

PG. 164.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14 N Y.

New York 14, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578/Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,

Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

### RECEIVERS—Automatic Radio Alarm

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.
Brelco Electronics Corp., 55 Vandam St., New York

Communications Co., Inc., 300 Greco Ave., Coral Gables

Communications co., Inc., 300 discounting and Fig. 24, Fla.

De Wald Radio Mfg. Corp., 35-15 37th Ave., Long Island City, N. Y.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Northeastern Engineering, Inc., Manchester, N. H.
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.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

### RECEIVERS—Automobile

ATOMIC INSTRUMENT CO., ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461. Automatic Radio Mfg. Co., 112 Brookline Ave., Boston,

Mass. Bendix Radio Division, Bendix Aviation Corp., Baltimore

Communications Co., Inc., 300 Greco Ave., Coral Gables, Continental Corp., 553 W. Randolph St., Chicago 6,

III.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Eckstein Radio & Television Co., 3400 E. 42nd St.,
Minneapolis 6, Minn.
Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Shevers, Inc., Harold, 123 West 64th St., New York 23,
N. Y.

N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740
wav New York 19, N. Y. ADV. PG. 552-558 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

# RECEIVERS—Coin Operated

Coradio, Inc., 212 Broadway, New York 7, N. Y. Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.

Monarch Radio & Television Corp., 61 Crescent St., Brook-

In S. N. Y.

ORTHON CORP., THE, 196 Albion Ave., Paterson 2,
N. J. ADV. PG. 362.

TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.

# RECEIVERS—Communication and Amateur

Applied Electronics Company, Inc., 1246 Folsom St., San Francisco 3, Calif.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York
1, N. Y. ADV. PG. 471.
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4,

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86,

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Condor Radio Mfg. Co., 116 N. Montezuma, Prescott,

CROSBY LABS., INC., Robbins Lane, Hicksville, N. Y.
ADV. PG. 356.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.

Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.

Federal Mfg. & Engrg. Corp., 211 Steuben St., Brooklyn

5, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
HAMMARLUND MFG. CO., 460 W. 34th St., New York
1, N. Y. ADV. PG. 215-217.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box
1320, Palo Alto, Calif.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
Inglewood, Calif.
Meissner Mfg. Div. Maguiro Industries, Inc. Ma. Convert

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,

III.

Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.

Motorola Inc., 4545 Augusta Blvd., Chicago 51, III.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 328, 329.

NORTHERN RADIO CO., INC., 143-145 W. 22nd St.,
New York 11, N. Y. ADV. 50, 51.

Radio Mfg. Engineers, Inc., 300-302 First Ave., Peoria
6. III.

Radiomarine Corp. of America, 75 Varick St., New York

13, N. Y.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV.

PG. 164.
Sylvan Electronic Labs., Inc., Broadalbin, N. Y.
Technical Materiel Corp., P. O. Box 142, 121 Spencer
Place, Mamaroneck, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,

N. J. ADV. PG. 262.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

### RECEIVERS—Diversity Reception

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford,

Conn. ADV. PG. 454.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

86, 87.
Continental Corp., 553 W. Randolph, Chicago 6, III.
CROSBY LABS., INC., Robbins Lane, Hicksville, N. Y.
ADV. PG. 356.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City,
N. Y.

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,

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. 50, 51.

Pioneer Electric & Research Corp., 7212 Circle Ave., Forest Park, III.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Radiomarine Corp. of America, 75 Varick St., New York

13, N. Y.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV.

PG. 164.

Technical Materiel Corp., The, P. O. Box 142, 121
Spencer Place, Mamaroneck, N. Y.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,
N. J. ADV. PG. 262.

# RECEIVERS—Fixed Frequency

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C. AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

AMERICAN ELECTRONEERING CORP., 5025-29 West Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Bassett, Inc., Rex, 307-311 N. W. First Ave., Fort Lauderdale, Fla.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.

86, 87. Communications Co., Inc., 300 Greco Ave., Coral Gables

Communications co., 116, 134, Fla.

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. ADV. PG. 451.

33, Pa. ADV. PG. 451.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
Farmers Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh 21, Pa.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193. Gates Radio Co., Quincy, III.

Gates Radio Co., Quincy, III.
Heintz & Kaufman Equipment Div. of the Robert Dollar
Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Co., 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,

Measurement Engineering Ltd., Arnprior, Ontario, Canada. Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34,

III.
Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 328, 329.
Northeastern Engineering, Inc., Manchester, N. H.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.
Radiomarine Corp. of America, 75 Varick St., New York
13, N. Y.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,
Calif.

Calif.

Calif.
Soriar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV.
PG. 164.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Calif.
Technical Materiel Corp., The, P. O. Box 142, 121
Spencer Place, Mamaroneck, N. Y.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,

N. J. ADV. PG. 262.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

Wilcox Electric Co., 1400 Chestnut St., Kansas City,

### RECEIVERS-f-m

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly

Hills, Calif.

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.

Bendix Radio Division, Bendix Aviation Corp., Baltimore

4, Md.

Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.

Communications Co., Inc., 300 Greco Ave., Coral Gables

34, Fla.
Continental Corp., 553 W. Randolph, Chicago 6, III.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Heintz & Kaufman Equipment Div. of The Robert Dollar
Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box

Co., 50 Drumm St., San Francisco II, Calif.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box
1320, Palo Alto, Calif.
Link Radio Corp., 125 W. 17th St., New York, N. Y.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,

Inglewood, Calif.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind. Measurement Engineering, Ltd., Arnprior, Ontario, Canada. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,

Molded Insulation Co., 335 E. Price St., Philadelphia 44,

Pa.

Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
National Electronics Laboratories, Inc., 1713 Kalorama
Rd., N. W., Washington 9, D. C.
Northeastern Engineering, Inc., Manchester, N. H.
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.

Radiomarine Corp. of America, 75 Varick St., New York

13. N.

13, N. Y.
Railway Communications, Inc., Smith Road & Glenwood,
Raytown, Mo.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
Radio Engineering Laboratories, Inc., 36-40 37th St.,
Long Island City 1, N. Y.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,
N. J. ADV. PG. 262.

N. J. ADV. PG. 262. West Coast Electronics Co., 1601 S. Burlington St., Los Calif.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### RECEIVERS-Loran

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23. Magnavox Co., The, Components Div., Fort Wayne 4,

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140. RECEIVERS-Marine

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Applied Electronics Co., 1246 Folsom St., San Fran-

cisco 3, Calif.

Bassett Inc., Rex, 307-311 N. W. First Ave., Fort

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.
Continental Corp., 553 W. Randolph, Chicago 6, III.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.

Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23. Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach,

Fla.
Heintz & Kaufman Equipment Div. of The Robert Dollar
Co., 50 Drumm St., San Francisco 11, Calif.
Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.
Kaar Engineering Co., 2995 Middlefield
1320, Palo Alto, Calif.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,
Inglewood. Calif.

Inglewood, Calif.
Magnavox Co., The, Components Div., Fort Wayne 4,

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Measurement Engineering, Ltd., Arnprior, Ontario, Can-

Radiomarine Corp. of America, 75 Varick St., New York

13, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y. 1-2-4-5-11.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### RECEIVERS-Microwave

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,

N. J. ADV. PG. 153.
Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

Cair.

Du Mont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,

Brookly N. Y. ADV. PG. 491

Brooklyn, N. Y. ADV. PG. 491.
Link Radio Corp., 125 W. 17th St., New York, N. Y.
Magnavox Co., The, Components Div., Fort Wayne 4, Magnavox Co.,

Ind.
Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
Brooklyn 11, N. Y. ADV. PG. 218, 219.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back

Covers. Communications, Inc., Smith Road & Glenwood,

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140. VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.

P. O. Box 5578.

PG. 384. WESTINGHOUSE ELECTRIC CORP., P. 0. B Pittsburgh 30, Pa. ADV. PG. 109-115. Wheeler Laboratories, Inc., Great Neck, N. Y.

### RECEIVERS—Panoramic

Avion Instrument Corp., Paramus, N. J.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

PANURAMIC RADIU PRUDUCIS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507. POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219. Telemark, Inc., 100 Greyrock PI., Stamford, Conn. VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.

# RECEIVERS—Portable & Mobile

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. Automatic Radio Mfg. Co., 112 Brookline Ave., Boston,

Automatic Radio Mrg. Co., 112 Browning Ave., Boston, Mass.

Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, III.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Continental Corp., 553 W. Randolph, Chicago 6, III.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Electro Craft Inc., 68 Jackson St., Stamford, Conn. Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn,

Farmers Engineering & Mfg. Co., 549 Brushton Ave.,

Farmers Engineering & Mily, Co., Co., Physics of Pittsburgh 21, Pa. FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193. GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23. Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif. Link Radio Corp., 125 W. 17th St., New York, N. Y. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. New York 4, N. Y. Measurement Engineering, Ltd., Arnprior, Ontario Can-

ada.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
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

Camden, N. J. ADV. PG. 299, Inside Back & Back Covers.

Schuttig & Co., Inc., 9th & Kearny Sts., N. E., Washington 17, D. C.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.

Stephens Mfg. Corp., 8538 Warner Drive, Culver City,

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. West Coast Electronics Co., 1601 S. Burlington St., Los

Angeles 6, Calif.

### RECEIVERS—Radio Direction Finder

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396. Applied Electronics Co., 1246 Folsom St., San Francisco

3, Gail.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.
Bendix Radio Division, Bendix Aviation Corp., Baltimore

4, MU. Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

RADIO CO., Cedar Rapids, Idwa. Adv. Fd. 86, 87.
Continental Corp., 553 W. Randolph, Chicago 6, III.
FAIRCHILD CAMERA & INSTRUMENT CORP., 88-06
Van Wyck Blvd., Jamaica 1, N. Y. ADV. PG. 416.
Fisher Research Lab., 1961 University Ave., Palo Alto,

Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, III.

Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box
1320, Palo Alto, Calif.
Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2,

Magnavox Co., The, Components Div., Fort Wayne 4, Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Pacific Mercury Television Mfg. Corp., 14500 Aetna St., Van Nuys, Calif. Radiomarine Corp. of America, 75 Varick St., New York 13. N. Y.

13, N. Y. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337. Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.

### RECEIVERS—Railroad

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md. Communications Co., Inc., 300 Greco Ave., Coral Gabies

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Farmers Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh 21, Pa.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.

Railway Communications, Inc., Smith Rd. & Glenwood, Paydough Mo.

Raytown, Mo.

RAYLOWI, MO. Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y. West Coast Electronics Co., 1601 S. Burlington St.,

Los Angeles 6, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 39, Pa. ADV. PG. 109-115.

### RECEIVERS-uhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

263.
AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd. Los Angeles 16, Calif. ADV. PG. 396.
Clarke Instrument Div., National Electrical Machine
Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Kaar Engineering Co., 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,

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 328, 329.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Covers.

Radio Engineering Laboratories, Inc., 36-40 37th St.,
Long Island City 1, N. Y.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great
Neck, N. Y. ADV. PG. 139, 140.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.

TELECHROME INC., 88 Merrick Rd., Amityville, N. I.
ADV. PG. 311.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14, N. Y.
West Coast Electronics Co., 1601 S. Burlington St., Los
Angeles 6 Calif.

Angeles 6, Calif.

### RECEIVERS-vhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG.

4//.
AMERICAN ELECTRONEERING CORP., 5025-29 W. Jef-ferson Blvd. Los Angeles 16, Calif. ADV. PG. 396. Automatic Radio Mfg. Co., 112 Brookline Ave., Boston,

Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, III.

Bendix Radio Division, Bendix Aviation Corp., Baltimore

Bendix Radio Division, School 1988 And M. Md.

Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

86, 87. Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Condor Radio Mfg. Co., 116 N. Montezuma, Prescott,
Ariz.

Ariz.

Continental Corp., 553 W. Randolph, Chicago 6, III.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Co., 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.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Measurement Engineering, Ltd., Arnprior, Ontario, Can-

Mitchell Industries, Inc., Camp Wolters, Mineral Wells,

Mitchell Industries, Inc., Camp Wolters, Mineral Wells, Texas.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

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 Doot

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.

Radiomarine Corp. of America, 75 Varick St., New York
13, N. Y.

Schuttig & Co., Inc., Ninth & Kearney Sts., N.E., Washington 17, D. C.

Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.

Sylvan Electronic Labs., Inc., Broadalbin, N. Y.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.

ADV. PG. 311.

ADV. PG. 311.

ADV. PG. 311.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.

Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

# RECEIVERS, HOME

1. a-m phono, Console
2. a-m phono, Table
3. a-m Console
4. a-m Portable
5. a-m Table
6. a-m Vest Pocket
7. a-m/f-m phono, Console
8. a-m/f-m console
9. a-m/f-m Portable
10. a-m/f-m Table

12. f-m Console
13. f-m Portable
14. f-m Table
15. t-v Console
16. t-v Portable
17. t-v Table
18. f-m/t-v Console
19. f-m/t-v Table
20. a-m/f-m/t-v Console
21. a-m/f-m/t-v Table
22. a-m/f-m/t-v Table
23. Recorder and Phonograph combination
24. Built-in wall type

Admiral Corp., 3800 Cortland St., Chicago 47, III. 1-2-4-5-7-15-17-20-22.

Admiral Corp., 3800 Cortland St., Chicago 47, III.
1-2-4-5-7-15-17-20-22.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 11.

Andrea Radio Corp., 27-01 Bridge Plaza North, Long Island City 1, N. Y. 4-18-19-20-22.

Ansley Mfg. Co., Arthur, Doylestown, Pa. 7-11.

Arvin Industries, Inc., Radio & Television Div., Columbus, Ind. 1-4-5-7-11-15-17.

Audar, Inc., P. 0. Box 438M, Pasadena 18, Calif. 1-2-5.

Audio Industries, Michigan City, Ind. 2-23.

Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass. 4-5-15-16.

Bace Television Corp., Green & Leuning Sts., South Hackensack, N. J. 15-17.

Belmont Radio Co., Div., Raytheon Mfg. Co., 5921 W.

Dickens Ave., Chicago 39, III. 4-5-6-7-11-15-16-17-22.

CBS-Columbia Inc., 170 53rd St., Brooklyn, N. Y. 1-2-3-4-5-6-7-8-11-15-17-18-19-20-21-22-23.

Calbest Engineering & Electronics Co., 828 N. Highland

Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif. 2-5-17-18-19-22. Capehart-Farnsworth Corp., 3700 E. Pontiac, Fort Wayne 1, Indiana. 4-5-7-15-17-22.

Cascade Television Co., 153 Chestnut Ave., Irvington, N. J. 15-16.
Commercial Equipment Co., Inc., Box 168, Lawrence,

Kansas. 6. Conrac, Inc., Box 168, Lawrence, Kansas. 6. Conrac, Inc., Glendora, Calif. 15-24. Continental Corp., 553 W. Randolph, Chicago 6, III. 4-5-6-10-11-13-14-15-17-18-19-21. Davis & Co., J. W., 9212 Denton Drive, Dallas, Texas. 2-5.

2-5.
DeWald Radio Mfg. Corp., 35-15 37th Ave., Long Island City, N. Y. 2-5-10-11-15-17
Du Mont Laboratories, Inc., Allen B., Television Receiver Div., 35 Market St., East Paterson, N. J. 15-17-18-19-20-22.
Eckstein Radio & Television Co., 3400 E. 42nd St., Minneapolis 6, Minn. 5.
Elex Co., 69-19 215th St., Bayside, N. Y. 2-4-5.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-20-21-22.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. 2-5-7-9-10-11-24. Esquire Radio Corp., 26 Court St., Brooklyn 19, N. Y. 4-5.

4-5.
Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J. 4-5-11-15-17.
Ferrar Radio & Television Corp., 55 W. 26th St., New York 10, N. Y. 2-3-5.
Fisher Radio Corp., 41 E. 47th St., New York, N. Y. 7-22-23.

Flush Walf Radio Co., 31 Clinton St., Newark 2, N. J.

24.

Freed Radio Corp., 200 Hudson St., New York, N. Y. 15-17-18.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park Syracuse, N. Y. 1-4-5-7-11-15-17. ADV. PG. 1-23.

Grayburne Corp., 103 Lafayette St., New York 13, N. Y. 1-2-4-8.

Hallicrafters Co., The, 4401 W. Fifth Ave., Chicago 24, III. 15-17-22.

HEATH CO., Benton Harbor, Mich. 5. ADV. PG. 492.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif. 1-2-7-15-17-20-22.

Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J. 15-17.

N. J. 15-17.

Jackson Industries, Inc., 500 E. 40th St., Chicago, III.

1-7-15-17-22.

Ave., Control of the Control of the

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif. 2-5.

Inglewood, Calif. 2-5.

Majestic Radio & Television Div. of The Wilcox-Gay Corp., 385 Fourth Ave., New York 16, N. Y. 1-4-5-6-7-9-11-15-16-17-18-19-20-21-22-23.

Mattison Television & Radio Corp., 893 Broadway, New York 3, N. Y. 17-19-20-22.

Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind. 4-5-15-17-22.

Meisser Mfg. Div. Maguine Laduttics I.

Ind. 4-5-15-17-22.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. 24.

Midwest Radio & Television Corp., 909 Broadway, Cincinnatl 2, Ohio. 7-15-22.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 5.

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. 1-2-3-4-5-7-11-15-17-18-19-20-21-22-23.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, P
1-2-3-4-5-7-8-9-11-15-16-17-18-19-20-21-22.
NATIONAL CO., INC., 61 Sherman St., Malden
Mass. 5-15-17 ADV. PG. 328, 329.
Newcomb Audio Products Co., 6824 Lexington Av
Hollywood 38, Calif. 2.
Olympic Radio & Television, Inc., 34-01 38th Ave., Lc
Island City, N. Y. 4-5-6-7-15-17-20-22.
ORTHON CORP., THE, 196 Albion Ave., Paterson
N. J. 1-2-5-24. ADV. PG. 362.
Pacific Mercury Television Mfg. Corp., 14500 Aetna S
Van Nuys, Calif. 3-5-7-8-9-11-15-17.
Packard-Bell Co., 12333 W. Olympic Blvd., Los Ange
64, Calif. 1-5-7-15-17-20-22-23.
Pentron Corp., The, 221 E. Cullerton St., Chicago II
III. 4.
Philco Corp., Tioga & C Sts., Philadelphia 34, P
1-2-3-4-5-7-11-15-17-22.
Philmore Mfg. Co., Inc., 113 University Place, N
York 3, N. Y. 5.
Pilot Radio Corp., 37-06 36th St., Long Island Ci
N. Y. 15-17-18-19-20-21-22.
Plastics & Electronics Co., Inc., P. O. Box 38, Station
Buffalo 8, N. Y. 6.
Prescott Television Co., 7350 Beverly Blvd., I
Angeles 36, Calif. 15-17-22.
RADIO CORP. OF AMERICA, Home Instrument Dep
Camden, N. J. 1-2-4-5-7-11-15-17. ADV. PG. 2
Inside Back & Back Covers.
Radio Engineering Laboratories, Inc., 36-40 37th S
Long Island City 1, N. Y. 14.

Inside Back & Back Covers.
Radio Engineering Laboratories, Inc., 36-40 37th S. Long Island City 1, N. Y. 14.
Rixtron Co., The, 1501 County Rd., Box 262, Belmos Calif. 24.
Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Cl. cago 40, III. 7-9-15-17-20-22.
Sethinel Radio Corp., 2100 Dempster St., Evanston, 14-5-6-7-8-9-11-15-16-17-20-21-22.
Setchell Carlson, Inc., 330 Fifth Ave., New Brights Minn. 4-15-17-22-23.
Shevers Inc., Harold. 123 W. 64th St., New York 2

Setchell Carlson, Inc., 330 Film Ave., Minn. 4-15-17-22-23.

Shevers Inc., Harold, 123 W. 64th St., New York 1 N. Y. 1-2-3-4-5-7-8-9-11-12-14-15-16-17-18-20-2 Speak-0-Phone Recording & Equipment Co., 23 W. 6G St., New York, N. Y. 23.

Starrett Television Mfg. Corp., 601 W. 26th St., New York, N. Y. 15-17.

STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 164.

Stewart-Warner Electric Div., Stewart-Warner Corp., 18 Diversey Pkwy., Chicago 14, III. 1-4-5-7-11-15-120-22.

22-23.

Telequip Radio Co., 2559 W. 21st St., Chicago 8, 15-17.

15-17.

Tele-Tone Radio Co., 540 W. 58th St., New York N. Y. 2-4-5-8-15-16-17.

Thordarson-Meissner Mfg. Divisions, Mt. Carmel, 1-2-3-4-5-7-8-9-10-11-12-17-23.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Pa. N. J. 15-17-18-19-20-21-22-23, ADV. PG. 262.

Transvision, Inc., 460 North Ave., New Rochelle, N. 15-17-18-19.

Trav-Ler Radio Corp., 571 W. Jackson Blvd., Chicago, P. 2-4-5-15-17-22.

U. S. Television Mfg. Corp., 3 W. 61st St. New York 20.

2-4-5-15-17-22.
U. S. Television Mfg. Corp., 3 W. 61st St., New York 2 N. Y. 15-17-22.
Vidaire Television Co., 576 W. Merrick Rd., Lynbrod N. Y. 15-17-18-19-22.
Video Corp. of America, 229 W. 28th St., New York N. Y. 15-17-20-22.
Video Products Corp., 42 West St., Red Bank, N. 15-16-17.

Video Products Corp., 42 West St., Red Bank, N. 15-16-17.
Weingarten Electronic Labs., Inc., 7556 Melrose Aw Los Angeles 46, Calif. 7.
Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 3
III. 1-2-3-4-5-7-8-9-11-15-17-20-22.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 557.
Pittsburgh 30, Pa. 2-3-4-5-7-8-9-10-11-15-17-2
ADV. PG. 109-115.
White Rock Mfg. Corp., White Rock, S. C. 1-2-4-5.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y. 1.
Zenith Radio Corp., 6001 Dickens Ave., Chicago 39, I 3-4-5-7-11-13-14-15-17-20-22.

# RECEIVING EQUIPMENT—vhf Omni-Range

AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 47
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cat
bridge 39, Mass. ADV. PG. 461.
Bendix Radio Division, Bendix Aviation Corp., Bali
more 4, Md.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. P
86. 87.

86, 87.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Lear Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mic
National Aeronautical Corp., 180 S. Main St., Amble

Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
T.L.G. ELECTRIC CORP., 31 W. 27th St., New York
N. Y. ADV. PG. 499.

### RECORDERS-Blood Pressure, Electronic

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Farrand Optical Co., Inc., 4401 Bronx Blvd., New York

SANBORN CO., 39 Osborn St., Cambridge 39, Mass.

ADV. PG. 474.

Statham Laboratories, Inc., 12401 W. Olympic Blvd.,
Los Angeles 64, Calif.

TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 509.

### RECORDERS—Cellophane Tape

Grayburne Corp., 103 Lafayette St., New York 13, N. Y. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Miles Reproducer Co., Inc., 812 Broadway, New York 3,

N. Y. Molded Insulation Co., 335 E. Price St., Philadelphia 44,

### RECORDERS-Density See Recorders, Specific Gravity

### RECORDERS-Dielectric Constant See Instruments-Electrical Measuring

# **RECORDERS**—Electronic Office Recorders &

Ampro Corp., 2835 N. Western Ave., Chicago 18, III.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New
York 19, N. Y. ADV. PG. 275.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
Coral Designs Div., Henry Dietz Co., 12-16 Astoria Blvd.,
Long Island City 2, N. Y.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago
41, III.
Edison, Inc., Thomas A., Ediphone Div. 53 Leiterid

41, 11.

Edlson, Inc., Thomas A., Ediphone Div., 51 Lakeside Ave., West Ooange, N. J.

Electronic Associates, Inc., Long Branch, N. J.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,

Inglewood, Calif. Iles Reproducer Co., Inc., 812 Broadway, New York

3, N. Y.

Molded Insulation Co., 335 E. Price St., Philadel-Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, III.

Pentron Corp., The, 221 E. Cullerton St., Chicago 16,

PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.
POLYPHASE INSTRUMENT CO., 705 Haverford Rd., Bryn Mawr, Pa. ADV. PG. 519.
Soundscriber Corp., 146 Munson St., New Haven 4,

Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago

# RECORDERS—Electronic Rotary Stylus

Bailey Meter Co., 1044 Ivanhoe Rd., Gleveland 10, Ohio.

### RECORDERS—Electronic Self-Balancing Recorders and Indicators

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohlo. Barnes Development Co., Lansdowne, Pa. Bristol Co., The, Waterbury 20, Conn. Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.

Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Leds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
MInneapolis-Honeywell Regulator Co., 2753 Fourth Ave.
S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Ave., Philadelphia 44, Pa. ADV. PG. 304, 305.
Schaevitz Engineering, Crescent Blvd. at Drexel Ave., Pennsauken Township, Camden 11, N. J.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# 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.
ALDEN PRODUCTS Co., 112 No. Main St., Brockton 64,
Mass. ADV. PG. 24.
Alfax Paper & Engineering Co., Washington St., P. 0.
Box 125, Westboro, Mass.

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.
Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36,

GAMEWELL CO., THE, Newton Upper Falls 64, Mass.

ADV. PG. 367. Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.

14, N. Y.
McElroy Mfg. Corp., Littleton, Mass.
Muirhead & Co., Ltd., Beckenham, Kent, England.
TIMES FACSIMILE CORP., 540 W. 58th St., New York
19, N. Y. ADV. PG. 526.

### RECORDERS-Film

APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 528.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Okla

GENERAL PRECISION LABORATORY, INC., Pleasant-ville, N. Y. ADV. PG. 84. Maurer Inc., J. A., 37-01 31st St., Long Island City, N. Y.

Miles Reproducer Co., Inc., 812 Broadway, New York 3,

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y. Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.

Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif. Warrick Co., Frederick P., Rt. 1, West Long Lake Rd., Bloomfield Hills, Mich.

### RECORDERS-Film Thickness

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. ADV. PG. 413. Foxboro Co., The, Foxboro, Mass. Tracerlab, Inc., 130 High St., Boston 10, Mass.

# RECORDERS—Fluid Conductivity, Electronic

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio.

Foxboro Co., The, Foxboro, Mass.
Industrial Instruments Inc., 17 Pollack Ave., Jersey City

5, N. J. Leeds & Northrup Co., 4970 Stenton Ave., Philadel-phia 44, Pa. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.

# RECORDERS-Fluid Flow, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Balley Meter Co., 1044 Ivanhoe Rd., Cleveland 10,

Ohio.
Bristol Co., The, Waterbury 20, Conn.
Fischer & Porter Co., 476 County Line Rd., Hatboro,

Fa. Foxboro Co., The, Foxboro, Mass. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III.

# 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., 3031 Grand Central Terminal, New York 17, N. Y.
Foxboro Co., The, Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4,

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUS-

WINNEAPULIS-HUNEYWELL REGULATOR CO., INDUS-TRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305. WESTON ELECTRICAL INSTRUMENTS CORP., 614 Fre-linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# RECORDERS—Liquid Level, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio.

Bristol Co., The, Waterbury 20, Conn.
Fischer & Porter Co., 476 County Line Rd., Hatboro,

Industrial Electronics, Inc., Hanover, Mass. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,

S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia
44, Pa. ADV. PG. 304, 305.

### RECORDERS—Magnetic Tape

Ampex Electric Corp., 934 Charter St., Redwood City,

Call.
Amplifier Corp. of America, 398 Broadway, New York
13, N. Y.
Ampro Corp., 2835 N. Western Ave., Chicago 18, III.
Audio-Master Corp., 341 Madison Ave., New York 17,
N. Y.

N. Y.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New
York 19, N. Y. ADV. PG. 275.
Aurex Corp., 1117 N. Franklin St., Chicago 10, III.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus
7, Ohio.
Berlant Associates, 4917 W. Jefferson Blvd., Los Angeles

16, Calif. BRUSH DEVELOPMENT CORP., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313. Califone Corp., 1041 N. Sycamore Ave., Hollywood 38,

Calif.
Cambridge Instrument Co., Inc., 30:1 Grand Central Terminal, New York 17, N. Y.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV PG. 292.
Cook Electric Co., 2700 Southport Ave., Chicago 14, III.
Coral Designs Div., Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Crestwood Recorder Corp., 221 N. LaSalle, Chicago 1, III.

Davies Laboratories, Inc., The, 4705 Queensbury Rd.,

Davies Laboratories, Inc., 1ne, 4705 Queensoury Rd., Riverdale, Md.

Dukane Corp., 135th & Indiana Sts., St. Charles, III.

Electro Craft Inc., 68 Jackson St., Stamford, Conn.

Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.

Fairchild Recording Equipment Co., 154th St. & 7th Ave., Whitestone, N. Y.

Holl Audio Industries, 5014 N. Encinita Ave., Temple City, Calif.

Holl Audio Industries, 5014 N. Encinita Ave., Temple City, Calif.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
MAGNECORD, INC., 360 N. Michigan Ave., Chicago 1, III. ADV. PG. 374.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Pentron Corp., 221 E. Cullerton St., Chicago 16, III.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 75.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Covers.
Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
Island City 3, N. Y.
Speak-O-Phone Recording & Equipment Co., 23 W. 60th

St., New York, N. Y.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. Video Corp. of America, 229 W. 28th St., New York 1,

Webster Electric Co., 1900 Clark St., Racine, Wis.

# RECORDERS—Materials Thickness, Electronic

Ectro, Inc., Delaware, Ohio.
Electric Eye Equipment Co., 16 W. Fairchild St., Danville, III.
Foxboro Co., The., Foxboro, Mass.

ville, III.
Foxboro Co., The., Foxboro, Mass.
Industrial Electronics, Inc., Hanover, Mass.
Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, III.
Photocon Research Products, 421 N. Foothill Blvd., Pasa-

dena, Calif. Tracerlab, Inc., 130 High St., Boston 10, Mass. VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleve-land 3, Ohio. ADV. PG. 348, 349.

# RECORDERS—Mechanical

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263. Bristol Co., The, Waterbury 20, Conn. Cyclotron Specialties Co., Moraga 8, Calif. Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.

Ohio.
Gorrell & Gorrell, Haworth, N. J.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.
SERVO-TEK PRODUCTS CO., 4 Godwin Ave., Paterson, N. J. ADV. PG. 230.

Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, III.
Thompson & Associates, John E., 7210 S. Yates Ave.,

Chicago 49, III.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. Y. ADV. PG. 256.

### RECORDERS—Moisture, Electronic

Fielden Instrument Corp., 2920 N. 4th St., Philadelphia

Fielden Instrument Corp., 2920 N. 410 St., Filindosiphia 33, Pa. Foxboro Co., The, Foxboro, Mass. Industrial Electronics, Inc., Hanover, Mass. MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

# RECORDERS—Nuclear Radiation

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.

Beckman Instruments, Inc., 820 Mission St., South Pasadona California

Calif. Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Cinema-Television Ltd., Worsley Bridge Rd., London,

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Cyclotron Specialties Co., Moraga 8, Calif.
MACDONALD & CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 200.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Nuclear Development Lab., Box 7034, Kansas City, Mo. Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.
Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.

Indianapolis 5, Ind.

Nucleonic Corp. of America, 497 Union St., Brooklyn 31,

N. Y.
R-C Scientific Instrument Co., 335 Culver Blvd., Playa Del Rey, Calif.
Radioactive Products, Inc., 443 W. Congress St., Detroit

26, Mich.

Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

Technical Associates, 140 W. Providencia Ave., Burbank,

Calif. VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

### RECORDERS—Oxygen

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

# RECORDERS-PH

Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Beckman Instruments, Inc., 820 Mission St., South

Beckman Instruments, Inc., 020 Mission Co., Pasadena, Calif.
Pasadena, Calif.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Foxboro Co., The, Foxboro, Mass.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

MINNEAPOLIS-HONEYWELL REGULATOR CO.,

trial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# RECORDERS—Potentiometer

RECORDERS—Power Level

See Instruments—Electrical Measuring

### RECORDERS-Pressure, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Commercial Research Laboratories, Inc., 20 Bartlett
Ave., Detroit 3, Mich.

Ave., Detroit 3, Mich.

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave.,
Chicago 40, Ill. ADV. PG. 413.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis,

Ind. Flader, Inc., Frederic, 1330 Laskey Rd., Toledo 12,

Foxboro Co., The, Foxboro, Mass.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.

Manning, Maxwell & Moore, Inc., Stratford, Conn.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,

S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., trial Div., Wayne & Roberts Ave., Philadelphia 44, Pa. ADV. PG. 304, 305. Photocon Research Products, 421 N. Foothill Blvd.,

Pasadena, Calif.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass.
ADV. PG. 474.

ADV. PG. 474.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Phil-

adelphia 33, Pa. ADV. PG. 509.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# RECORDERS—Smoke and Combustion, Electronic

Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Ohio. Bristol Co., The, Waterbury 20, Conn. Combustion Control Corp., 720 Beacon St., Boston 15,

Mass Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

Ess Specialty Corp., 96 S. Washington Ave., Bergen-field, N. J. Industrial Electronics Co., Inc., Hanover, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Lumenite Electric Co., 407 S. Dearborn St., Chicago

Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.

### **RECORDERS—Sound Level**

Audio Instrument Co., Inc., 133 W. 14th St., New York BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.

ADV. PG. 324, 325.
Miles Reproducer Co., Inc., 812 Broadway, New York 3,

SOUND APPARATUS CO., Stirling, N. J. ADV. PG. 518. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

### RECORDERS—Sound and Phonograph

Ampex Electric Corp., 934 Charter St., Redwood City,

Audio-Master Corp., 341 Madison Ave., New York 17,

N. Y. AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275. Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36,

Berndt-Bach, Inc., 7373 Beverly Bivu., Los Aligeros S., Calif.
Cook Laboratories, R-2, Stamford, Conn.
Fairchild Recording Equipment Co., 154 St. & 7th Ave., Whitestone, N. Y.
Gates Radio Co., Quincy, III.
General Industries Co., Taylor & Olive St., Elyria, Ohio.
JERSEY CITY TECHNICAL LABORATORY 880 Bergen Ave., Jersey City 6, N. J. ADV. PG. 424.
Magna Electronics Co., 9810 Anzas Ave., P. O. Box 338, Inglewood, Calif.

Inglewood, Calif.
Meissner Mfg. Div., Maquire Industries, Inc., Mt. Carmel,

Miles Reproducer Co., Inc., 812 Broadway, New York 3, PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.

III. ADV. PG. 375.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG.

75. 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.
Soundscriber Corp., 146 Munson St., New Haven 4,

Conn.
Western Sound & Electric Labs., Inc., 805 S. Fifth St.,
Milwaukee 4, Wis.

# RECORDERS—Specific Gravity, Electronic

Bristol Co., The, Waterbury 20, Conn. Fischer & Porter Co., 476 County Line Rd., Hatboro, Pa. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

# RECORDERS—Strain

Ampex Electric Corp., 934 Charter St., Redwood City, Calif.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Century Geophysical Corp., 133 N. Utica, Tulsa 3, Okla. Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
Ellis Associates, Box 77, Pelham 65, N. Y.
Foxboro Co., The Foxboro, Mass.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 480.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Bryn Mawr, Pa. ADV. PG. 519. POLYPHASE INSTRUMENT CO.,

SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474. SOUND APPARATUS CO., Stirling, N. J. ADV. PG.

### RECORDERS—Tape

Ampex Electric Corp., 934 Charter St., Redwood City, Calif. Ampro Corp., 2835 North Western Ave., Chicago 18, III. Audio-Master Corp., 341 Madison Ave., New York 17, N. Y. AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275. Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313. Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
Ectro, Inc., Delaware, Ohio.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill.
ADV. PG. 314.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn. Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Fairchild Recording Equipment Co., 154th St. & 7th Avenue, Whitestone, N. Y. General Industries Co., Taylor & Olive Sts., Elyria, Ohio. JERSEY CITY TECHNICAL LABORATORY, 880 Bergen Ave., Jersey City 6, N. J. ADV. PG. 424. Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Molded Insulation Co., 335 E. Price St., Philadelphia 44, Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, III. Pentron Corp., The, 221 E. Cullerton St., Chicago 16, III. PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. Proctor Soundex Corp., 133 N. 6th Ave., Mt. Vernon, N. Y. N. Y.
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.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
Speak-O-Phone Recording & Equipment Co., 23 W. 60th
St., New York, N. Y.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38. Calif.

RECORDERS—Telemetering

See Instruments—Electrical Measuring

# RECORDERS-Telephone Recording Equipment

wood 38, Calif.

Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y.
United Pressed Products Co., 741 W. Harrison St.,

Chicago 7, III. Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago Webster Electric Co., 1900 Clark St., Racine, Wis.

Ampex Electric Corp., 934 Charter St., Redwood City, Calif. Amplifier Corp. of America, 398 Broadway, New York 13, N. Y.
AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New
York 19, N. Y. ADV. PG. 275.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittania St., Meriden, Conn. ADV. PG. 292. Dictaphone Corp., 420 Lexington Ave., New York 17, Edison Inc., Thomas A., Ediphone Div., 51 Lakeside Ave.,

West Orange, N. J.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New
York 10, N. Y. ADV. PG. 525.
Gorrell & Gorrell, Haworth, N. J.
Miles Reproducer Co., Inc., 812 Broadway, New York 3,

N. Y. Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston,

Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill. Speak-O-Phone Recording & Equipment Co., 23 W. 60th

Speak-O-Frone Recording & Equipment Co., 23 W. 60th St., New York, N. Y. Stancil-Hoffman Corp., 1016 N. Highland Ave., Holly-wood 38, Calif. Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

# RECORDERS—Temperature, Electronic

Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 1v, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Fischer & Porter Co., 476 County Line Rd., Hatboro, Pa. Foxboro Co., The., Foxboro, Mass.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S.. Minneapolis, Minn.

S., Minneapolis, Minn.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

SANBORN CO., 39 Osborn St., Cambridge 39, Mass. Pa. ADV. PG. 304, 305.

SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila-

delphia 44, Pa.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Wheelco Instruments Div., Barber-Colman Co., Rockford,

### RECORDERS—Timing

AMERICAN TIME PRODUCTS INC., 580 Fifth Ave., New York 19, N. Y. ADV. PG. 478.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Bristol Co., The, Waterbury 20, Conn.

Cyclotron Specialties Co., Moraga 8, Calif.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, In

Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

N. Y.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., 232 N. Elm St., Waterbury 20,
Conn. ADV. PG. 198.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago

13, III.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

### RECORDERS—Torque, Electronic

Automatic Temperature Control Co. Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 474.

### RECORDERS-Vacuum

Automatic Temperature Control Co. Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. Bristol Co., The, Waterbury 20, Conn. Distillation Products Industries Div. of Eastman Kodak Co., 755 Ridge Rd., W., Rochester 3, N. Y. Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.

Foxboro Co., The, Foxboro, Mass.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUS-TRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305. National Research Corp., 70 Memorial Drive, Cambridge

42, Mass.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O.,
Philadelphia 20, Pa.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# RECORDERS—Weight, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski

Ave., Philadelphia 44, Pa.

Foxboro Co., The, Foxboro, Mass.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

ADV. PG. 474.

ADV. PG. 474.

### RECORDERS—Wire

Aurex Corp., 1117 N. Franklin St., Chicago 10, III. Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41,

Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn,

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y. Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston,

Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y. Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago

### RECORDING HEADS

See Heads, Recording

### RECORDING TAPE

See Tape (for Recording)

### RECORDING WIRE

See Wire (for Recording)

### RECORDS—Phonograph

Audio-Master Corp., 341 Madison Ave., New York 17,

Cook Laboratories, R-2, Stanford, Conn.
Decca Records, Inc., 50 West 57th St., New York 19,
N. Y.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
RADIO CORP. OF AMERICA, Record Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

RECTIFIERS—Copper Oxide, Copper Sulphide See Rectifiers—Metallic

### RECTIFIERS

- Germanium
- 2. Metallic Oxide 3. Selenium 4. Tube

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 3. ADV. PG. 334. Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y.

Barry Electronics Corp., 136 Liberty St., New York 6, N. Y. 3.

N. Y. 3. Bart-Messing Corp., 227 Main St., Belleville 9, N. J. 2. Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass. 1-3

Mass. 1-3.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. 3. ADV. PG. 153.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co.,
52 Iowa Ave., Paterson 3, N. J. 3.
BRADLEY LABS, INC., 82 Meadows St., New Haven 10,
Conn. 2-3. ADV. PG. 254.
British Industries Corp., 164 Duane St., New York 13,
N. Y. 1-3.

N. Y. 1-3, CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. 4. ADV. PG. 96, 97. Clark Electronic Labs., Box 165, Palm Springs, Calif. 3-4. Conant Labs., 6500 0 St., Lincoln 5, Neb. 2-3. CONTINENTAL ELECTRIC CO., Geneva, III. 4. ADV.

PG. 444.
Dresser Electric Co., 942 E. Larned St., Detroit 7,

Mich. 3.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, III. 3. ADV. PG. 413.
Electricoil Transformer Co., Westerly Rd., Ossining,

Chicago 40, III. 3. ADV. PG. 413.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y. 3.
Electronic Devices, Inc., Precision Rectifier Div., 429 12th St., Brooklyn, N. Y. 3.
Electronic Processes Corp., 328 N. Market, San Jose 18, Calif. 4.
ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. 4. ADV. PG. 200.
Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, III. 3.

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, III. 3.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 3. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-2-3-4. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. 1-3-4. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. 1-3-4. ADV. PG. 1-23.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.

General Electronics, Inc., 101 Hazel St., Paterson, N. J.

Good-All Electric Mfg. Co., 112 W. First St., Ogallala, Green Electric Co., W., 130 Cedar St., New York, N. Y.

HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. 1-2-3-4. ADV. PG. 412. INDUSTRIAL RECTIFIER CO., 120 Cedar St., New York, N. Y. 3. ADV. PG. 500, 501. Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. 3. INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. 3. ADV. PG. 393. International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa. 3. Kotron Rectifier Corp., 54 Clark St., Newark 4, N. J. 3.

3. Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 3. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 2-3. McColpin-Christic Corp., 3410 W. 67th St., Los Angeles

43, Calif. 2-4.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4. N. Y.

Marconi Wireless Telegraph Co., Ltd., 23-23 Beaver St., New York 4, N. Y.
MODEL RECTIFIER CORP., 557 Roggers Ave., Brooklyn 25, N. Y. 3. ADV. PG. 523.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. 4.
North Electric Mfg. Co., 501 S. Market St., Galion, Oct.

North Electric Mars.
Ohio. 3.

OPAD-GREEN CO., 71-5 Warren St., New 1918 C.,
N. Y. 3. ADV. PG. 520.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. 2.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
4. ADV. PG. 295, Inside Back & Back Covers.
RADIO RECEPTER CO., 251 W. 19th St., New York
11, N. Y. 1-3. ADV. PG. 206.
11, N. Y. 1-3. Co., Inc., 1803 E. Seventh St., Los

RADIO RECEPTER CO., 251 W. 19th St., New York 11, N. Y. 1-3. ADV. PG. 206. Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif. 2-3-4. SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. 3. ADV. PG. 323. Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio. 2-3.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. 2.
Syntron Co., 243 Lexington, Homer City, Pa. 3.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-3-4. ADV. PG. 552-558.
TAYLOR TUBES, INC., 2312 Wabansia Ave., Chicago 47, III. 4. ADV. PG. 420.
Ther Electric & Machine Works, 15 S. Jefferson St., Chicago, III. 2-3-4.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif. 4.
Vickers, Inc., 1815 Locust St., St. Louis 3, Mo. 3.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,

Vickers, Inc., 1815 Locust St., St. Louis 3, Mo. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5 Pittsburgh 30, Pa. 1-3-4. ADV. PG. 109-115. 5578,

### RECTIFIERS—Tube Rectifying Units

RECTIFIERS—Tube Rectifying Units

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.
Bart-Messing Corp., 227 Main St., Belleville 9, N. J.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.
Furst Electronics, 10 S. Jefferson St., Chicago 6, Ill.
Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Green Electric Co., W., 130 Cedar St., New York, N. Y.
KEPCO LABS, INC., 131-38 Sanford Ave., Flushing 55,
N. Y. ADV. PG. 236, 237.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd.,
Corona, N. Y. ADV. PG. 510.
McColpin-Christic Corp., 3410 W. 67th St., Los Angeles
43, Calif.

Calif.

43, Calif.

Marconi Wireless Telegraph
New York 4, N. Y.

Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.

National Spectrographic Labs., Inc., 6300 Euclid Ave.,
Cleveland, Ohio.

Peochel Fectronics, Inc., 13, Garden St. New Pochelle.

Peschel Electronics, Inc., 13 Garden St., New Rochelle,

N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337.
Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los
Angeles 21, Calif.
Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati, 36,

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6,

SNEINSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 168, 169. Ther Electric & Machine Works, 15 S. Jefferson St. Chicago, III. Chicago, III.
TRAD TELEVISION CORP., 1001 First Ave., Aubury Park,

N. J. ADV. PG. 262. Videon Electronic Corp., 312 E. Washington St., In-

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

# REGULATORS—Current

AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 58. AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 58.
ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 303.
BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

COND.

CO

Conn.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ADV. PG. 488.

Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield,

N. J.
KEPCO LABS, INC., 131-38 Sanford Ave., Flushing 55,
N. Y. ADV. PG. 236, 237.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54,
Mass. ADV. PG. 336, 337.
SORENSEN & Co., INC., 375 Fairfield Ave., Stamford,
Conn. ADV. PG. 168, 169.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.

ADV. PG. 311.
Thordarson-Meissner Mfg. Division, Mt. Carmel, III.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif.

VARIAN ASSUCIATES, 990 Varian St., San Carlos, Calif-ADV. PG. 213.
Varo Mfg. Co., Inc., Box 638, Garland, Texas.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleve-land 3, Ohio. ADV. PG. 348, 349.
Videon Electronic Corp., 312 E. Washington St., In-dianapolis 4, Ind.
Weltronic Co., 19500 W. Eight Mill Rd., Detroit 19, Mich.

WISTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

# REGULATORS—Frequency

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

Electric Regulator Corp., 50 Day St., South Norwalk, Com.

Conn.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ADV. PG. 488.

Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 168, 169.

Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# REGULATORS—Voltage Regulators and

ANTON ELECTRONIC LABS, INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 303. BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,

BUGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153.

Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. Burlington Instrument Co., Burlington, Iowa. CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Ohio.
Clark Electronic Labs., Box 165, Palm Springs, Calif.
Control Corp., 718 Central Ave., Minneapolis 14, Minn.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill.
ADV. PG. 314.
Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minpeapolis 13 Minn.

neapolis 13, Minn. Electric Regulator Corp., 50 Day St., South Norwalk,

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J.
ADV. PG. 488.
Furst Electronics, 10 S. Jefferson St., Chicago 6, Ill.
Gaveco Labs., Inc., Sub. of General Aviation Equipment
Co., Inc., 2 East End Ave., New York 21, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.,
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
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. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
KEPCO LABS., INC., 131-38 Sanford Ave., Flushing 55,
N. Y. ADV. PG. 236, 237.
LAMBDA ELECTRONICS CORP., 103-02 Northern
Blvd., Corona, N. Y. ADV. PG. 510.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
York 55, N. Y. ADV. PG. 361.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.
Pedersen Electronics Co., Mount Diablo Blvd., Lafayette,

Pedersen Electronics Co., Mount Diablo Blvd., Lafayette,

Calif.
Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV PG. 336, 337.
RED BANK DIVISION, Bendix Aviation Corp., Red Bank, N. J. ADV. PG. 125, 126.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, III.

ADV. PG. 317.

SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 168, 169.

Standard Electronics Corp., 285 Emmet St., Newark,

Standard Electronics Corp., 200 Elimited St., N. J.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, III.

SUPERIOR ELECTRIC CO., THE, 4000 Church St., Bristol, Conn. ADV. PG. 133-135.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.

TELECHROME INC., 88 Merrick Rd., Amityville, N. I. ADV. PG. 311.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
United Electronics Co., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG., Inside Front Cover.
Varo Mfg. Co., Inc., Box 638, Garland, Texas.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
Videon Electronic Corp., 312 E. Washington St., Indianapolis 4, Ind.

Washington St., Ind.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

1. Coaxial

2. d'Arsonval
3. Differential
4. Electronic, Resistance Activated
5. Frequency Selective
6. High Voltage

5. Frequency Selective
6. High Voltage
7. Impulse
8. Keying and Break-in
9. Latching
10. Mercury
11. Overload
12. Overvoltage & Undervoltage
13. Polarized
14. Power
15. Rotary
16. Sensitive
17. Sequence
18. Stepping
19. Sub-Miniature
20. Telephone
21. Time Delay
22. Vacuum Contact
23. Vibrating Reed Type
Note: (h) indicates hermetically

Note: (h) indicates hermetically sealed types.

A'G'A DIVISION OF ELASTIC STOP NUT CORP. OF AMERICA, 1029 Newark Ave., Elizabeth 3, N. J. 21. ADV. PG. 378, 379.

ADAMS & WESTLAKE CO., Michigan St., Elkhart, Ind., (b)

ADAMS & WESTLAKE CO., Michigan St., Elkhart, Ind., 10-16-21. ADV. PG. 103-106. (h)
ADVANCE ELECTRIC & RELAY CO., 2435 Namomi St., Burbank, Calif. 1-4-6-8-9-11-12-14-16-17-19-20-21. ADV. PG. 160. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 13. ADV. PG. 343. (h)
Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis. 11-14-21. ALLIED CONTROL CO., INC., 2 E. End Ave., New York 21, N. Y. 1-3-6-7-8-9-11-12-14-15-16-19-21. ADV. PG. 150, 151. (h)
Allied Electric Products, Inc., 76-98 Coit St., Irvington, N. J. 21.

AMERICAN ELECTRONEERING CORP., 5025-29 West Jefferson Blvd., Los Angeles 16, Calif. 4-5. ADV.

PG. 396.

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. 4-16.

American Relay & Controls, Inc., 4901 West Flournoy St., Chicago 44, III. 6-9-11-12-14-16-20-21. (h)

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 23. ADV. PG. 334.

AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. 21. ADV. PG. 58.

Andrew Corp., 363 E. 75th St., Chicago 19, III. 6.

Arrow-Hart & Hegeman Electric Co., 100 Hawthorne St., Hartford 6, Conn. 9-11-16-21.

Assembly Products, Inc., Chagrin Falls 6, Ohio. 2-9-12-16.

Automatic Electric Sales Corp., 1033 W. Van Buren.

12-16.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. 8-9-10-13-15-18-20-23. (h)
Automatic Signal Division, Eastern Industries, Inc., 100
Regent St., East Norwalk, Conn. 14.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. 3.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave. Philadelphia 44 Pa. 21.

Ave., Philadelphia 44, Pa. 21.

Barber-Colman Co., Rockford, Ill. 13.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa. 23.

Vernon, N. Y. 4-21.

Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, III. 3-7-9-10-13-14-18-20-21-22. (h)

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio. 9-11-12-21.

Ohio. 9-11-12-21.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. 1-3-16.
COMAR ELECTRIC CO., 3349 W. Addison, Chicago 18, III. 1-7-9-14-20. ADV. PG. 462.
Control Corp., 718 Central Ave., Minneapolis 14, Minn. 9-20-23.
Cook Electric Co. 2700 Southport Ave. Chicago 14, III.

9-20-23.
Cook Electric Co., 2700 Southport Ave., Chicago 14, III.
1-3-5-6-7-9-11-12-14-15-16-17-18-19-20-21. (h)
Coral Designs Div., Henry G. Dietz Co., 12-16 Astoria
Blvd., Long Island City 2, N. Y. 4.
CRAMER Co., INC., R. W., Box 13, Centerbrook, Conn.
21. ADV. PG. 400.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
11-21.

11-21.

DE COURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. 14. ADV. PG. 76.

Deltz Co., S. J., 38 River Edge, River Edge, N. J. 4-21.

Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio. 21.

Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. 19.

Durakool, Inc., 1010 N. Main St., Elkart, Ind. 10-21.

Ebert Electronics Co., 185-09 Jamaica Ave., Hollis 7, N. Y. 10-14.

ECLIPSE-PLONEER DIV. Bondix Aviation Corp. Table

N. Y. 10-14. (h)
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. 12. ADV. PG. 127, 128.
EDISON, INC., THOMAS A., Instrument Div., 81 Lakeside Ave., West Orange N. J. 11-12-16-21. ADV. PG. 88, 89.
Electric Design & Mfg. Corp., Burlington, Iowa. 2.
Electro-Mechanical Specialties Co., 6819 Melrose St., Los Angeles 38, Calif. 3-5-6-7-8-10-11-12-13-14-16-21. (h)
ELECTRO-SEAL CORP., 946 Lee St., Des Plaines, III. 15-17-18-20-21. ADV. PG. 407. (h)

Electronic Apparatus Co., Elkhart, Ind. 10. (h)
Electronic Control Corp., 1573 E. Forest St., Detroit,
Mich. 4.
Electyme Motor Products Corp., 565 W. Washington
Blvd., Chicago 6, III. 23.
Eureka Television & Tube Corp., 69 Fifth Ave., Hawthorne, N. J. 4-11-12-19-21-22.
Farmer Flectric Co. 21 Mossfeld Rd. Wahan 68 March

thorne, N. J. 4-11-12-19-21-22. Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.

RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 7-8-13-15-16-18-20. ADV. PG. 189-193.

Star Co., 440 Mixville Rd., West Cheshire, Conn.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn. 14-20.

G-V Controls Inc., 28 Hollywood Plaza, East Orange, N. J. 12-21.

Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 E. End Ave., New York 21, N. Y. 11-12.

General Communication Co., 530 Commonwealth Ave., Boston 15, Mass. 1.

General Controls Co., Glendale 1, Calif. 10.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 4-11-12-13-16-17-18-21-22. ADV. PG. 1-23.

GRAYHILL, 4536 W. Madison St., Chicago 24, III. 14. ADV. PG. 510.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, III. 1-4-8-9-11-14-16-18-20-21. ADV. PG. 202.

Haledy Electronics Co., 57 Williams St., New York 5, N. Y. 4-16-22. (v)

HAYDON CO., A. W., 232 N. Elm St., Waterbury 20, Conn. 21. ADV. PG. 198.

HAYDON MFG. CO., INC., 554 Elm St., Torrington, Conn. 21. ADV. PG. 226, 227.

Heinemann Electric Co., 97 Plum St., Trenton 2, N. J. 21.

Conn. 21. AUV. FG. 220, 2...

Heinemann Electric Co., 97 Plum St., Trenton 2, N. J. 21.

Hoffman Engineering Corp., Anoka, Minn. 9.

Hufco Industries, 2815 W. Olive, Burbank, Calif. 19. (h)

Industrial Electronics Co., Inc., Hanover, Mass. 11-21.

Industrial Products Co., Danbury, Conn. 1.

JENNINGS RADIO MFG. CO., 1098 E. William St.,

San Jose 12, Calif. 6-8-22. ADV. PG. 25-27.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S.

Cicero Ave., Chicago 38, Ill. 20. ADV. PG. 274.

Kurman Electric Co., Inc., 35-18 37th St., Long Island

City, N. Y. 13-14-16-20-21-23.

LEACH RELAY CO., 5915 Avalon Blvd., Los Angeles 3,

Calif. 6-7-8-9-11-14-16-21. ADV. PG. 208. (h)

LELAND, INC. G. H., 123 Webster St., Dayton 2,

Ohio. 15-17-18. ADV. PG. 385.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

III. 4-16-21.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind. 15.

Magnetic Devices, Inc., 712 East St., Frederick, Md.

Magnetic Devices, Inc., 712 East St., Frederick, Md. 6-15.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 19.

Muirhead & Co., Ltd., Beckenham, Kent, England. 3.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London W. C. 2, England. 21-22.

Neomatic Inc., 879 Wellesley Ave., Los Angeles 49, Calif. 4-6-16-17-19.

North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. 3-7-9-14-16-17-18-20-23.

PHAOSTRON Co., 151 Pasadena Ave., South Pasadena, Calif. 9-14-16-21-22. ADV. PG. 118, 119.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. 11.

PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, III. 3-7-9-14-16-17-20-21. ADV. PG. 286.

Photobell Company, 116 Nassau St., New York 7, N. Y. 4.

4.
Polytron Engineering, 6659 Belair Rd., Baltimore 6,
Md. 13-16-19-21.
POTTER & BRUMFIELD, Princeton, Ind. 4-7-8-9-14-1619-20-21. ADV. PG. 170.
Precision Scientific Co., 3737 W. Cortland St., Chicago
47, Ill. 10-16.
Price Electric Corp., Frederick, Md. 1-4-6-7-9-11-1415-16-17-18-19-20-21.

B. B. M. Div. Escay, Wise, Corp. Leganscott, Ind.

R. B. M. Div., Essex Wire Corp., Logansport, Ind. 9-11-14-16-19-20.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. 15. ADV. PG. 295, Inside Back & Back Covers.

Back Covers.

Roller-Smith Corporation, Bethlehem, Pa. 11-12-21.

SERVO-TEK PRODUCTS CO., 4 Godwin Ave., Paterson, N. J. 4. ADV. PG. 230.

Sheldon Electric Co., Div., Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J. 21. (h)

SIGMA INSTRUMENTS, INC., 180 Pearl St., South Braintree 85, Mass. 3-4-5-7-8-9-11-12-13-16-21.

ADV. PG. 371. (h)

SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th New York, N. Y. 1-6-8-9-13-14-16-19-20-21. A PG. 288.

Spencer Thermostat Div., Metals & Controls Corp., 34
Forest St., Attleboro, Mass. 11-21.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London WC 2, England. 8-20-22.
STAVER CO., INC., Box 431, Bay Shore, N. Y. 23.
ADV. PG. 28.
Sterling Engineering Co., Inc., 90 Mill St., Laconia,
N. H. 20.

N. H. 20. (II)
STEVENS-ARNOLD INC., 22 Eikins St., South Boston,
Mass. 5-8-13-23. ADV. PG. 46. (II)
Struthers-Dunn, Inc., 150 N. 13th St., Philadelphia 7,
Pa. 9-10-11-14-16-17-18-21.

June, 1952 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. 21. Thermo Instruments Co., Box 336, Belmont, Calif. 14.

Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25. Calif. 1. geles 25, Calif. 1.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton,

Ohio. 2.

ULANET CO., GEORGE 413 Market St., Newark 5, N. J. 21. ADV. PG. 410.
U. S. Instrument Corp., 409 Broad St., Summit, N. J. 15.

15. Varo Mfg. Co., Inc., Box 638, Garland, Texas. 5-12. Vokar Corp., 7300 Huron River Dr., Dexter, Mich. 17-19-22-23. (h)
Wallace & Tiernan Products, Inc., Belleville 9, N. J. 5. WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. 6-8-9-11-12-14-16-21. ADV. PG. 173, 174.
Warlck Co., Charles F., 16251 Hamilton Ave., Detroit 3, Mich. 14-16.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. 2-3-5-6-7-9-12-13-14-15-16-17-21. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. 2-14-16-20-21. ADV. PG. 256.
Wheaton Co., T. C., Electronic Div., Millville, N. J. 16-19.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6,

White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6,

Mo. 14.

Zenith Electric Co., 152 W. Walton St., Chicago 10, III. 14.

### RELAYS-Cross-Bar

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.
Stromberg-Carlson Co., Rochester 3, N. Y.
Vincent Co., A. W., 39 State St., Rochester 14, N. Y.

### RESISTORS

### Fixed Composition

Low wattage Temperature sensitive

3. High frequency 4. High megohm 5. High voltage 6. High wattage

7. Voltage sensitive 8. Resistor-suppressor

### Variable Composition

# 9. Controls & potentiometers

# Wire Wound

10. 2 Watts and under
11. 4 to 35 Watts
12. 4 to 500 Watts
13. 500 to 1500 Watts
14. Precision low voltage
15. Precision high voltage
16. Rf non-inductive

### Variable Wire Wound

17. 4 Watts and under
18. 5 to 25 Watts
19. 25 Watts and over
20. 500 Watts and over
21. Slide wire
22. Adjustable
23. Rheostat—potentiometer types

ACE COIL & ELECTRONICS CO., 912 Middlesex Ave., Metuchen, N. J. 14. ADV. PG. 446.
Acme Electric Heating Co., 1217 Washington St., Boston, Mass. 11-12-13.
Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis. 1-9.

Wis. 1-9.

Amalgamated Electronics, Electronic Rd., Clinton Corners, N. Y. 14-17-18.

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y. 10-11-12-22.

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. 10.

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. 10-11-14-15-16. ADV. PG. 90.

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. 10-11-14-15-16.

Carter Parts Co., 213 Institute Pl., Chicago 10, III.

N. Y. 10-11-14-15-16.

Carter Parts Co., 213 Institute Pl., Chicago 10, III. 10-11-17-18-22-23.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. 9-17-23. ADV. PG.

Keefe Ave., Milwaukee 1, Wis. 9-1/-23. ADV. rg. 71-74.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. 9-17. ADV. PG. 42, 43.
CIMA CORP., 119 Braintree St., Allston, Mass. 11-12-14-15-16-22. ADV. PG. 476.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. 10-14. ADV. PG. 386.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio. 12-13-19-23.
CLAROSTAT MFG. CO., INC., Dover, N. H. 9-10-11-12-14-16-17-18-19-22-23. ADV. PG. 162, 163.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. 8-10

COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III.
10-14. ADV. PG. 506.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif. 10-14-15-17-21.
Columbia Resistors, Inc., 216 Lafayette St., New York
12, N. Y. 11-12-18-19-22.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New
York 22, N. Y. 10-11-12-14-16-17-18-19. ADV.
PG. 307.
Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio. 1-8-10.
CORNELL ELECTRONICS CORP., 40-33 Main Ave.,
Douglaston, N. Y. 17. ADV. PG. 502.
CREST LABORATORIES, INC., Whitehall Bidg., Far
Rockaway, N. Y. 14. ADV. PG. 515.
Custom Electronics Corp., 738 Speedwell Ave., Morris
Plains, N. J. 14.

Custom Electronics Corp., 738 Speedwell Ave., Morris Plains, N. J. 14.

\*DALE PRODUCTS, INC., Box 1, Columbus, Nebr. 1-3-4-6-10-11-12-14-15-16. ADV. PG. 136, 137. DAVEN CO., 191 Central Ave., Newark 4, N. J. 10-14-16-17-22-23. ADV. PG. 121.

DE JUR-AMSCO CORP., Northern Bivd. at 45th St., Long Island City 1, N. Y. 17-18-19-23. ADV. PG. 183-185

DYNAMIC RESISTOR CORP., 42-27 Francis Lewis Blvd., Bayside, N. Y. 9-12-18-19. ADV. PG. 403. Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.

Bergen, N. J. 3.
Electro-Mec Laboratory, 19 Murray St., New York 7, N. Y. 10-14-15-17-23.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 8. ADV. PG. 271.

Ford Engineering Co., 129 East A St., Upland, Calif. 17-23.

Friez Instrument Div., Bendix Aviation Corp., Baltimore

4, Md. 2. FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. 10-11-14-15-16. ADV. PG. 512,

GAMEWELL CO., Newton Upper Falls, 64, Mass. 10-17. ADV. PG. 367.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 6-11-12-13. ADV. PG.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 10-14-16-17-18-22-23. ADV. PG.

82, 83.
Giannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena 1, Calif. 22-23.
Globar Division, Carborundum Co., Niagara Falls, N. Y. 1-2-5-6-7-8.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. 8.

Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. 8.
Hardwick, Hindle, Inc., 40 Hermon St., Newark, N. J. 11-12-18-19-21-22-23.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. 14. ADV. PG. 514.
HI-Q DIVISION, AEROVOX CORP., Seneca Ave., Olean, N. Y. 11-12. ADV. PG. 242, 243.
HYCOR COMPANY, INC., 11423 Vanowen St., North Holiywood, Calif. 10-11-12-16. ADV. PG. 172.
I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa. 10-11-12-14-15-17-18-19-22.
INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. 10-11-14-15-16. ADV. PG. 146, 147.
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa. 1-3-4-5-6-9-10-11-14-15-16-22.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, III. 17-18-23.
Javex, 921 State, Garland, Texas 1.
K. F. Development Co., 867 Woodside Way, San Mateo, Calif. 17-23.
Kystone Carbon Co., Inc., Saint Marys, Pa. 2.
Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, III. 10-11-12-14-15-16-18-19-22.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. 12-18-19-22.
Leed & Northrup Co., 4970 Stenton Ave., Philadelphia 49 10-114-16-21-23.

12-18-19-22.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. 10-14-16-21-23.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 9-11-12-17-18-22-23.
MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. 10-14-15. ADV. PG. 171.
Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. 10.

MICRO-CIRCUITS CO., New Buffalo, Mich., 2. ADV. PG.

462.
Milwaukee Resistor Co., Dept. 5, 700 W. Virginia St.,
Milwaukee 4, Wis. 12-18-19-22.
Model Engineering & Mfg., Inc., Huntington, Ind.
12-22.

Co., Ltd., Beckenham Kent, England. Muirhead & 10-14-17-18 Muter Co., 1255 S. Michigan Ave., Chicago, III. 10-11-18-23.

18-23.

National Electric Controller Co., 5307 Ravenswood Ave., Chicago, III. 19.

Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio. 1-5-8-10-11-12-17-18-19.

OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, III. 1-3-9-10-11-12-13-14-15-16-18-19-20-21-22-23.

ADV. PG. 79.

III. 1-3-9-10-11-20
ADV. PG. 79.
0HMWEVE CO., 43 Darcy St., West Hartford 6, Conn.
3. ADV. PG. 342.
Painton & Co., Ltd., 366 Madison Ave., New York 17,
N. Y. 10-11-12-14-15-16-17-18-19-22-23.
N. Y. 10-11-12-19-23-23.
Pasadena Ave., South Pasadena,

N. Y. 10-11-12-14-15-16-1/-18-19-22-23.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. 10. ADV. PG. 118, 119.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. 1-3-4-5-6-8-9-10-11-21.

Plastics & Electronics Co., Inc., P. O. Box 38, Station J, Buffalo 8, N. Y. 1-4-5.

Precision Electronic Components Ltd., 560 King St. West,

Precision Electronic Components Ltd., 560 King St. West, Toronto Ont., Canada. 9.

Precision Resistor Co., 334 Badger Ave., Newark 8, N. J. 10-14-15.

Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J. 10-11-12-14-15-16.

RESISTANCE PRODUCTS CO., 714 Race St., Harrisburg, Pa. 3-4-5-6-10-14-15. Adv. PG. 296. (h) Resistor Sales of Nevada, P. O. Box 2502, Reno, Nev. 1-2-3-4.

Resistors, Inc., 5226 W. 26th St., Chicago 50, Ill. 11-12-16-18-19-22.

REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. 6-20-21-22-23. ADV. PG. 354.

Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa. 14.

St. Mary's Carbon Co., State Rd., St. Marys, Pa. 1.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. 9-10-11-14-15-23. ADV. PG. 320.

Speer Resistor Corp., St. Marys, Pa. 1.

Sprague Electric So., 125 Marshall St., North Adams, Mass. 11-12-14-15-16.

STACKPOLE CARBON CO., St. Marys, Pa. 1-9. ADV. PG. 154, 155.

States Co., 19 New Park Ave., Hartford 6, Conn. 16.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. 2. ADV. PG. 228, 229.

Supreme, Inc., Greenwood, Miss. 14.

ADV. PG. 228, 229.

Supreme, Inc., Greenwood, Miss. 14.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades
Park, N. J. 10-14-23.

Park, N. J. 10.14-23.

TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. 17-21-23. ADV. PG. 394, 395.

Trans-Sonics, Inc., Bedford Airport, Bedford, Mass. 2.

Tru-Ohm Products Div., Model Engineering & Mfg. Co., 2800 Milwaukee Ave., Chicago 16, III. 11-12-13-16-22-23

22-23.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. 4. ADV. PG. 348, 349.
Vokar Corp., 7300 Huron River Dr., Dexter, Mich. 10-14.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. 11-12-13-16-19-20-22-23. ADV. PG.

173, 174.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Plttsburgh 30, Pa. 1-9. 109-115.
WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. 1-4-5. ADV. PG. 391.
WIRT CO., 5221 Greene St., Philadelphia 44, Pa. 11-12-13-17-22. ADV. PG. 298.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. 14-15-16. ADV. PG. 482.

### RESISTORS—Deposited Carbon

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, CAMPBELL INDUSTRIES, INC., 733 E. Main St., Chattanooga 8, Tenn. ADV. PG. 58. CHASE RESISTOR CO., 9 River St., Morristown, N. J. ADV. PG. 426.

DALE PRODUCTS, INC., Box 1, Columbus, Neb. ADV.

PG. 136, 137.
ELECTRA MFG. CO., Resistor Div., 2537 Madison Ave., Kansas City, Mo. ADV. PG. 353.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
International Resistance Co., 401 N. Broad St., Philadelphia 8 Pa

International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
PHAOSTRON CO., 151 Pasadena Ave., Pasadena, Calif.
ADV. PG. 118, 119.
RADELL CORP., 7900 Pendleton Pike, Indianapolis 26,
Ind. ADV. PG. 181.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
WILKOR DIVISION, Aerovox Corp., 2882 Detroit Ave.,
Cleveland 13, Ohio. ADV. PG. 243.

# RESISTORS—Precision, Film Type

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 433.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio.
CORNELL ELECTRONICS CORP., 40-33 Main Ave., Douglaston, N. Y. ADV. PG. 502.
DALE PRODUCTS, INC., Box 1, Columbus, Nebr. ADV. PG. 136, 137.

PG. 136, 137. International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles

Pancro Mirrors, Inc., 2958 Los Feilz Divd., Los Angeles 39, Calif.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.
Telewave Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y.
WILKOR DIVISION, Aerovox Corp., 2882 Detroit Ave., Cleveland 13, Ohio. ADV. PG. 243.

### RESISTORS—Sub-Miniature

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y. BOND ELECTRONICS CORP., 60 Springfield Ave., Spring-field, N. J. ADV. PG. 90.

APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box

CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 386. CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 162, 163.
CORNELL ELECTRONICS CORP., 40-33 Main Ave., Douglaston, N. Y. ADV. PG. 502.
DALE PRODUCTS, INC., Box 1, Columbus, Nebr. ADV. PG. 136, 137.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. Electro-Mec Laboratory, 19 Murray St., New York 7, Electro-Mec Laboratory, 19 Murray St., New York 7, N. Y.
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. ADV. PG. 512, 513.
HYCOR COMPANY, INC., 11423 Wanowen St., North Hollywood, Calif. ADV. PG. 172.
INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. ADV. PG. 146, 147.
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
Javex, 921 State, Garland, Texas.
MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. ADV. PG. 171.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 118, 119.
Plastics & Electronics Co., Inc., P. O. Box 38, Station J., Buffalo 8, N. Y.
Precision Resistor Co., 334 Badger Ave., Newark 8, N. J. SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio ADV. PG. 348, 349.
Vokar Corp., 7300 Huron River Dr., Dexter, Mich.
WILKOR DIVISION, Aerovox Corp., 2882 Detroit Ave., Cleveland 13, Ohio. ADV. PG. 243.

### RHEOSTATS

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
Carter Parts Co., 213 Institute Pl., Chicago 10, III.
CENTRALAB DIV. OF GLOBE-UNION INC., 914 E. Keefe
Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG.
162, 163.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,
Wie DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 183-185.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

Hardwick, Hindle Inc., 40 Hermon St., Newark, N. J. International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa. phia 8, Pa.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.

100 P. P. 3029 E. Washington St., Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. National Electric Controller Co., 5307 Ravenswood Ave., National Electric Contained St., Chicago, Ill.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44,
Ill. ADV. PG. 79.
Precision Electronic Components Ltd., 560 King St.
West, Toronto, Ont., Canada.
REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y.
ADV. PG. 354. ADV. PG. 354. STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155.
STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 502.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.
VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 90.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 173, 174.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# RHEOSTATS—Slide Wire

Brown Electro-Measurement Corp., 4637 Southeast Haw-thorne Blvd., Portland 15, Ore. Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Hardwick, Hindle Inc., 40 Hermon St., Newark, N. J. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. National Electric Controller Co., 5307 Ravenswood Ave., Chicago, III.

OHMITE MFG. C., 4835 W. Flournoy St., Chicago 44,
III. ADV. PG. 79.

REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. REX RHEOSIAI CU., 3 FOXINGS Ru., Dalumin, III. ADV. PG. 354.
STICHT CO., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 502.
TECHNOLOGY INSTRUMENT CORP., 531 Main St., Acton, Mass. ADV. PG. 394, 395.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago

### RINGS—Carbon Packing

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Phila-

GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.

NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 264.

St. Mary's Carbon Co., State Rd., St. Marys, Pa. Speer Carbon Co., Lincoln Ave., St. Marys, Pa. STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155.

### RINGS—Collector

ELECTRO TEC CORP., South Hackensack, N. J. ADV. PG. 255.
GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.
Industrial Electrical Works, 1509 Chicago St., Omaha 2. Nebr. MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465.
Speer Carbon Co., Lincoln Ave., St. Marys, Pa. Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, Ill.

### RINGS—Oil Sealing

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.
Felt Products Mfg. Co., 1504 West Carroll Ave., Chi-Felt Products Mfg. Co., 1504 West Carroll Ave., Chicago 7, III.
Garlock Packing Co., The, Palmyra, N. Y.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.
Johns-Manville, 22 E. 40th St., New York 16, N. Y.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258.
Speer Carbon Co., Lincoln Ave., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154. 155. 154, 155. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472. U.

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown,

### RINGS—Retaining

Felt Products Mfg. Co., 1504 West Carroll Ave., Chicago 7, III.
Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount
Vernon, N. Y.
National Lock Washer Co., 40 Hermon St., Newark 5, U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
Waldes Kohinoor Inc., 47-16 Austel Place, Long Island City 1, N. Y.

### RIVETS

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 246.
BRAININ CO., C. S., 320 Washington St., Mount Vernon, N. Y. ADV. PG. 424.
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.
FEDERAL SCREW PRODUCTS INC., 224 Huron St., Chicago 10, Ill. ADV. PG. 498.
Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y. Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, III. Hasall Inc., John, Clay & Oakland Sts., Brooklyn 22, MILFORD RIVET & MACHINE CO., Milford, Conn. ADV. PG. 369. PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 160. Tubular Rivet & Stud Co., Linden St., Quincy, Mass.

# ROOMS-Screen

ACE ENGINEERING & MACHINE CO., INC., 3642 N.
Lawrence St., Philadelphia 40, Pa. ADV. PG. 152.
Belling & Lee Ltd., 366 Madison Ave., New York 17,
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. Lindsay Structure, Inc., 5000 W. Dempster St., Skokle,

### RUBBER

See Insulation Materials RUBBER—Conductive See Insulation Materials

### **SCALERS**

44. Princeton, N. J. ADV. PG. 528.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England. Computing Devices of Canada, Ltd., 338 Queen St., Ottawa OligiTAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Electronic Control Corp., 1573 E. Forest St., Detroit, Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
EL-TRONICS, INC., 2649 N. Howard St., Philadelphla 33, Pa. ADV. PG. 451.
Nuclear Development Lab., Box 7034, Kansas City, Mo. Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.
Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
NUCLEAR RESEARCH CORP., 2563 Grays Ferry Ave., Philadelphia 46, Pa. ADV. PG. 301.
Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo. St. Louis 5, Mo. Nucleonic Corp. of America, 497 Union St., Brooklyn 31, N. Y.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd.,
Great Neck, N. Y. ADV. PG. 278.
R-C Scientific Instrument Co., 335 Culver Blvd., Playa
Del Rey, Calif.
Radiation Counter Laboratories, Inc., 5122 W. Grove St.,
Skokie, III.
Technical Associates, 140 W. Providencia Ave., Burbank,
Calif. Calif. Walkirt Co., 145 W. Hazel, Inglewood, Calif. Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

### SCALES—Oscilloscope

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax N. S., Canada.
Du Mont Laboratories, Inc., Allen B., Instrument Dlv., 1500 Main Ave., Clifton, N. J.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.

### SCANNERS—Reflected & Transmitted Light

Acme Telectronix Div., NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
Industrial Electronics Co., Inc., Hanover, Mass.

McElroy Mfg. Corp., Littleton, Mass.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311. TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 526.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

# SCRAMBLERS—Speech

Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.

# SCREENS—Television Projection

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. Willson Camera Co., Inc., 1401 Lawrence Rd., Havertown,

SCREWS—Self-Tapping Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
American Screw Co., Willimantic, Conn.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Blake & Johnson Co., Waterville 48, Conn.
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. FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Cihcago 10, III. ADV. PG. 498.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, III.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio. Ohio.
National Screw & Mfg. Co., The, Cleveland 4, Ohio.
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
Pheoli Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Pilgrim Screw Co., 259 Dexter St., Providence, R. I.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Scovill Manufacturing Co., Waterbury 20, Conn. Shakeproof Inc., Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, III. Star Stainless Screw Co., 206 Union Ave., Paterson 2,

Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, III. Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, III. United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, III.

### SCREWS—Set

ALLEN MFG. CO., Hartford 2, Conn. ADV. PG. 132.
Allmetal Screw Products Co., Inc., 33 Greene St., New
York 13, N. Y.
American Laubscher Corp., 333 W. 52nd St., New York
19, N. Y.

Autoscrew Co., 216-222 W. 18th St., New York 11,

N.Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N.Y. ADV. PG. 342.
Bristol Co., The, Waterbury 20, Conn.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St.,

Chicago 10, III. ADV. PG. 498. GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120. Harper Co., H. M., 8200 Lehigh Ave., Morton Grove,

III.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. AV. PG. 477.
Javex, 921 State, Garland, Texas.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland,

Javex, 921 State, Garianu, Texas.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio.
National Screw & Mfg. Co., The, Cleveland 4, Ohio.
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y. Pheol! Mfg. Co., 5700 Roosevelt Rd., Chicago 50, III.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Scovill Mfg. Co., Waterbury 20, Conn.
Set Screw & Mfg. Co., 470 Main St., Bartlett, III.
Shakeproof, Inc., Div. of Illinois Tool Works, 2501 N.
Keeler Ave., Chicago 39, III.
Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, III.
United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, III.

### SEALS—Carbon

GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.

NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 264.

St. Mary's Carbon Co., State Road, St. Marys, Pa. STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154.

154, 155.
S. Graphite Co. Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.

### SEALS—Hermetic

Belling & Lee, Ltd., 366 Madison Ave., New York

17, N. Y.

CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 435.

Corning Glass Works, Corning, N. Y.

ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG 57.

Electronic Apparatus Co., Elkhart, Ind.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.

Elsite Carp. 6000 Ferryion, Ave. Clipton 13. Oblo.

N. Y.
Fusite Corp., 6000 Fernview Ave., Cincinnati 13, Ohio.
GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne
Ave., Valley Stream, N. Y. ADV. PG. 362.
HELDOR MFG. CO., Div. of Heldor Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J.
ADV. PG. 238.
HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind.
ADV. PG. 401.

ADV. PG. 401.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St.,

Newark 7, N. J. ADV. PG. 77. Kearfott Co., Inc., 1150 McBride Ave., Little Falls,

NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258.

NEO-SIL CORP., 26 Cornelison Ave., Jersey Lity 4, N. J. ADV. PG. 258.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 396.
Sealectro Corp., 181 Union Ave., New Rochelle, N. Y. Sealtron Co., 9701 ReadIng Road, Cincinnati 15, Ohio. Sperti-Farraday, Inc., Cincinnati Div., Cincinnati 2, Ohio. STUPAKOFF CERAMIC MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.
Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield,
N. J. ADV. PG. 510.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302.
Vitroseal Corp., 6325 Guilford Ave., Box 6048, Indianapolis 20, Ind.
Wheaton Co., T. C., Electronic Division, Millville, N. J.

WILMAD GLASS CO., INC., Landisville, N. J. ADV. WILMAD GLASS 60, 100, 100, PG. 486.
PG. 486.
City, Calif.
Zell Products Corp., 276-280 Main St., P. 0. Box 590,

### SEALS—Metal-to-Glass

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Belling & Lee, Ltd., 366 Madison Ave., New York 17,

Belling & Lee, Ltd., 366 Middison Ave., New York N. Y.
N. Y.
CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle,
Lodi, N. J. ADV. PG. 435.
Corning Glass Works, Corning, N. Y.
ELECTRICAL INDUSTRIES, INC., 44 Summer Ave.,
Newark 4, N. J. ADV. PG. 57.
Electronic Apparatus Co., Elkhart, Ind.
Fusite Corp., 6000 Fernview Ave., Cinclnnati 13, Ohlo.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne
Ave., Valley Stream, N. Y. ADV. PG. 362.
HARDMAN CO., INC., H. V., 571 Cortlandt St., Belleville, N. J. ADV. PG. 505.
HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind.
ADV. PG. 401.

HERMÁSEAL CO., INC., Riverside Drive, Elkhart, Ind. ADV. PG. 401.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark, N. J. ADV. PG. 77.
JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. ADV. PG. 25-27.
Litton Industries, San Carlos, Calif. SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 396.
Sealtron Co., 9701 Reading Road, Cincinnati 15, Ohio. STUPAKOFF CERAMIC MFG. CO., Latrobe, Pa. ADV. PG. 228, 229.

STUPAKOFF CERAMIC MFG. CO., Latrobe, Pa. AUV. PG. 228, 229.
Vitroseal Corp., 6325 Guilford Ave., Box 6048, Indianapolis 20, Ind.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wheaton Co., T. C., Electronic Div., Millville, N. J. WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG. 486 PG. 486.
Zell Products Corp., 276-280 Main St., P. O. Box 590,

Norwalk, Conn.

### SEALS-Oil

Bristol Co., The, Waterbury 20, Conn.
Garlock Packing Co., The, Palmyra, N. Y.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave.,
Yonkers 3, N. Y. ADV. PG. 340, 341.
HLDDR MFG. CO., Div. of Heldor Bushing & Terminal
Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV.
PG. 238. Dohns-Manville, 22 E. 40th St., New York 16, N. Y.
NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4,
N. J. ADV. PG. 258.
Sealol Corporation, 45 Willard Ave., Providence 5, R. I.
Syntron Co., 243 Lexington, Homer City, Pa.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472.
Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
Wolfe Co., Inc., Franklin C., 3644 Eastham Drive,
Culver City, Calif.

# SELECTIVE CALLING APPARATUS

Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
HAMMARLUND MFG. CO., 460 W. 34th St., New York
1, N. Y. ADV. PG. 215-217.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S.
Cicero Ave., Chicago 38, III. ADV. PG. 274.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
Island City 3, N. Y.
STEVENS-ARNOLD, INC., 22 Elkins St., South Boston,
Mass. ADV. PG. 46.

# SERVICES

### PLATING—Metal on Plastic

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 497.

Bart-Messing Corp., 227 Main St., Belleville 9, N. J. Buhl Optical Co., 1009 Beech Ave., Pittsburgh 12, Pa. COHAN-EPNER CO., INC., 142 W. 14th St., New York 11, N. Y. ADV. PG. 380.
CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 435.
Donham Craft, Inc., Thomaston, Conn.
Electrochemical Industries, Inc., Jacques St., Worcester, Mass. Mass.

EMERSON & CUMING CO., 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 35.

GENERAL CHEMICAL DIV., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y. ADV. PG. 453.

Glts Molding Corp., 4600 W. Huron St., Chicago 44, III. Keller Products Co., 41 Union St., Manchester, N. H. Laconia Corp., 37 S. 6th St., Newark 7, N. J. Metaplast Process, Inc., 3451 56th St., Woodside, N. Y.

Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee, Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Optical Film Engineering Co., 2731-37 N. 6th St.,
Philadelphia 33, Pa.

### PLATING—Precision Metal

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-Messing Corp., 227 Main St., Belleville 9, N. J.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y. City 1, N. Y.

COHAN-EPNER CO., INC., 142 W. 14th St., New York
11, N. Y. ADV. PG. 380.

Donham Craft, Inc., Thomaston, Conn.

Electrochemical Industries, Inc., Jacques St., Worcester, GENERAL CHEMICAL DIV., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y. ADV. PG. 453.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.

James Plating Works, Inc., 720 W. Schubert Ave.,
Chicago 14, III.
Lerner Instrument & Electronic Mfg. Corp., 47-49 Bergen
St., Brooklyn 2, N. Y.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
MERIT PLATING CO., 218 E. 141ct St., New York 51,
N. Y. ADV. PG. 525.

Molded Insulation Co., 335 E. Price St., Philadelphia
44, Pa.

SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362. Standard Metals Corp., 262 Broad St., North Attleboro,

Mass.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

### SEALING—Hermetic

ELECTRO SEAL CORP., 946 Lee St., Des Plaines, III. ADV. PG. 407.

GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne
Ave., Valley Stream, N. Y. ADV. PG. 362.

# TINNING—Hot Dipped

HOPWOOD RETINNING CO., INC., 190 Pacific Ave., Jersey City, N. J. ADV. PG. 411.

Hopwood Retinning Corp., 303 Commercial St., Malden, Mass.

# TREATING—Fungus & Moisture Proof

General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, III. PRODUCTION ENGINEERING CO., Ciifton, N. J. ADV. PG. 503.

## SERVOMECHANISMS See Controls, Servo

### SERVOS

Doelcam Inc., 56 Elmwood St., Newton 58, Mass, ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro N. J. ADV. PG. 127-128, FORD INSTRUMENT DIV., SPERRY CORP., 31-10 Thomson Ave., Long Island City, N. Y. ADV. PG. 486, Kearfott Co., Inc., 1150 McBride Ave., Little Falls, N. J.

# SHAFTS—Flexible

SHAFTS—Flexible

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, III. ADV. PG. 326.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.

Flexible Shaft Div., Walker Turner Div., Kearney & Trecker Corp., Plainfield, N. J.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

KUPFRIAN MFG. CO., 398 State St., Binghamton, N. Y. ADV. PG. 476.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

STEWART MFG. CORP., F. W., 4311 Ravenswood Ave., Chicago 13, III. ADV. PG. 514.

Stow Mfg. Co., 445 State St., Binghamton, N. Y. U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.

WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. ADV. PG. 391.

# SHAPERS—Television Signal

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.

### SHIELDING—Electrostatic

Belling & Lee, Ltd., 366 Madison Ave., New York 17, N. Y.
METAL TEXTILE CORP., 647 E. First Ave., Roselle,
N. J. ADV. PG. 180.
Metaplast Process, Inc., 3451 56th St., Woodside, N. Y.
Muter Co., 1255 S. Michigan Ave., Chicago, Ill.

### SHIELDING—Radio Ignition

Belling & Lee, Ltd., 366 Madison Ave., New York 17, BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.

BOSTON INSULATED WIRE & CABLE CO., 63 Bay St.,
Boston 25, Mass. ADV. PG. 475.

BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J.
ADV. PG. 259.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
Columbia Wire & Supply Co., 2850 Irving Park Rd.,
Chicago 18, III.
Connecticut Hard Rubber Co., 407 Fact St. May Have 8, Conn.
Filtron Co., Inc., The, 131-05 Fowler Ave., Flushing, N.Y. N. Y.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.
KUPFRIAN MFG. CO., 398 State St., Binghamton,
N. Y. ADV. PG. 476.
METAL TEXTILE CORP., 647 E. First Ave., Roselle,
N. J. ADV. PG. 180.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5,
N. J. ADV. PG. 399.
Whitaker Cable Corp., Kansas City 16, Mo.

### SHIELDING-Sheet or Screen

ACE ENGINEERING & MACHINE CO., 3642 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 152.
American Cladmetals Co., P. O. Box 544, Carnegie, Pa. Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio. Cleveland Wire Cloth & MTg. Co., 3575 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. 180.
York Co., Inc., Otto H., 69 Glenwood Place, East Orange,

### SHIELDS-Cathode Ray Tube

DuMont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J. MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 316. WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 52, 53.

### SHIELDS-Coil

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, III. ADV. PG. 326.
Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, III. HELDOR MFG. CO. DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 238.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329. Paul & Beekman Inc., 1801 Cortland St., Philadelphia 40, Pa.

### SHIELDS—Ferrite

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.
Ferroxcube Corp. of America, 50 E. 41st St., New York, N. Y.

### SHIELDS—Lead

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ANCHOR METAL CO., 244 DORIGIN 3Ct, Brooking 3, N. C., ADV. PG. 58.

DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, 111. ADV. PG. 64, 65.

National Lead Co., 111 Broadway, New York 6, N. Y.

NUCLEAR RESEARCH CORP., 2563 Grays Ferry Ave., Philadelphia 46, Pa. ADV. PG. 301.

Nucleonic Corp. of America, 497 Union St., Brooklyn 31,

Radiation Counter Laboratories, Inc., 5122 W. Grove St.,

Technical Associates, 140 W. Providencia Ave., Burbank,

### SHIELDS-Transformer

HELDOR MFG. CO. DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 238.
Paul & Beekman, Inc., 1801 Cortland St., Philadelphia Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.

### SHIELDS—Tube

N. Y.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24,
III. ADV. PG. 234, 235.
Clarke Instrument Div., National Electrical Machine
Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia
44, Pa. ADV. PG. 156.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison
Ave., New York 17, N. Y.
ELCO CORPORATION, 190 W. Glenwood Ave., Philadelphia
40, Pa. ADV. PG. 48.
Formatic Co., 178 Bridge St., Naugatuck, Conn.
GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y.
ADV. PG. 516.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long ADV. PG. 516.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, III. ADV. PG. 445.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Mass.
MYCALEX TUBE SOCKET CORPORATION, Clifton Blvd.,
Clifton, N. J. ADV. PG. 130, 131.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
STAVER CO., INC., Box 431, Bayshore, N. Y. ADV. PG.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chl-cago 50, III. ADV. PG. 212. Belling & Lee, Ltd., 266 Madison Ave., New York 17, N. Y.

### SHIFTERS—Signal

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.

### SHUNTS-Meter

Assembly Products, Inc., Chagrin Falls 6, Ohio. Associated Research, Inc., 3788 W. Belmont, Chicago 18, Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512. Cole Instrument Co., 1320 S. Grand Ave., 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. 1-23.
INDUSTRIAL RECTIFIER CO., 120 Cedar St., New York,
N. Y. ADV. PG. 500, 501.
Precision Resistor Co., 334 Badger Ave., Newark 8, N. J.
Reliance Instrument Co., 3027 W. Van Buren St., Chicago
12, 111. 12, III. Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers,
N. Y. ADV. PG. 482.

### SIGNAL SHIFTER

See Shifters, Signal

### SILICON

See Metals

### SILICONE—Compounds

See Insulating Compounds

### SILICONE GREASES

AMERICAN PHENOLIC CORP., 1830 S. 5th Ave., Chicago 50, III. ADV. PG. 212. DOW CORNING CORP., Midland, Mich. ADV. PG. 382. General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

### SILICONE LUBRICANTS

DOW CORNING CORP., Midland, Mich. ADV. PG. 382.
General Electric Co., Chemical Div., 1 Plastics Ave.,
Pittsfield, Mass. Radiocrafters Division of Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.

### SILICONE OILS

DOW CORNING CORP., Midland, Mich. ADV. PG. 382. General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

### SILICONE RUBBER

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown,

Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.
DOW CORNING CORP., Midland, Mich. ADV. PG. 382.
Garlock Packing Co., Palmyra, N. Y.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

IRVINGTON VARNISH INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.

Melpar, Inc., 452 Swann Ave., Alexandria, Va.

Mica Insulator Co., Schenectady 1, N. Y.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9,

N. J. ADV. PG. 471.

Sponge Rubber Products Co., The, 469 Derby Place,
Shelton, Conn.

Western Felt Works, 4029 Ogden Ave., Chicago, Ill.

### SLEEVES—Antenna Copper Splicing

Andrew Corp., 363 E. 75th St., Chicago 19, III. SHERMAN MFG. CO., H. B., 22 Barney St., Battle Creek, Mich. ADV. PG. 200.

### SLIDES—Chassis

GRANT PULLEY & HARDWARE CO., 31-85 Whitestone Parkway, Flushing, N. Y. ADV. PG. 455. Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
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. 497.
COLLECTRON CORP., 216 E. 45th St., New York 17, N. Y. ADV. PG. 501.
DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.
Electro Development Corp., 6014 W. Washington Blvd., Culver City, Calif. Culver City, Calif.
ELECTRO TEC CORP., South Hackensack, N. J. ADV. GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 340, 341.
INSTRUMENT CORP. OF AMERICA, Blacksburg, Va.
ADV. PG. 91. ADV. PG. 91. MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80. Naer Corp., 631 S. Sepulveda Blvd., West Los Angeles 49, Calif. 49, Calif.
P. M. Industries, Inc., Stamford, Conn.
POLYPHASE INSTRUMENT CO., 705 Haverford Rd., Bryo.
Mawr, Pa. ADV. PG. 519.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, Ill-

### SOCKETS

1. Diode

2. Pencil Tube

3. Printed Circuit 4. Subminiature

5. Transistor

6. Turret

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. 1-4. ADV. PG. 212.
CINCH MFG. CORP., 1026 S. Homan St., Chicago 24, III. 1-2-3-4-5-6. ADV. PG. 234, 235.
Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif. 1.
CONTINENTAL CONNECTOR CORP., 30-30 Northern Blvd., Long Island City, N. Y. 4-6. ADV. PG. 183.
ELCO CORPORATION, 190 W. Glenwood Ave., Philadelphia 40, Pa. 4. ADV. PG. 48.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. 1. ADV. PG. 120.
General Laminated Products Inc., 2857 S. Halstead St., Chicago 8, III. 1-2-4-5.
GOMBOS CO., INC., JOHN, 103 Montgomery Ave., General Laminated Products Inc., 2857 S. Halstead St., Chicago 8, III. 1-2-4-5. GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. 4. ADV. PG. 364. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. 2. ADV. PG. 477. METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, III. 1-3-4. ADV. PG. 445. MONOWATT DEPT., General Electric Co., 66 Bissell St., Providence, R. I. 4. ADV. PG. 22. MYCALEX TUBE SOCKET CORPORATION, Clifton Blvd., Clifton, N. J. 4. ADV. PG. 130, 131. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. 6. ADV. PG. 328, 329. RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. 3. ADV. PG. 66. SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-2-3-4-6. ADV. PG. 552-558. UCINITE CO., DIV., UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. 4. ADV. PG. 101.

101.
UNITED-CARR FASTENER CORP., Cambridge, Mass.
3.4. ADV. PG. 100.
Vector Electronic Co., 3352 San Fernando Rd., Los
Angeles 65, Calif. 6.

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WINCHESTER ELECTRONICS INC., Glenbrook, Conn. 4. ADV. PG. 81.

Yates Engineering Services, Box 67, Cranford, N. J. 1.

### SOCKETS—Miniature Sockets & Connectors

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass, ADV. PG. 24.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

Belling & Lee, Ltd., 366 Madison Ave., New York 17, N. Y.

Belling & Lee, Ltd., 366 Madison Ave., New York 17, N. Y.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
Drake Mfg. Co., 1713 Hubbard St., Chicago 22, III. EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 156.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.
ELCO CORPORATION, 190 W. Glenwood Ave., Philadelphia 40, Pa. ADV. PG. 48.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 441.
Javex, 921 State, Garland, Texas.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.

JOHNSON CO., E. T., MASS., CINCH MFG. CORP., 1026
S. HOMAN Ave., Chicago 24, III. ADV. PG. 234, 235.
KINGS ELECTRONICS, 40 Marbledale Road, Tuckahoe,
N. Y. ADV. PG. 144, 145.
Kulka Electric Mfg. Co., Inc., 30 South St., Mount
Vernon, N. Y.
METHODE MFG. CO., 2021 W. Churchill St., Chicago
47, III. ADV. PG. 445.
Millen Mfg. Co., James, 150 Exchange St., Malden,
Mass.

MYCALEX TUBE SOCKET CORPORATION, Clifton Blvd., Clifton, N. J. ADV. PG. 130, 131.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 513.

Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y.

UCINITE CO. DIVISION, UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV.

UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 100.

U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.

Vector Electronic Co., 3352 San Fernando Rd., Los Angeles 65, Calif.

# SOCKETS-Tube

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

Belling & Lee, Ltd., 366 Madison Ave., New York 17, N.Y.

Belling & Lee, Ltd., 366 Miadison Ave., New York 17, N. Y.

N. Y.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.

EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 156.

Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.

ELCO CORPORATION, 190 W. Glenwood Ave., Philadelphia 40, Pa. ADV. PG. 48.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

Eitel-McCullough, Inc., San Bruno, California. Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.

INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 441.

JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.

251.

METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, III. ADV. PG. 445.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. MYCALEX TUBE SOCKET CORPORATION, Clifton Blvd., Clifton, N. J. ADV. PG. 130, 131.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 513.

Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

UCINITE CO., DIVISION. UNITED-CARR FASTENER

CORP., 459 Watertown St., Newtonville, Mass. ADV.

PG. 101.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass.

ADV. PG. 100.

U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.

Vector Electronic Co., 3352 San Fernando Rd., Los Angeles 65, Calif.

# SOLDER

ALPHA METALS, INC., P. O. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357. ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.

Cerro de Pasco Copper Corp., 40 Wall St., New York 5,

N. Y.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65, Dunton Co., M. W., 7 Goff St., Providence 3, R. I. Enthoven & Sons, Ltd., H. J., 366 Madison Ave., New York 17, N. Y.
Eutectic Welding Alloys Corp., 40 Worth St., New York

Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y. Glaser Lead Co., Inc., 31 Wycoff Ave., Brooklyn 27, N. Y.

N. Y.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago
39, III. ADV. PG. 442.
Lenk Mfg. Co., The, 30 Cummington St., Boston 15,

Mass.
MULTICORE SALES CORP., 164 Duane St., New York
13, N. Y. ADV. PG. 47.
MULTICORE SOLDERS, LTD., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England.
ADV. PG. 47.

National Lead Co., 111 Broadway, New York 6, N. Y. New York Solder Co., 684 E. 133rd St., New York 54, N. Y.

N. Y.
Ruby Chemical Co., 68 McDowell St., Columbus, Ohlo.
Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, III.
SECON METALS CORP., 228 E. 45th St., New York 17,
N. Y. ADV. PG. 362.
Standard Metals Corp., 262 Broad St., North Attleboro,

Mass.
Super Flow Solder Co., Inc., 90 State St., Albany, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### SOLDER—Aluminum

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.
Enthoven & Sons, Ltd., 366 Madison Ave., New York 17,

N. Y. Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa. Grayburne Corp., 103 Lafayette St., New York 13, N. Y. Johnson Mfg. Co., Inc., Mount Vernon, Iowa. KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 39, III. ADV. PG. 442.
Lenk Mfg. Co., The, 30 Cummington St., Boston 15,

Super Flow Solder Co., Inc., 90 State St., Albany, N. Y.

### SOLDER-Platinum

AMERICAN PLATINUM WORKS, N.J. R.R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J. Farrelloy Co., 1245 N. 25th St., Philadelphia 21, Pa. GENERAL PLATE DIVISION, Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
Handy & Harman, 82 Fulton St., New York 38, N. Y. NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465.

PG. 465. Samuel & Co., Inc., J. A., 220 Broadway, New York 38,

N. Y.
SECON METALS CORP., 228 E. 45th St., New York 17,
N. Y. ADV. PG. 362.
Tricon Mfg. Co., 8008-12 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., 105 Chestnut St., Newark 5, N. J.

# SOLDER—Rings and Preforms

ALPHA METALS, INC., P. O. Box 34, 56 Water St., Jersey City, N. J. ADV. PG. 356, 357.

AMERICAN PLATINUM WORKS, N.J. R.R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.

ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.

DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.

Dunton Co., M. W., 7 Goff St., Providence 3, R. I. Enthoven & Sons, Ltd., H. J., 366 Madison Ave., New York 17, N. Y.

Futectic Welding Alioys Corp., 40 Worth St., New York

York 17, N. Y. Eutectic Welding Alloys Corp., 40 Worth St., New York

Eutectic Welding Alloys Corp., 40 World St., New York 13, N. Y.
Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa.
GENERAL PLATE DIVISION, Metals & Controls Corp.,
Attleboro, Mass. ADV. PG. 270.
Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 27,
N. Y. Control of Alloys and Assemble St. New York 13, N. Y.

N. Y.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Handy & Harmon, 82 Fulton St., New York 38, N. Y.
KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago
39, III. ADV. PG. 442.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG.

MULTICORE SOLDERS LTD., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England. ADV. PG. 47.

National Lead Co., 111 Broadway, New York 6, N. Y.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV.
PG. 465.

Soldering Specialties Co., 19 Chatham Rd., Summit, Standard Metals Corp., 262 Broad St., North Attleboro,

Super Flow Solder Co., Inc., 90 State St., Albany, N. Y. Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, Ill. Universal Chain Co., 92 Burnett Ave., Maplewood, N. J.

### SOLDER—Silver

AMERICAN PLATINUM WORKS, N.J. R.R. Ave. at Oliver St., Newark 5. N. J. ADV. PG. 76. AMERICAN PLATINUM WORKS, N.J. R.R. Ave. at Oliver St., Newark 5. N. J. ADV. PG. 76.
ANCHOR METAL CO., 244 Boerum St., Brooklyn 6, N. Y. ADV. PG. 58.
Baker & Co., Inc., 113 Astor St., Newark 5. N. J. Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass. Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y.

Eutectic Welding Alloys Corp., 40 Holds St., 13, N. Y.
Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa.
GENERAL PLATE DIVISION, Metals & Controls Corp.,
Attleboro, Mass. ADV. PG. 270.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash
Ave., Chicago 2, III.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG.

80.
National Lead Co., 111 Broadway, New York 6, N. Y.
SECON METALS CORP., 228 E. 45th St., New York 17,
N. Y. ADV. PG. 362.
Standard Metals Corp., 262 Broad St., North Attleboro,

Mass.
Super Flow Solder Co., Irc., 90 State St., Albany, N. Y.
Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, III.
Western Gold & Platinum Works, 589 Bryant St., San

Francisco, Calif.
Wildberg Bros. Smelting & Refining Co., 742 Market St.,
San Francisco 2, Calif.

# SOLDERING IRONS-Electric

See Irons, Electric Soldering

### SOLENOIDS

A. P. W. CO., 72 W. Main St., Rockaway, N. J. ADV. PG. 402. Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4,

Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. Cannon Electric Co., 3209 Humboldt St., Los Angeles 31,

Calif.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago
18, III. ADV. PG. 462.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wls.
Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
DIT-MCO INC., 729 Baltimore Ave., Kansas City 6,
Mo. ADV. PG. 452.
Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41,

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St.,
Chicago 12, Ill. ADV. PG. 202.
McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louls
10, Mo.
Magnavox Co., The Components Div., Fort Wayne 4,
Indiana.

Indiana.

Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34, III.

PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet,

PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joilet, III. ADV. PG. 286.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 412.
Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J. Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y. Scully Machine Co., 62 Walter St., Bridgeport, Conn. Soreng Mfg. Corp., 9555 Eden Ave., Schiller Park, III. STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 59.
Standard Transformer Corp., Elston Kedzle & Addison, Chicago 18. III.

Chicago 18, III.
Telvision Laboratories, Inc., 5045 West Lake St., Chicago 44, III.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,

N. J. ADV. PG. 413.

# SOLENOIDS—Rotary

LELAND, INC., G. H. 123 Webster St., Dayton 2, Ohio. ADV. PG. 385. Magnavox Co., The Components Div., Fort Wayne 4,

Manning, Maxwell & Moore, Inc., Stratford, Conn.
Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
N. J. ADV. PG. 413.

### SOLENOIDS—Sub-Miniature

Five Star Co., 440 Mixville Rd., West Cheshire, Conn. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Neomatic Inc., 879 Wellesley Ave., Los Angeles 49, Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J. STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 59.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.

### SONAR

Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Edo Corp., College Point, N.Y.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.

## SORTERS-Flectronic

See Controls—Counting & Sorting

### SOUND SYSTEMS—Complete

ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, III. ADV. PG. 507.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Ansley Mfg. Co., Arthur Doylestown, Pa.
Audio-Master Corp., 341 Madison Ave., New York 17, N. Y. Co., Inc., David, 29 Ninth Ave., New York 14, Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y. Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Cascade Television Co., 153 Chestnut Ave., Irvington, N. J Dilks Co., The, Seymour, Conn. Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
Electronic Development Lab., 43-07 24rd St., Long Island City 5, N. Y.
Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.
Executone, Inc., 415 Lexington Ave., New York 17, N. Y.
Maurer, Inc., J. A., 37-01 31st St., Long Island City, N. Y.
Olesen Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif. Calif.
RADIO CORP OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood Stromberg-Carlson Co., Rochester 3, N. Y.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,

# SPECTROMETERS—Mass

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa. Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 8, Callif. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. 10, Colo.

Measurement Engineering Ltd., Arnprior, Ontario, Canada. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,

# SPECTROMETERS and SPECTOGRAPHS

American Optical Co., Box A, Buffalo 15, N. Y.
Applied Physics Corp., 362 W. Colorado St., Pasadena
1, Calif.
Applied Research Laboratories, 3717 Park Pl., Montrose, Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass. Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.

Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Farrand Optical Co., Inc., 4401 Bronx Blvd. New York Farrand Optical Co., Inc., 4401 Bronk Blvu. New 1018
66, N. Y.
Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, III.
Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass.
National Spectographic Labs., Inc., 6300 Euclid Ave.,
Cleveland, Ohio.
Perkin-Elmer Corp., The Main Ave., Norwalk, Conn.

PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 220. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADG. PG. 213. elch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

Applied Physics Corp., 362 W. Colorado St., Pasadena

### **SPECTROPHOTOMETERS**

Applied Physics Corp., 362 W. Colorado St., Laddolla 1, Calif. Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass. Bausch & Lomb Optical Co., 635 St Paul St., Rochester 2, N. Y. Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif. Biddle Co., James G., 1316 Arch St., Philadelphia 7, Coleman Instruments, Inc., 318 Madison St., Maywood, Farrand Optical Co., Inc., 4401 Bronx Blvd. New York Farrand Optical Co., Inc., 4401 Bronx Blvd. New York 66, N. Y.
Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass. Perkin-Elmer Corp., The, Main Ave., Norwalk, Conn. Photovolt Corp., 95 Madison Ave., New York 16, N. Y. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

### SPECTROSCOPIC SOURCE UNITS

Applied Research Labs., 3717 Park Pl., Montrose, Calif. Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.
Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass. Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia National Spectographic Labs., Inc., 6300 Euclid Ave., Cleveland, Ohio.

PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 220

N. Y. Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

### SPEECH INPUT CONSOLES

See Amplifiers, Audio Input Systems

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago,

Ace Spring Mfg. Co., 77 W. Houston St., New York 12,

### SPRINGS

All-Weather Springs, 140 Cedar St., New York, N. Y. Chatillon & Sons, John, 93 Cliff St., New York 38, N. Y. Dudek & Bock Spring & Mfg Co., 2100 W. Fulton, Chicago 12, III.

DUMONT ELECTRIC CO., 308 Dyckman St., New York, N. Y. ADV. PG. 199.

ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 120.

Garrett Co., Inc., George K., D & Tioga Sts., Philadelphia 34, Pa.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120. unter Spring Co., 21 Spring Ave., Lansdale, Pa. EE SPRING CO., 30 Main St., Brooklyn 1, N. Y. ADV. PG. 363.

Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, III.

NEWCOMB SPRING OF CONN., INC., 227 Cherry St., Bridgeport 5, Conn. ADV. PG. 204.

NEWCOMB SPRING CORP., 3907 7th Ave., Brooklyn 32, N. Y. ADV. PG. 204.

Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa.

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. ADV. PG. 160.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

Webster Spring Corp., 176-182 Johnson St., Brooklyn 1, N. Y.

# SPRINGS—Antenna Tension

Ace Spring Mfg. Co., 77 West Houston St., New York 12, Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, II LEE SPRING CO., 30 Main St., Brooklyn 1, N. Y. ADV. Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, III.,
NEWCOMB SPRING OF CONN., INC., 227 Cherry St.,
Bridgeport 5, Conn. ADV. PG. 204.
NEWCOMB SPRING CORP., 3907 7th Ave., Brooklyn 32,
N. Y. ADV. PG. 204.

SANDSTEEL SPRING DIV., Sandvik Steel, Inc., 145 Hudson St., New York 13, N. Y. ADV. PG. 160. Webster Spring Corp., 176-182 Johnson St., Brooklyn 1, N. Y.

### SPRINGS—Instrument Hairsprings

All-Weather Springs, 140 Cedar St., New York, N. Y. Chatilion & Sons, John, 93 Cliff St., New York 38, N. Y. Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, III. Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, III.

NEWCOMB SPRING OF CONN., INC., 227 Cherry St., Bridgeport 5, Conn. ADV. PG. 204.

NEWCOMB SPRING CORP., 3907 7th Ave., Brooklyn 32, N. Y. ADV. PG. 204.

SANDSTEEL SPRING DIV., SANDVIK STEEL, INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 160.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

### SPRINGS—Precision

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, III.
Ace Spring Mfg. Co., 77 West Houston St., New York
12, N. Y.
All-Weather Springs, 140 Cedar St., New York, N. Y.
Chatillon & Sons, John, 93 Cliff St., New York, N. Y.
Chicago 12, III.
Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.
INSTRUMENT SPECIALTIES CO., INC., 254 Bergen
Blvd., Little Falls, N. J. ADV. PG. 265.
LEE MECHANICAL LABORATORIES, 30 Main St., BrookIvn 1. N. Y. ADV. PG. 365. lyn 1, N. Y. ADV. PG. 365. Lewis Spring & Mfg. Corp., 2656 W. North Ave., Chicago 47, III.
Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, III.

NEWCOMB SPRING CORP., 3907 7th Ave., Brooklyn
32, N. Y. ADV. PG. 204.

NEWCOMB SPRING OF CONN., INC., 227 Cherry St.,
Bridgeport 5, Conn. ADV. PG. 204.

Raymond Mfg. Co. Div. of Associated Spring Corp., 226
S. Center St., Corry, Pa.

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. ADV. PG. 160.

Webster Spring Corp., 176-182 Johnson St., Brooklyn
1, N. Y.

# STANDARDS—Capacitance STANDARDS—Frequency STANDARDS—Inductance

See Instruments—Electrical Measuring

### STANDARDS—Laboratory Time

AMERICAN TIME PRODUCTS INC., 580 Fifth Ave., New York 19, N. Y. ADV. PG. 478. GENERAL RADIO CO., 275 Massacnusetts Ave., Cam-bridge 39, Mass. ADV. PG. 82, 86. Muirhead & Co., Ltd., Beckenham, Kent, England. NORRMAN LABORATORIES, ERNST, Williams Bay, Wis. ADV. PG. 434. ADV. PG. 434.

STANDARD ELECTRIC TIME CO., THE, 89 Logan St., Springfield, Mass. ADV. PG. 494.

Varo Mfg. Co., Inc., Box 638, Garland, Texas.

# STANDARDS—Resistance

See Instruments—Electrical Measuring

# STANDARDS EQUIPMENT—Calibration

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbans, Calif. Leeds & Northrup Co., 4970 Stenton Ave., Philade[phia MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158, 159.
Radio Frequency Labs., Inc., Boonton 2, N. J.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.

STANDS-Microphone Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
Astatic Corp., The Conneaut, Ohio.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Eastern Mike-Stand Co., 56 Christopher Ave., Brooklyn 12, N. Y.
ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG. 485.
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.

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,

Special Products Co., Silver Spring, Md.

### STANDS-Speaker

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y. ELECTRO-VOICE, INC., Buchanan, Mich. ADV. PG.

485. Queens Tool Engineering & Mfg. Co., 15 Front St., Rockville Centre, N. Y.

### STEATITE

### See Insulation Materials

### STETHOGRAPHS AND STETHOPHONES

Associated Research Inc., 3788 W. Belmont, Chicago 18,

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Electro-Medical Lab., Inc., South Woodstock 8, Vt.

### STETHOSCOPES—Amplifying

Associated Research, Inc., 3788 W. Belmont, Chicago

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Cinema-Television Ltd., Worsley Bridge Rd., London,

Unema-letevision Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
Maico Co., Inc., 21 N. 3rd St., Minneapolis 1, Minn.
Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, III.
Western Cound & Flattering

Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

### STIMULATORS

Electrodyne Company, 32 Oliver St., Boston, Mass. Electro-Medical Lab., Inc., South Woodstock 8, Vt. 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. Wappler, Inc., 27 W. 24th St., New York 10, N. Y.

### STRAIN RELIEFS

CENTRALAB DIV. GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
HEYMAN MFG. CO., 300 Michigan Ave., Kenilworth, N. J. ADV. PG. 441.
Philco Corp., Tioga & C Sts., Philadelphla 34, Pa.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,

WALKER CO., GEORGE, 118 Amsterdam Ave., Passaic, N. J. ADV. PG. 500.

# STRIPS-Mounting

Aerolite Electronics Corp., 507 26th St., Union City,

Aerolite Electronics Corp., 507 26th St., Union City, N. J.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
INSULINE CORP. 0F AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.

N. Y.
South River Metal Products Co., Inc., 377-379 Turnpike,
South River, N. J.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield,
N. J. ADV. PG. 510.

# STROBOSCOPES

Berkshire Laboratories, 580 Beaver Rd., Lincoln, Mass. Clarkstan Corp., 11921 SW. Pico Blvd., Los Angeles 64, Calif.

64, Calif.
COMMUNICATION MEASUREMENTS LAB., INC., 120
Greenwich St., New York, N. Y. ADV. PG. 468.
Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave.,
Boston 15, Mass.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Haledy Electronics Co., 57 William St., New York 5,
N. Y.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London W.C. 2, England.

Pantek Co., Box 16945, West Branch, Los Angeles 46, Calif.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

# SUPPRESSORS—Auto Radio Ignition

Belling & Lee, Ltd., 366 Madison Ave., New York 17, Belling & Lee, Ltd., 366 Madison Ave., New York 17, N. Y.
N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG 342.

BUSTON PG. 280.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 271.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. INSULINE CORP. OF AMERICA, 36-02 35th St., Long Island City, N. Y. ADV. PG. 477.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn N. Y. ADV. PG. 402, 403.

National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City, N. Y.

ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.

### SUPPRESSORS-Noise

Belling & Lee, Ltd., 366 Madison Ave., New York 17,

Belling & Lee, Ltd., 366 Madison Ave., New York 17, N. Y.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG 342.
Camburn, Inc., 32-40 57th St., Woodside, N. Y.
DEUTSCHMANN CORP., TOBE, 921 Providence Highway, Norwood, Mass. ADV. PG. 280.
Filtron Co., Inc., The, 131-05 Fowler Ave., Flushing, N. Y.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn. Hailett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif. ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 362.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Telectro Industries Corp., 35-18 37th St., Long Island

Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
N. J. ADV. PG. 413.

# SURFACE ANALYZERS AND COMPARATORS See Analyzers

# SURPLUS NEW & USED EQUIPMENT See Pages 331 to 351

### SWITCHES—Automatic

AMERICAN ELECTRONEERING CORP., 5025-29 West
Jefferson Blvd., Los Angeles 16, Callf. ADV. PG. 396.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hetherington, Inc., Sharon Hill, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
RUSSELL & STOLL CO., INC., 125-6 Barclay St., New
York 7, N. Y. ADV. PG. 387.
SESSIONS CLOCK CO., Forestville, Conn. ADV. PG.
330, 331.

330, 331. Zenith Electric Co., 152 W. Walton St., Chicago 10,

### SWITCHES—Coaxial Cable

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 433. Dielectric Products Co., Inc., 125 Virginia Ave., Jersey

Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
General Communication Co., 530 Comonwealth Ave., Boston 15, Mass.
Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, III.
Hetherington, Inc., Sharon Hill, Pa.
Industrial Products Co., Danbury, Conn.
Javex, 921 State, Garland, Texas.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphla 44. Pa.

44, Pa.
PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave.,
Kearney, N. J. ADV. PG. 515.
THOMPSON PRODUCTS, INC., Electronics Div., 2196
Clarkwood Rd., Cleveland 3, Ohio. ADV. PG. 98.
Transco Products, Inc., 12210 Nebraska Ave., Los
Angeles 25, Calif.

# SWITCHES-Control

CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beards-ley Ave., Elkhart, Ind. ADV. PG. 42, 43. Control Products, Inc., 306 Sussex St., Harrison, N. J. Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121. Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y. ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88,

ELECTRO SWITCH CURP., 167 King Ave., Weinstein S., Mass. ADV. PG. 377.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Helghts, III.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 21, III. ADV. PG. 202.

HART MFG. CO., 110 Bartholomew Ave., Hartford 1, Conn. ADV. PG. 260.

Hetherington, Inc., Sharon Hill, Pa.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

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, III.

OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, III. ADV. PG. 79.

Reynolds Electric Co., 3000 River Rd., River Grove, III. Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y.

Roller-Smith Corp., Bethlehem, Pa.

RUSSELL & STOLL CO., INC., 125-6 Barclay St., New York 7, N. Y. ADV. PG. 387.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

Tech Laboratorles, Inc., Bergen & Edsall Bivds., Pall-sades Park, N. J.

Vokar Corp., 7300 Huron River Dr., Dexter, Mich.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# SWITCHES-Decade

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

15, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

PG. 121.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Grigsby-Allison Co., Inc., 407 N. Salem Ave., ArlIngton Heights, III.

Hetherington, Inc., Sharon Hill, Pa.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia

Hetherington, Inc., Sharon Hill, Pa.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
Painton & Co., Ltd., 366 Madison Ave., New York
17, N. Y.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt.

Sensitive Research Instrument Cosp., Sensitive R

### SWITCHES—Duplex

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S.,
Long Island City, N. Y.
Hetherington, Inc., Sharon Hill, Pa.
Javex, 921 State, Garland, Texas.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa.

Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y.

# SWITCHES—Flectronic

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C. Airborne Electronics Co., Metropolitan Airport, Hangar No. 3, Van Nuvs, Calif.
AMERICAN ELECTRONEERING CORP., 5025-29 West Jefferson Bivd., Los Angeles 16, Calif. ADV. PG.

396. C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Clnema-Television, Ltd., Worsley Bridge Rd., London,

Cinema-Television, Ltd., Worsley Bridge Rd., London, S.E. 26, England.
COMAR ELECTRIC CO., 3349 W. Addison, Chicago 18, III. ADV. PG. 462.
Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wife

Wis.

DuMont Laboratories, Inc., Allen B., Instrument Div.,
1500 Main Ave., Clifton, N. J.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, Ill. ADV. PG. 120.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 364.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington
Heights, Ill.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arington Heights, III.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, III. ADV. PG. 202.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
HENDELINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
Painton & Co., Ltd., 366 Madison Ave., New York
17, N. Y.
Photocircuits Corp., Glen Cove, N. Y.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,
Mich. Mich.
WESTINGHOUSE ELECTRIC CORP., P. 0.
Pittsburgh 30, Pa. ADV. PG. 109-115. 0. Box 5578,

### SWITCHES—Float Type

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Hetherington, Inc., Sharon Hill, Pa. Industrial Electronics Co., Inc., Hanover, Mass. Soreng Mfg. Corp., 9555 Eden Ave., Schiller Park, III. Thermo Instruments Co., Box 336, Belmont, Ohio.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### SWITCHES—Key

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III.
Carter Parts Co., 213 Institute Pl., Chicago 10, III.
Clare Co., C. P., 4719 Sunnyside Ave., Chicago 30, III.
Hetherington, Inc., Sharon Hill, Pa.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S.
Cicero Ave., Chicago 38, III. ADV. PG. 274,
Molded Insulation Co., 335 E. Price St., Philadelphia
44, Pa. Muirhead & Co., Ltd., Beckenham, Kent, England. Presto Electric Co., Inc., 600 Fulton St., Eliza N. J. N. J.
Stromberg-Carlson Co., Rochester 3, N. Y.
SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago
22, III. ADV. PG. 404.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palicades Park. N. II. Tech Laboratories, Inc., pergen & Losan, States Park, N. J.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

# SWITCHES—Knife

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 377. Mass. ADV. PG. 377.

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. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave.,
Newark 5, N. J.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16,
N. Y.
National Electropic Mfg. Corp., 43,00 News Districtions N. Y.
National Electronic Mfg. Corp., 42-08 Vernon Blvd.,
Longe Island City 1, N. Y.
Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, III.
Radio Merchandise Sales, Inc., 1165 Southern Blvd.,
New York 59, N. Y.
Trumbull Electric Dept. of General Electric Co.,
Plainville, Conn.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

# SWITCHES-Limit

Acro Mfg. Co., 2040 E. Main St., Columbus, Ohio. Aerolite Electronics Corp., 507 26th St., Union City, N. J. AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. St., Chicago 7, III.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

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. 1-23.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St.,
Chicago 12, Ill. ADV. PG. 202.

HART MFG. CO., 110 Bartholomew Ave., Hartford 1,
Conn. ADV. PG. 260. Hetherington, Inc., Sharon Hill, Pa.

Micro Switch, Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, III.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.
S., Minneapolis, Minn.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena,
Calif. ADV. PG. 118, 119.

ROTRON MFG. CO., INC., 7-9 Schoonmaker Lane,
Woodstock, N. Y. ADV. PG. 76.

TYNISWITCH DIVISION, SESSIONS CLOCK CO., Forrestville, Conn. ADV. PG. 330.
Unimax Switch Div. of W. L. Maxson Corp., 460 W.
34th St., New York 1, N. Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### SWITCHES—Mercury

ADAMS & WESTLAKE CO., Michigan St., Elkhart, Ind. ADV. PG. 103-106.

Durakool, Inc., 1010 N. Main St., Elkhart, Ind. Electronic Apparatus Co., Elkhart, Ind. GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Hetherlngton, Inc., Sharon Hill, Pa. LITTELFUSE, INC., Des Plaines, III. ADV. PG. 465. Mack Electrical Devices, Inc., 43 Glenside Ave., Wyncote, Pa. Pa.

MERCOID CORP., 4201 Belmont Ave., Chicago 41, III.

ADV. PG. 246.

Micro Switch Div. of Minneapolis-Honeywell Regulator
Co., 7 W. Spring St., Freeport, III.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,
S., Minneapolis, Minn.

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.

Shannon Luminous Materials Co., 7356 Santa Monica
Blvd., Hollywood 46, Calif.

ADAMS & WESTLAKE CO., Michigan St., Elkhart, Ind.

SWITCHES—Rotary and Band Change Carling Electric, Inc., 505 New Park Ave., West Hartford 10, Conn.

CENTRALAB DIV. OF GLOBE-UNION INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. Mass. 162, 163.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 121.

Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.

Electro Development Corp., 6014 W. Washington Blvd., Culver City, Callf.

ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass, ADV. PG. 377.

GRAYHILL, 4536 W. Madison St., Chicago 24, III. ADV. GRAYHILL, 4536 W. Madison St., Officago 27, 11.
PG. 510.
Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, III.
HART MFG. Co., 110 Bartholomew Ave., Hartford 1, Conn. ADV. PG. 260.
Hetherington, Inc., Sharon Hill, Pa.
INSULINE CORP., OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa. J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.

JBT INSTRUMENTS INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. ADV. PG. 385.

Mallory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind.

Muirhead & Co., Ltd., Beckenham, Kent, England.
Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 79.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Photocircuits Corp., Glen Cove, N. Y.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
Roller-Smith Corp., Bethlehem, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

SWITCHGRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. ADV. PG. 404.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Pall-sades Park. N. ch Laboratories, Inc., Bergen & Edsall Blyds., Pali-

### SWITCHES—Safety

Federal Electric Products Company, 50 Parls St., Federal Electric Products Company, 50 Parls St., Newark, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd. Schenectady 5, N. Y. ADV. PG. 1-23.
Hetherington, Inc., Sharon Hill, Pa.
Kolton Electric Mfg. Co., 123 New Jersey Rallroad Ave., Newark 5, N. J.
Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, III.
Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.

sades Park, N. J.
UCINITE CO., DIVISION, UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 101.

U. S. Instrument Corp., 409 Broad St., Summit, N. J.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,

RUSSELL & STOLL CO., INC., 125-6 Barclay St., New York 7, N. Y. ADV. PG. 387. Trumbull Electric Dept. of General Electric Co, Plainville, Conn
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

BIRNBACH RADIO CO., INC., 145 Hudson St., New York

### SWITCHES—Slide

13, N. Y. ADV. PG. 342. Carling Electric, Inc., 505 New Park Ave., West Hartford 10, Conn. Carling Electric, Inc., 300 March 100 March 100 Conn.

CENTRALAB DIV. OF GLOBE-UNION INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 71-74.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington March 111 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, III. Hetherington, Inc., Sharon Hill, Pa. INSULINE CORP., OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477. JFD MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. Muter Co., 1255 S. Michigan Ave., Chicago, III. Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, III. Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Photocircuits Corp., Glen Cove, N. Y.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155. WIRT CO., 5221 ADV. PG. 298. 5221 Greene Street, Philadelphia 44, Pa.

### SWITCHES-Snap Action

Acro Mfg. Co., 2040 E. Main St., Columbus, Ohio. AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Les Switch Corp., 55 Water St., Watertown 72, Mass.
Carling Electric, Inc., 505 New Park Ave., West Hartford 10, Conn.
Carter Parts Co., 213 Institute Pl., Chicago 10, III.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, III. ADV. PG. 462.
Control Products, Inc., 306 Sussex St., Harrison, N. J.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wie Control Products, Inc., 900 Sassa S., William Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison Ave., New York 17, N. Y.

ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 377.

ENERAL ELECTRIC CO., Apparatus Sales Div., I River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

GRAYHILL, 4536 W. Madison St., Chicago 24, Ill. ADV. PG. 510.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 202.

HART MFG. CO., 110 Bartholomew Ave., Hartford 1, Conn. ADV. PG. 260.

Hetherington, Inc., Sharon Hill, Pa.

Hoffman Engineering Corp., Anoka, Minn.

J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa. Heights, Pa.

J-B-T INSTRUMENTS INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457.

JFD MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403. JFD MFG. CO., 6101-23 SIXTERING ASS., ADV. PG. 402, 403.

MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, WIs. ADV. PG. 439.

Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, III.

MONOWATT DEPT., General Electric Co., 66 Bissell St., Providence, R. I. ADV. PG. 22.

Mu Switch Division, Acro Switch Co., 38 Pequit St., Caston Mass.

Providence, R. 1. ADV. PG. 22.

Mu Switch Division, Acro Switch Co., 38 Pequit St., Canton, Mass.

Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y. ADV. PG. 326.

SESSIONS CLOCK CO., Forestville, Conn. ADV. PG.

330, 331.
Soreng Mfg. Corp., 9555 Eden Ave., Schiller Park, III.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG.

154, 155.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
TYNISWITCH DIVISION, SESSIONS CLOCK CO., Forest-

ville, Conn. ADV. PG. 330.
UCINITE CO., DIVISION, UNITED-CARR FASTENER
CORP., 459 Watertown St., Newtonville, Mass. ADV.

Unimax Switch, Div. of W. L. Maxon Corp., 460 West 34th St., New York 1, N. Y. UNITED CARR FASTENER CORP., Cambridge, Mass. ADV. PG. 100.

SWITCHES—Step Type Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 377.
Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, III. Heights, III.
Hetherington, Inc., Sharon Hill, Pa.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. ADV. PG. 385. Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y. ADV. PG. 336. SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 320.

Pa. ADV. PG. 320.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

### SWITCHES-Tap

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
Carter Parts Co., 213 Institute Pl., Chicago 10, III.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
Burbank, Calif. ADV. PG. 386.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Calif.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.

PG. 121.
Eastern Specialty Co., Philadelphia 40, Pa.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88,
Mass. ADV. PG. 377.
GRAYHILL, 4536 W. Madison St., Chicago 24, III. ADV.

GRAYHILL, 4536 W. Madison St., Chicago 24, Ill. Adv. PG: 510.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, III.

HART MFG. CO., 110 Bartholomew Ave., Hartford 1, Conn. Adv. PG. 260.

Hetherington, Inc., Sharon Hill, Pa.

J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Heights, Pa.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
OHMITE MFG. CO., 4835 W. Flourney St., Chlcago 44, Ill. ADV. PG. 79.
Painton & Co., Ltd., 366 Madison Ave., New York 17,

N. Y.
Philoc Corp., Tioga & C Sts, Philadelphia 34, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 320.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Pallsades Fark, N. J.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### SWITCHES-Time

CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV, PG, 400

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis. Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio. Eagle Signal Corp., Moline, Ill. Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hagen Mfg. Co., Inc., Baraboo, Wis.
HAYDON CO., A. W., 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. ADV. PG. 226, 227.
Hetherington, Inc., Sharon Hill, Pa.
LANDIS & GYR, INC., 104 Fifth Ave., New York 36, N. Y. ADV. PG. 315.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

III.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
Paragon Electric Co., Two Rivers, Wisconsin.
Reliance Automatic Lighting Co., 1919 Mead St.,
Racine, Wis.
Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford,
Conn.
Roller-Smith Corporation, Bethlehem, Pa

Roller-Smith Corporation, Bethlehem, Pa.
SESSIONS CLOCK CO., Forestville, Conn., ADV. PG.

SESSIONS CLOCK CO., Forestville, Conn., ADV. PG. 330, 331.

Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y. Walser Automatic Timer Corp., Graybar Bldg., New York, N. Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Zenith Electric Co., 152 W. Walton St., Chicago 10, 111.

# SWITCHES—Toggle and Pushbutton

Acro Mfg. Co., 2040 E. Main St., Columbus, Ohio.
Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
BIRNBACH RADIO CO., INC., 145 Hudson St., New
York 13, N. Y. ADV. PG. 342.
Cable Electric Products Co., Providence, R. I.
Carling Electric, Inc., 505 New Park Ave., West Hartford 10, Conn.
Carter Parks Co., 213 Institute, Pl. Chicago, 10, III.

ford 10, Conn.
Carter Parts Co., 213 Institute Pl., Chicago 10, III.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe
Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
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.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison
Ave., New York 17, N. Y.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. GRAYHILL, 4536 W. Madison St., Chicago 24, III. ADV. PG. 510. Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Hainte III

Heights, III.
HART MFG. CO., 110 Bartholomew Ave., Hartford 1, Conn. ADV. PG. 260.
Hetherington, Inc., Sharon Hill, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Joy Mfg. Corp., Oliver Bldg., Pittsburgh 22, Pa.
Kulka Electric Mfg. Co., 30 South St., Mount Vernon, N. Y.
Mallory & Co., Inc., P. P. 2000.

N. Y.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts.,
Racine, Wis. ADV. PG. 439.
Micro Switch Div. of Minneapolis-Honeywell Regulator
Co., 7 W. Spring St., Freeport, III.
Molded Insulation Co., 335 E. Price St., Philadelphia
44. Pa.
44. Pa.

44, Pa.
MONOWATT DEPT., General Electric Co., 66 Bissell St.,
Providence, R. I. ADV. PG. 22.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, III.
Painton & Co., Ltd., 366 Madison Ave., New York 17,
N. Y.

N. Y. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. Philmore Mfg. Co., Inc., 113 University Place, New York

3, N. Y.
Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
RUSSELL & STOLL CO., INC., 125-6 Barclay St., New
York 7, N. Y.
ADV. PG. 387.
SESSIONS CLOCK CO., Forestville, Conn. ADV. PG.

\*830, 331.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, III. ADV. PG. 414.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG.

TSAN OLD CARBON CO., St. Marys, Fa. 201. FG. 154, 155.

SWITCHCRAFT, INC., 1328-30 N. Halstead St., Chicago 22, III. ADV. PG. 404.

TYNISWITCH DIVISION, SESSIONS CLOCK CO., Forest-ville, Conn. ADV. PG. 330.

UCINITE CO. DIVISION, UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 101.

PG. 101.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### SWITCHES—Transformer

Hetherington, Inc., Sharon Hill, Pa. J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa. Warrick Co., Charles F., 16251 Hamilton Ave., Detroit WARTICK CO., Order St. 7, Mich. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

### SWITCHES--Vacuum

CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.
Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
Coral Designs Div., Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

WIS.

Eitel-McCullough Inc., San Bruno, Calif.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,

1 River Rd., Schenectady 5, N. Y.

Hetherington, Inc., Sharon Hill, Pa.

JENNINGS RADIO MFG. CO., 1098 E. William St., San

Jose 12, Calif. ADV. PG. 25-27.

### SYNCHROS

See Servos

### SYNCROSCOPES

BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.
Control Corp., 718 Central Ave., Minneapolis 14, Minn. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,

Control Corp., 718 Central Acc., Miningor St., Halifax, Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass. DuMont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 351.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### TACHOMETERS—Electronic

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 19, N. Y. ADV. PG. 478.
BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 443. Cossor (Canada), Ltd., 301-303 Windsor St., Halifax,

COSSOT (CARAGOA), ELG., 501-505 Ministry, M. S., Canada.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. ADV. PG. 488.
Foxboro Co., The, Foxboro, Mass.
GENERAL. RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver

10, Colo.

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. 324, 325.

King Electric Equipment Co., 9123 Inman Ave., Cleveland 5. Ohio

land 5, Ohio.
Micro Balancing, Inc., 191 Herricks Rd., Garden City

Micro Balancing, Inc., 191 Herricks Ru., Galden B., Park, N. Y.

Park, N. Y.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 278.

STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 502.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, III.

TAPE—(for Recording)

Audio-Master Corp., 341 Madison Ave., New York 17, Audio-Master Corp., 341 Madison ave., New York N. Y. Duotone Co., Inc., Keyport, N. J. Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y. Grayburne Corp., 103 Lafayette St., New York 13, N. Y. Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn. Orradio Industries, Inc., Opelika, Ala. Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill. Recordisc Corp., 395 Broadway, New York, N. Y. Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.

Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago

Zephyr Products Co., 129 E. 124th St., New York 35, N. Y.

### TAPE—Magnetic Recording

Amplifier Corp. of America, 398 Broadway, New York 13, N. Y.
AUDIO DEVICES INC., 444 Madison Ave., New York 22, N. Y. ADV. PG. 289.
Audio-Master Corp., 289 Madison Ave., New York 17,

Audio-Master Corp., 289 Madison Ave., New York 17, N. Y.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
Fidelitone Corp., 1616 Devon Ave., Chicago 26, III.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Jensen Industries, Inc., 329 S. Wood St., Chicago, III.
Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St.
Paul 6, Minn.
Orradio Industries, Inc., Opelika, Ala.
Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, III.
Pentron Corp., 221 E. Cullerton St., Chicago 16, III.
Recordisc Corp., 395 Broadway, New York, N. Y.
Recoton Corp., 251 Fourth Ave., New York 10, N. Y.
Reeves Soundcraft Corp., 10 E. 52nd St., New York

Recover Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.
Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, III.
Zephyr Products Co., 129 E. 124th St., New York 35, N. Y.

# TAPES

See Insulation Parts

# TECHNICAL BOOKS—Publishers

Academic Press Inc., 125 E. 23rd St., New York 10,

Academic Press Inc., 125 E. 23rd St., New York 10, 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.
Chanman & Hall Ltd., 37 Essex St., London, W. C. 2.

Chapman & Hall Ltd., 37 Essex St., London, W. C. 2,

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. N. Y.
Engineers Council for Professional Development, 29 W.
39th St., New York, N. Y.
Federal Telephone & Radio Corp., Publication Dept., 67
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 International Publishers Co., 381 Fourth Ave., New York, Interscience Publishers Inc., 215 Fourth Ave., New York 3, N. Y.
Irwin Inc., Richard D., 3201 S. Michigan Ave., Chicago
16. III. 16, III.

MACMILLAN CO., THE, 60 Fifth Ave., New York 11,
 N. Y. ADV. PG. 498.

McGRAW-HILL BOOK COMPANY, INC., 330 W. 42nd
 St., New York 36, N. Y. ADV. PG. 347, 357, 410,
 484, 509.

Maedel Publishing House, 593 East 38th St., Brooklyn 3,
 N Y N. Y. National Bureau of Standards, Washington, D. C. Nelson & Sons, Thomas, 385 Madison Ave., New York, Oxford University Press, 114 Fifth Ave., New York, N. Y.
Philips Gloeilampenfabrieken, N. V., Eindhoven, The
Netherlands. 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. N. Y.
Radio Corporation of America, R C A Laboratories Div.,
Princeton, N. J.
Radio Corporation of America, Tube Dept., Harrison,
N. J. N. J. State of the control of the co 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, III.
VanNostrand Co., Inc., D., 250 Fourth Ave., New York 3, N. Y. Wiley & Sons Inc., John, 440 Fourth Ave., New York, N. Y.

# TELEMETERING SYSTEMS—Electronic AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.

APPLIED SCIENCE CORP. OF PRINCETON, THE, P. O. BOX 44, Princeton, N. J. ADV. PG. 528.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio. BENDIX AVIATION CORP., PACIFIC DIVISION, 11600 Sherman Way, North Hollywood, Calif. ADV. PG. 129.

Bristol Co., The, Waterbury 20, Conn.

C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md. Control Corp., 718 Central Ave., Minneapolis 14, Minn. Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 215-217.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. 10, Colo.

Lenkurt Electric Co., Inc., 1113 County Rd., San Carlos, Melpar, Inc., 452 Swann Ave., Alexandria, Va.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St.,
New York 11, N. Y. ADV. PG. 50, 51.
Northeastern Engineering, Inc., Manchester, N. H.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.
Resdel Engineering Courts Covers.

Resdel Engineering, 2309 Riverside Drive, Los Angeles

39, Calif.

Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Philadelphia 4, Pa.

Telemetering Associates, P. 0. Box 6, Silver Spring, Md.

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,

Pittsburgh 30, Pa. ADV. PG. 109-115.

# TELEPHONES—Handsets

Automatic Electric Sales Corp., 1033 W. Van Buren St.,

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland
Rd., Clifton, N. J. ADV. PG. 189-193.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S.
Cicero Ave., Chicago 38, III. ADV. PG. 274.
North Electric Mfg. Co., 501 S. Market St., Galion,
Ohio.

Pacific Electricord Co., P. 0. Box 15805, Cranshaw Sta., Los Angeles 8, Calif. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375. Philmore Mfg. Co., Inc., 113 University Place, New York

3, N. Y.
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. 306. Stromberg-Carlson Co., Rochester 3, N. Y. Telectro Industries Corp., 35-18 37th St., Long Island City 1. N. Telephonics Corp., Park Ave., Huntington, N. Y. U. S. Instrument Corp., 409 Broad St., Summit, N. J.

TELEVISION MASKS See Masks, Television

# TELEVISION PROJECTION SCREENS See Screens, Television Projection

### TELEVISION SYSTEMS—Industrial

Bace Television Corp., Green & Communication Hackensack, N. J.
Diamond Power Specialty Corp., Lancaster, Ohio.
DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.

AMERICA, Engineering Products Dept., Back Television Corp., Green & Leuning Sts., South Brooklyn 8, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back

Covers.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.

## TENSIONS-Coil Winding

Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y. Paper Machinery & Research Inc., 1014 Oak St., Roselle, N. J. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

### TERMINAL BLOCKS

Aerolite Electronics Corp., 507 26th St., Union City, N. J.

AIRCRAFT MARINE PRODUCTS, INC., 2100 Paxton St., Harrisburg 10, Pa. ADV. PG. 469.

AMERICAN PHENOLIC CORP., 1830 S. 54th St., Chlcago 50, III. ADV. PG. 212.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III.

Baer Co., N. S., 9 Montgomery St., Hillside, N. J.

Bellok Listrument Corp., 13, 11, 111th St., Cellars Belgic

Belock Instrument Corp., 13-11 111th St., College Point,

N. Y.

BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route
29, Hillside, N. J. ADV. PG. 338.
Cable Electric Products Co., Providence, R. I.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
Cambridge 38, Mass. ADV. PG. 437.
Cannon Electric Co., 3209 Humboldt St., Los Angeles 31,
Califi.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70

Brittania St., Meriden, Conn. ADV. PG. 292.
CONTINENTAL CONNECTOR CORP., 30-30 Northern Blvd., Long Island City, N. Y. ADV. PG. 183.
Cook Electric Co., 2700 Southport Ave., Chicago 14, III.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 214.
Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.

waukee 16, Wis.

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 183-185.

Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.

EBY INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 156.

44, Pa. ADV. PG. 156. Electrical Refractories Co., 50 Clark St., East Palestine,

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.

FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Franklin Airloop Corp., 43-20 34th St., Long Island City,

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
General Laminated Products, Inc., 2857 S. Halsted St.,

General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, III.
Glts Molding Corp., 4600 W. Huron St., Chicago 44, III.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
JONES DIV., HOWARD B., Cinch Mfg. Corp., 1026 S.
Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
JOWIL ELECTRONICS INC., 7945 Germantown Ave.,
Philadelphia 18, Pa. ADV. PG. 524.
Keystone Electronics Corp., 423 Broome St., New York
12, N. Y.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave.,
Newark 5. N. J.

Kulka Electrical Mfg. Co., Inc., 30 South St., Mt. Vernon, LYNN ELECTRONIC RESEARCH CO., 228 W. Palm Ave.,

Burbank, Calif. ADV. PG. 499.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, III. ADV. PG. 445.
Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, III.
Molding Corp. of America, 58 Weybosset St., Providence,

Mykroy, Inc., Arlington Heights Airport, Arlington Heights, III. North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.

Northern Industrial Chemical Co., 7-11 Elkins St., South

Boston 27, Mass.
P. M. Industries Inc., Stamford, Conn.
Penn-Union Electric Corp., 315 State St., Erie, Pa.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park,
III. ADV. PG. 66.
Rohden Manufacturing Co., 4739 Montrose Ave., Chicago

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,

N. Y. States Co., 19 New Park Ave., Hartford 6, Conn. Ther Electric & Machine Works, 15 S. Jefferson St., Chicago, III.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield,

N. J. ADV. PG. 510. U. S. ENGINEERING CO., 521 Commercial St., Glendale

J. Calif. ADV. PG. 432.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
U. S. Instrument Corp., 409 Broad St., Summit, N. J. Wade Electric Products Co., 400 Jacob St., Sturgis,

WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

TERMINAL BOARDS Aerolite Electronics Corp., 507 26th St., Union City, ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
Mass. ADV. PG. 24.
American Radio Hardware Co., Inc., 152 MacQueston
Pkwy., Mt. Vernon, N. Y.
Ark-Les Switch Corp., 55 Water St., Watertown 72, Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Belling & Lee, Ltd., 366 Madison Ave., New York 17, Mass. BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 29, Hillside, N. J. ADV. PG. 338.
Cable Electric Products Co., Providence, R. I.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

15, Calif.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
CONTINENTAL CONNECTOR CORP., 30-30 Northern
Blvd., Long Island City, N. Y. ADV. PG. 183.
Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.
Custom Electronics Corp., 738 Speedwell Ave., Morris
Plains. N. J.

Plains, N. J.
DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla,

DIGITAL PRODUCTS, INC., 7852 ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.

Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphla 44, Pa. ADV. PG. 156.
Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madlson Ave., New York 17, N. Y.
ELECTRONIC MECHANICS INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.
Electronic Research & Mfg. Co., 434 Midland Ave., Garfield, N. J.

field, N. J.

EMELOID CO., INC., THE, 1239 Central Ave., Hillside
5, N. J. ADV. PG. 405.

FEDERAL SCREW PRODUCTS INC., 224 W. Huron St.,

Chicago 10, III. ADV. PG. 498.
anklin Airloop Corp., 43-20 34th St., Long Island
City, N. Y. Franklin

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.

General Laminated Products, Inc., 2857 S. Halsted St., General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, II.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 441.
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. 477.
JONES DIV., HOWARD B., Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
JOWIL ELECTRONICS, INC., 7945 Germantown Ave., Philadelphia 18, Pa. ADV. PG. 524.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave.. Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J. Ika Electric Mfg. Co., Inc., 30 South St., Mount Vernon, N. Y. LYNN ELECTRONIC RESEARCH CO., 228 W. Palm Ave., Burbank, Calif. ADV. PG. 499.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif. Inglewood, Calif.
Masonite Corp., 111 W. Washington St., Chicago 2, III.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago
47, III. ADV. PG. 445.
Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 47, III. Micarta Fa 40, III. Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, III.
Molding Corp. of America, Inc., 58 Weybosset St., Providence, R. I.
Mykroy, Inc., Arlington Heights Airport, Arlington Heights, III.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 513.
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. Northern Industrial Chemical Co., 7-11 Elkins St., South Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
P. M. Industries, Inc., Stamford, Conn.
Photocircuits Corp., Glen Cove, N. Y.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41
Elm St., Stoneham 80, Mass. ADV. PG. 287.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park,
III. ADV. PG. 66.
Roflan Co., Everett, Mass.
Rohden Manufacturing Co., 4739 Montrose Ave., Chicago
41, III. Sealtron Co., 9701 Reading Road, Cincinnati 15, Ohio. Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y. N. Y.
States Co., 19 New Park Ave., Hartford 6, Conn.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield,
N. J. ADV. PG. 510.
Tri-Dex Co., P. O. Box 643, Lindsay, Calif.
UCINITE CO. DIVISION, UNITED-CARR FASTENER
CORP., 459 Watertown St., Newtonville, Mass. ADV.
PG. 101. U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
U. S. ENGINEERING CO., 521 Commercial St., Glendale 3, Calif. ADV. PG. 432.
3, Calif. ADV. PG. 432.

# TERMINAL STRIPS Aerolite Electronics Corp., 507 26th St., Union City,

N. J.

AIRCRAFT MARINE PRODUCTS, INC., 2100 Paxton St.,
Harrisburg 10, Pa. ADV. PG. 469.

ALDEN PRODUCTS CO., 112 No. Main St., Brockton 64,
Mass. ADV. PG. 24.

American Radio Hardware Co., Inc., 152 MacQueston
Pkwy., Mt. Vernon, N. Y.
Baer Co., N. S., 9 Montgomery St., Hillside, N. J.

Belling & Lee, Ltd., 366 Madison Ave., New York 17,
N. Y. N. Y. ADV. PG. 342.

BIRNBACH RADIO CO., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.

BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 29, HillsIde, N. J. ADV. PG. 338.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 437.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. 15, Calif.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70

Wade Electric Products Co., 400 Jacob St., Sturgis,

Yates Engineering Services, Box 67, Cranford, N. J.

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
CONTINENTAL CONNECTOR CORP., 30-30 Northern
Blvd., Long Island City, N. Y. ADV. PG. 183.
Cook Electric Co., 2700 Southport Ave., Chicago 14, III.
Curtis Development & Mfg. Co., 3226 N. 33rd St.,
Milwaukee 16, Wis.
Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohlo.
EBY, INC., HÜGH H., 2700 Stenton Ave., Philadelphia
44, Pa. ADV. PG. 156.
Edison Swan Electric Co., Ltd., (Clix Dlv.), 366 Madison
Ave., New York 17, N. Y.

ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444. Electronic Research & Mfg. Co., 434 Midland Ave., Electronic Research & Mfg. Co., 434 Midland Ave., Garffeld, N. J.
EMELOID CO., INC., THE, 1239 Central Ave., Hillside 5, N. J. ADV. PG. 405.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y. New York 10, N. Y. ADV. PG. 525.

General Laminated Products, Inc., 2857 S. Halsted St., 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. 77.

INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 441.

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. 477.

JONES DIV., HOWARD B., Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 234, 235.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Kolton Electric Mfg. Co., 123 New Jersey Railyand Ave. Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

Kulka Electric Co., Inc., 30 South St., Mount Vernon, LYNN ELECTRONIC RESEARCH CO., 228 W. Palm Ave., Burbank, Calif. ADV. PG. 499.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, III. ADV. PG. 445.

Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, III.

Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, III.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Mass Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
Molding Corp. of America, Inc., 58 Weybosset St.,
Providence, R. I. Providence, R. I.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
Mykroy, Inc., Arlington Helghts Airport, Arlington Heights, III.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 513.
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. Northern Industrial Chemical Co., (-11 EIRIIS St., Social Boston 27, Mass. P. M. Industries Inc., Stamford, Conn. Photocircuits Corp., Glen Cove, N. Y. PRECISION METAL PRODUCTS CO. OF MALDEN, 41 Elm St., Stoneham 80, Mass. ADV. PG. 287. RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66. Rohden Manufacturing Co., 4739 Montrose Ave., Chlcago 41, III. Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18 Calif. Northern Industrial Chemical Co., 7-11 Elkins St., South Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif. Sealtron Co., 9701 Reading Road, Cincinnati 15, Ohio. Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y. States Co., 19 New Park Ave., Hartford 6, Conn.
Ther Electric & Machine Works, 15 S. Jefferson St.,
Chicago, III. There Electric & Machine Works, 15 S. Jenerson St., Chicago, III.

THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.

Tri-Dex Co., P. O. Box 643, Lindsay, Calif.

UCINITE CO. DIVISION, UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 101 UNITED C CARR FASTENER CORP., Cambridge, Mass. UNITED CARR FASTENER CORP., Cambridge, Mass. ADV. PG. 100.
U. S. ENGINEERING CO., 521 Commercial St., Glendale 3, Calif. ADV. PG. 432.
U. S. GASKET CO., Fluorocarbon Products Div., P. 0. Box 93, Camden, N. J. ADV. PG. 472.
Wade Electric Products Co., 400 Jacob St., Sturgis, Yates Engineering Services, Box 67, Cranford, N. J.

# TERMINALS

(h) Indicates hermetically sealed types.

Aerolite Electronics Corp., 507 26th St., Union City, AIRCRAFT MARINE PRODUCTS, INC., 2100 Paxton St., AIRCRAFT MARINE PRODUCTS, INC., 2100 Paxton St., Harrisburg 10, Pa. ADV. PG. 469.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24.

AMERICAN BRASS CO., 25 Broadway, New York 4, N. Y. ADV. PG. 373.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Andrew Corp., 363 E. 75th St., Chicago 19, III.

Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass. Mass.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 368.
Audio Equipment Sales, 153 W. 33rd St., New York
1, N. Y.
Totatwia Sales Corp. 1033 W. Van Buren 1, N. Y. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III.

BEAD CHAIN MANUFACTURING CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 503. Belling & Lee, Ltd., 366 Madison Ave., New York (h) Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
Breico Electronics Corp., 55 Vandam St., New York
13, N. Y.
Brilhart Plastics Corp., Old Country Rd., Mineola,
N. Y. (h) BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 29, Hillside, N. J. ADV. PG. 338. Budd-Stanley Co., Inc., 43-01 22nd St., Long Island. City 1, N. Y. Budot-Stating Co., And Conn.
City 1, N. Y.
Burndy Engineering Co., Norwalk Conn.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
Cambridge 38, Mass. ADV. PG. 437.
Cannon Electric Co., 3209 Humboldt St., Los Angeles Cambridge 38, Mass. ADV.
Cannon Electric Co., 3209 Humboldt St., Los Angeles 31, Calif.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
Carter Parts Co., 213 Institute Pi., Chicago 10, III.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.
CITATION PRODUCTS Co., 233 E. 146th St., New York 51, N. Y. ADV. PG. 512.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15. Calif. 15, Caur.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 15, Calif.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
Brittania St., Meriden, Conn. ADV. PG. 292.
CONTINENTAL CONNECTOR CORP., 30-30 Northern
Blvd., Long Island City, N. Y. ADV. PG. 183.
Cook Electric Co., 2700 Southport Ave., Chicago 14, III.
Corning Glass Works, Corning, N. Y.
Charles Grand Glass Electronic Research & Mfg. Co., 434 Midland Ave., Garfield, N. J. FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 498.
Frankel Connector Co., 27 Vestry St., New York, N. Y. Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y. Fryling Mfg. Co., 639 W. 12th St., Erie, Pa. Fusite Corp., 6000 Fernview Ave., Cincinnati 13, Ohio. (h) GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 507.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, Ill. ADV. PG. 120. ford, III. ADV. PG. 120.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
General Laminated Products, Inc., 2857 S. Halsted St., General Laminates Products, Nac. Chicago 8, III.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 364.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. Hatheway Mfg. Co., 1500 Railroad Ave., Bridgeport, Conn. Conn.

HELDOR MFG. CO., Div. of Heldor Bushing & Terminal
Co., Inc., 225 Belleville Ave., Bloomfield, N. J.
ADV. PG. 238.

HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind.
ADV. PG. 401.

HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St.,
Newark 7, N. J. ADV. PG. 77.

(h)
Ilsco Copper Tube & Products Inc., Mariemont Ave.,
Mariemont, Cincinnati 27, Ohio.

Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.

(h) 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. 477.
International Resistance Co., 401 N. Broad St., Phila-International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa. (h)
IPPOLITO & CO., INC., JAMES, 401 Concord Ave.,
Bronx 54, N. Y. ADV. PG. 359.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-251.

JOHNSON & HOFFMAN MFG. CO., 55-65 Ongley St., Rockville Centre, N. Y. ADV. PG. 344, 345.

JONES DIV., HOWARD B., Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, III. ADV. PG. 234, 235.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, III. ADV. PG. 274.

Keystone Electronics Corp., 423 Broome St., New York Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KINGS ELECTRONICS, 40 Marbiedale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
Kulka Electric Mfg. Co., Inc., 30 South St., Mount Vernon, N. Y.
LUNDEY ASSOCIATES, 694 Main St., Waltham 54, Mass. ADV. PG. 282. LYNN ELECTRONIC RESEARCH CO., 228 W. Palm Ave., Burbank, Calif. ADV. PG. 499. Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338, Inglewood, Calif.
MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 424.
Mallory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.
MENDELSOHN SPEEDGUN CO., INC., 457 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 502.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 445.
Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chlcago 40, Ill.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Molding Corp. of America, Inc., 58 Weybosset St., Providence, R. I.
Mose Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.

35, Mass.

Mykroy, Inc., Arlington Heights Airport, Arlington Heights, III.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 513.

NEO-SIL CORP., 26 Cornelison Ave., Jersey City 4, N. J. ADV. PG. 258.

(b)

ADV. PG. 258. (h)
North Electric Mfg. Co., 501 S. Market St., Galion,
Ohio.

Pacific Electricord Co., P. O. Box 15805, Cranshaw Sta., Los Angeles 8, Calif. Painton & Co., Ltd., 366 Madison Ave., New York 17,

N. Y.
PATTON-MacGUYER CO., 17 Virginia Ave., Providence
5, R. I. ADV. PG. 132.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
III. ADV. PG. 375.
Pheoli Mfg. Co., 5700 Roosevelt Rd., Chicago 50, III.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Philmore Mfg. Co., Inc., 113 University Place, New York
3, N. Y.

Philmore Mrg. Co., Inc., 113 billion of the control of the control

ANTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337. (h) Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

Roflan Co., Everett, Mass.
Rohden Manufacturing Co., 4739 Montrose Ave., Chicago III.

41, III.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
Sealtron Co., 9701 Reading Road, Cincinnati 15, Ohio. (h)
Shakeproof Inc., Div. of Illinois Tool Wks., 2501 N.
Keeler Ave., Chicago 39, III.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 320.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park,

N. J.
SHERMAN MFG. CO., H. B., 22 Barney St., Battle Creek, Mich. ADV. PG. 200.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.

N. Y.
States Co., 19 New Park Ave., Hartford 6, Conn.
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.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa.
ADV. PG. 228, 229.
SUPERIOR ELECTRIC CO., 4000 Thure Ave., Bristol,
Conn. ADV. PG. 133-135.
SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago
22, III. ADV. PG. 404.
Telectro Industries Corp., 35-18 37th St., Long Island
City 1, N. Y.
Telephonics Corp., Park Ave., Huntington, N. Y.
Thompson-Bremer Co., 1640 W. Hubbard St., Chicago,

Telephonics Corp., Park Ave., Huntington, N. Y. Thompson-Bremer Co., 1640 W. Hubbard St., Chicago,

III.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield,
N. J. ADV. PG. 510. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302. (h)
TRIMM, INC., 400 W. Lake St., Libertyville, III. ADV.
PG. 180.
UCINITE CO. DIV., UNITED-CARR FASTENER CORP.,
459 Watertown St., Newtonville, Mass. ADV. PG.

101. UNITED-CARR FASTENER CORP., Cambridge 42, Mass.

United Shoe Machinery Corp., 140 Federal St., Boston 7,

U. S. ENGINEERING CO., 521 Commercial St., Glendale 3, Calif. ADV. PG. 432.

Vitroseal Corp., 6325 Guilford Ave., Box 6048, Indian-apolis 20, Ind. Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115. (h)
Wheaton Co., T. C., Electronic Div., Millville, N. J. (h).
Whitaker Cable Corp., Kansas City 16, Mo.
WHITSO, INC., 2037 Churchill St., Chicago 47, III.
ADV. PG. 40.

Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.
WINCHESTER ELECTRONICS INC., Glenbrook, Conn. ADV. PG. 81.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.
Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

# TEST CHAMBERS

See Chambers, Test

### TESTERS—Automatic Tube

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
Industrial Electronic Co., Inc., Hanover, Mass.
Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

6, N. Y.
STANDARD CABINET CO., 57 Washington Ave., Carlstadt, N. J. ADV. PG. 519.
Supreme, Inc., Greenwood, Miss.
Triplett Electrical Instrument Co., Harmon Rd., Bluffton,

## TESTERS—Battery

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt Vernon, N. Y. Feiler Engineering & Mfg. Co., Dept EBG, 8026 N. Monticello Ave., Skokie, III. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8. Ohio.

Monticello Ave., Skokie, III.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8, Ohio.
King Electrica Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.
Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los
Angeles 21, Calif.
Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, III.
Simpson Electric Co., Div. of American Gage & Machine
Co., 5218 W. Kinzie St., Chicago 44, III.
Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31, III.
Supreme, Inc., Greenwood, Miss.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.

### TESTERS—Capacitor

British Industries Corp., 164 Duane St., New York 13, N. Y.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8, Ohio.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,
Dayton 1, Ohio.

Dayton 1, Ohio.

King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

44, Pa.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.

Sprague Electric Co., 125 Marshall St., North Adams, Mass.

Sun Electric Corp. 4002

Sun Electric Corp., 6323 Avondale Ave., Chicago 31,

MI. WESTON ELECTRICAL INSTRUMENTS CORP., 614 Fre-linghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### TESTERS-Cathode Ray Tube

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

# TESTERS—Circuit

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 403.

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

Cole Instrument Co., 2520 Co. 15, Calif.

15, Calif.

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.

Fordham Mfg. Co., 2220 Pearsall Ave., New York 69, N. Y. Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Ideal Industries, Inc., Park & Borden Aves., Sycamore,

Instrument Laboratories, 315 W. Walton Place, Chicago 10, III. Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,

Dayton 1, Ohio.
King Electric Equipment Co., 9123 Inman Ave., Cleve-

King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.

Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.

Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, III.

Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.

Peschel Electronics. Inc., 13 Garden St., New Rochelle.

Pa. ADV. PG. 141. Peschel Electronics, Inc., 13 Garden St., New Rochelle,

N. Y.
Precision Apparatus Co., Inc., 92-27 Horace Harding
Blvd., Elmhurst, N. Y.
PRECISION ELECTRONICS, 643 Milwaukee Ave., Chlcago 22, Ill. ADV. PG. 358.
Radio City Products Co., Inc., 152 W. 25th St., New
York 1, N. Y.

Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y.
Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, N. Y.
Roller-Smith Corp., Bethlehem, Pa.
Senn Corp., New Augusta, Ind.
Sherron Electronic Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzle St., Chicago 44, III.
STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 502.
Superior Instrument Co., 227 Fulton St., New York, N. Y.

Supreme, Inc., Greenwood, Miss.
T. L. G. ELECTRIC CORP., 31 W. 27th St., New York
1, N. Y. ADV. PG. 499.
Telectro Industries Corp., 35-18 37th St., Long Island

City 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

### TESTERS—Coating Thickness

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln,

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV PG. 436. Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda

GATOMER LAB., Mc., McM., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, III.

### TESTERS-Coil

COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
King Electric Equipment Co., 9123 Inman Ave., Cleveland

Ring Electric Equipment 607, 7225 Annual 75, Ohio.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29,

Pa. In Electric Corp., 6323 Avondale Ave., Chicago 31, Sun

Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill. WESTON ELECTRICAL INSTRUMENTS CORP. 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# TESTERS—Color Infra Red

Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 220.

# TESTERS—Continuity

Booth Co., Arthur E., 4124 Beverly Bivd., Los Angeles, Partish Industries Corp., 164 Duane St., New York 13, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif

Calif.
Dante Electric Mfg. Co., Bantam, Conn.
Feller Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
Westbury, N. Y. ADV. PG. 412.
Ideal Industries, Inc., Park & Borden Aves., Sycamore, III.
Kartron, Inc., Box 472, Huntington Beach, Calif.
Keystone Electronics Corp., 423 Broome St., New York 12,
N. Y.

Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y.

TESTERS-Meter

Associated Research, Inc., 3788 W. Belmont, Chicago 18,

III. Booth Co., Arthur E., 4124 Beverly Blvd., Los Angeles,

Calif.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, Ill.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8, Ohlo.
Instrument Laboratories, 315 W. Walton Place, Chicago
10. III.

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. 44, Pa.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Markov Electrical Instrument Co., 402 Canal St.,
Manchester, N. H. ADV. PG. 284.
Metropolitan Electronics & Instrument Co., 106 Fifth
Ave., New York 11, N. Y.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge, 42, Mark

RAMSON Electrical Historians St. Price Age & Machine St. Chicago 44, III.

Co., 5218 W. Kinzie St., Chicago 44, III.
Taffet Radio & Television Co., 2530 Belmont Ave., New
York 58, N. Y.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

TESTERS—Microwave Radar Testing Equipment

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 49.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

15, Calif. Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. General Communication Co., 530 Commonwealth Ave.,

Boston 15, Mass.
Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich,

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,

HEWLETT-PACKARD CU., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. Industrial Electronics Co., Inc., Hanover, Mass.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325.

Lerner Instrument & Electronic Mfg. Corp., 47-49 Bergen

St., Brooklyn 2, N. Y. ru Laboratories, Inc., Black Oak Ridge Rd., Wayne,

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355. MICROWAVE ASSOCIATES, INC., 22 Cummington St., Perstan Marc ADV PG. 417, 22 Cummington St.,

MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.
Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif. SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
VECTRON, INC. 235 High St., Waltham, Mass. ADV. PG. 384.
Waveline, Inc., North Caldwell, N. J.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Wheeler Laboratories, Inc., Great Neck, N. Y.

TESTERS-Moisture Detection, Electronic

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
Canadian Aviation Electronics Ltd., 8280 St. Lawrence
Blvd., Montreal, P. Q.
Hart Molsture Gauges, Inc., 126 Liberty St., New York

6, N. Y.
Industrial Electronics Co., Inc., Hanover, Mass.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New
York 4, N. Y. ADV. PG. 355.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 158,

Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades

Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Radio City Products Co., Inc., 152 W. 25th St., New
York 1, N. Y. York 1, N. Y.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6 N. Y.
Simpson Electric Co. Div. of American Gage & Machine
Co., 5218 W. Kinzie St., Chicago 44, III.
Sittler Corp., 18 N. Ada St., Chicago 7, III.
Sterling Instruments Co., 13331 Linwood Ave., Detroit 6, Mich.
STICHT CO., INC., HERMAN H., 27 Park Place, New
York 7, N. H. ADV. PG. 502.
Superior Instrument Co., 227 Fulton St., New York, N. Y.
UNITED MFG. & SERVICE CO., 405 S. Sixth St., Milwaukee 4, Wis. ADV. PG. 417.

# TESTERS—Crystal Testing

BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 443.

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Cole Instrument Co., 1320 S. Grand Ave., Los Angeles Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
JERSEY CITY TECHNICAL LABORATORY, 880 Bergen Ave., Jersey City 6, N. J. ADV. PG. 424.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.
Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.
Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J. Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y. TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

### 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. 397.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 355.

STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 164.

### TESTERS-Insulation

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England. Associated Research, Inc., 3758 W. Belmont, Chicago 18, III. Biddie Co., James G., 1316 Arch St., Philadelphia 7, Pa.
Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.

Central Research Laboratories, Inc., Red Wing, MIch.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
Dice Co., J. W., Englewood, N. J.
Eastern Specialty Co., Philadelphia 40, Pa.
Electronic Brazing Co., 140 Glenridge Ave., Montclair, Entwistle Co., James L., P. O. Box 176, Providence 7, Entwistle Co., James L., P. O. Box 176, Providence 7, R. I.
Flader, Inc., Frederic, 1330 Laskey Rd., Toledo 12, Ohio.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Hivolt Ltd., 34A Pottery Lane, London W. 11, England.
Holtzer-Cabot Div. of National Pneumatic Co., Inc., 125
Amory St., Boston 19, Mass.
Ideal Industries, Inc., Park & Borden Aves., Sycamore,
Ill. Industrial Transformer Co., Gouldsboro, Pa.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia
44, Pa. Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn
6. N. Y. 6, N. Y.

SPELLMAN TELEVISION CO., INC., 3029 Webster Ave.,
New York 67, N. Y. ADV. PG. 332, 333.

Sterling Instruments Co., 13331 Linwood Ave., Detroit
6, Mich.

STICHT CO., INC., HERMAN H., 27 Park Place, New
York 7, N. Y. ADV. PG. 502.

T.L.G. ELECTRIC CORP., 31 W. 27th St., New York 1,
N. Y. ADV. PG. 499.

Takk Corp., Newark, Ohio.

TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV.
P. 379.

Park, N. J.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

TESTERS-Multitesters AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 523. British Industries Corp., 164 Duane St., New York 13, N. Y. Cole Instrument Co., 1320 S. Grand Ave., 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. 149.
Electronic Measurements Corp., 280 Lafayette St., New
York 12, N. Y.
Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N.
Monticello Ave., Skokie, III.
Hickok Electrical Instrument Co., 10514 Dupont Ave.,
Cleveland 8, Ohio.

INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 194. Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20,

Ind.
Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
Oak Ridge Products Mfg. Div. of Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Radio City Products Co., Inc., 152 W. 25th St., New York, N. Y.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.

RAWSON Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
Simpson Electric Co. Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
Supreme, Inc., Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y. Triplett Electrical Instrument Co., Harmon Rd., Bluffton,

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Fre-linghuysen Ave., Newark 5, N. J. ADV. PG. 256. YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

TESTERS—Radar Tube

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
CHATHAM ELECTRONICS CORP., 475 Washington St.,
Newark 2, N. J. ADV. PG. 96, 97.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New
York 10, N. Y. ADV. PG. 525.
Industrial Electronics Co., Inc., Hanover, Mass.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,
Dayton J. Chie Dayton 1, Ohio.
Pacific Electronics, Saticoy, Calif.
Research Electronics Lab., 2459 Susquehanna Rd., Roslyn,

ra.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

# TESTERS-Synchro Error

Cole Instrument Co., 1320 S. Grand Ave., Los Angles 15, Calif.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 260, 505.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 141.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

# TESTERS—Transconductance Tube

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohto.
Industrial Electronics Co., Inc., Hanover, Mass.
Metropolitan Electronics & Instrument Co., 106 Fifth Ave., New York 11, N. Y.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London W. C. 2, England.
Oak Ridge Products Mfg. Div., Video Television, Inc., 37-01 Vernon Blvd., Long Island City 1, N. Y.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold,

N. Y. Supreme, Inc., Greenwood, Miss.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.
Transvision, Inc., 460 North Ave., New Rochelle, N. Y. WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.

# TESTERS—Vacuum Tube

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

# THERMISTORS

BREEZE CORPS., INC., 41 S. South St., Newark 7, N. J. ADV. PG. 259.

CARBOLOY DEPT. OF GENERAL ELECTRIC CO., 11139
E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG.

Friez Instrument Div., Bendix Aviation Corp., Baltimore

4, Md.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Keystone Carbon Co., Inc., St. Marys, Pa.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.

462.
SPERRY GYROSCOPE CO., DIV. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.

PG. 228, 229.
VICTORY ENGINEERING CORP., Springfield Rd., Union,
N. J. ADV. PG. 204.

P. 379.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Winsfow Co., Inc., 9 Liberty St., Newark 5, N. J.

### THERMOCOUPLES

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

AMERICAN PLATINUM WORKS, N. J. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.

American Thermo Electric Co., 67 E. 8th St., New York

3, N. Y.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York
1, N. Y. ADV. PG. 471.
Bristol Co., The, Waterbury 20, Conn.
Cole Instrument Co., 1320 S. Grand Ave Los Angeles
15, Calif.

Dallons Labs., 5066 Santa Monica Bivd Los Angeles, Calif.

Calif.
ELECTRO-TECH EQUIPMENT CO., 55 Lispenard St., New York 13, N. Y. ADV. PG. 354.
Farrand Optical Co., Inc., 4401 Bronx Blvd. New York 66, N. Y.
Field Electrical Instrument Co., 8 N. Manheim Bidd.

New Paltz, N. Y.
Foxboro Co., The Foxboro, Mass.
General Controls Co., Glendale 1, Calif.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16,

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.
Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.
Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago

Illinois testing Labs., Inc., 420 N. Labatte Sc., Chicago 10, Ill.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelchia 44, Pa.
Lewis Engineering Co., 52 Rubber Ave., Naugatuck,

Conn.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley. Ave., Stamford, Conn. ADV. PG. 180.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
Reeder & Co., Charles M., 171 Victor Ave., Detroit 3.

& 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.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.
Taco West Corp., 525 N. Noble St., Chicago 22, III.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
Uniform Tubes, Level Rd., Collegeville 2, Pa.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Wheelco Instruments Div., Barber-Colman Co., Rockford, III.

# THERMOCOUPLES—Pyrometric

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at St., Newark 5, N. J. ADV. PG. 76.
Bristol Co., The, Waterbury 20, Conn.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15. Calif.

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.

Calif.

ELECTRO-TECH EQUIPMENT CO., 55 Lispenard St., New York 13, N. Y. ADV. PG. 354.

Foxboro Co., The Foxboro, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, III.

J B T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

MINNEAPOLIS-HONEYWELL REGULATOR CO.,

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Wheelco Instruments Div., Barber-Colman Co., Rockford, III.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

# THERMOMETERS—Resistance

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.

Cole Instrument Co., 1920 3. Grand Col., Ed. March 15, Callf.
15, Callf.
EDISON, INC., THOMAS A., INSTRUMENT DIV., 81
Lakeside Ave., West Orange, N. J. ADV. PG. 88, 89.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago

10, III.
J B T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 457.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.

44, Pa.
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,
S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44,
Pa. ADV. PG. 304, 305.
Ruge-de Forest, Inc., 84 Massachusetts Ave., Cambridge
39, Mass.

Ruge-de Forest, Inc., 84 Massachusetts Ave., Cambridge 39, Mass.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, III.

Taco West Corp., 525 N. Noble St., Chicago 22, III.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila-

delphia 44, Pa.

Trans-Sonic, Inc., Bedford Airport, Bedford, Mass.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Wheelco Instruments Div., Barber-Colman Co., Rockford,

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

### THERMOPILES

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y.
Eppley Lab., Inc., The, Newport, R. I.
Farrand Optical Co., Inc., 4401 Bronx Blvd., New York

Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago

10, III.
LISTON-BECKER INSTRUMENT CO., INC., 20 Beckley Ave., Stamford, Conn. ADV. PG. 180.
Litton Industries, San Carlos, Calif.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
Reeder & Co., Charles M., 171 Victor Ave., Detroit 3, Mich.

### THERMOSTATS—Electronic

### See also—Controls, Temperature

American General Thermostat Corp., 2060 Bronx St., New York 60, N. Y. Bristol Co., The, Waterbury 20, Conn. Cooper Co., Clark, 379 N. Market St., Palmyra, N. J. G-V Controls Inc., 28 Hollywood Plaza, East Orange,

N. J.
HART MFG. CO., 110 Bartholomew Ave., Hartford 1, Conn. ADV. PG. 260.
Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, III.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,

S., Minneapolis, Minn.
Philadelphia Scientific Glass Co., 4 Eckard Ave., Abing-

ton, Pa.

Spencer Thermostat Div., Metals & Controls Corp., 34
Forest St., Attleboro, Mass.

STEVENS MFG. CO., INC., 69 S. Walnut St., Mansfield,
Ohio. ADV. PG. 430.

ULANET CO., GEORGE, 413 Market St., Newark 5,
N. J. ADV. PG. 410.

Wilson Co., H. A., 105 Chestnut St.. Newark 5. N. J.

### **THYRATRONS**

See Tubes

# TIMERS—Automatic Cycle

Amglo Corp., 2037 W. Division St., Chicago 22, III.
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.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn.
ADV. PG. 400.
Deitz Co., S. J., 38 River Rd., River Edge, N. J.
Eagle Signal Corp., Moline, Illinois.
Electronic Processes Corp., 328 N. Market, San Jose 18,
Calif.

Calif.
Engineering Research Associates, Inc., 1902 W. Min-

Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.
Foxboro Co., The, Foxboro, Mass.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GLASER-STEERS CORP., 2 Main St., Belleville 9,
N. J. ADV. PG. 245.
Gorrell & Gorrell, Haworth, N. J.
Haledy Electronics Co., 57 William St., New York 5,
N. Y.

N. Y.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 226, 227.
Industrial Electronics Co., Inc., Hanover, Mass.

Ingraham Co., E., Bristol, Conn. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. Montgomery Mfg. Co., 204 S. Main St., Owensville,

Ind.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Paragon Electric Co., Two Rivers, Wis.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
Thermo Instruments Co., Box 336, Belmont, Calif.
Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,
Mich.

Mich.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 256.
Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.
Zenith Electric Co., 152 W. Walton St., Chicago 10,

### TIMERS—Automatic Interval

Airborne Electronics Co., Metropolitan Airport, Hangar No. 3, Van Nuys, Calif. AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 523. Amglo Corp., 2037 W. Division St., Chicago 22, III. Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 443.

BENKELEY SCIENTIFIC CURP., RICHMOND, CAND. ADV. PG. 443.

BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 492, 493.

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

CRAMER CO., INC., R. W. Box 13, Centerbrook, Conn. ADV. PG. 400.

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, III.

Electronic Processes Corp., 328 N. Market, San Jose 18, Calif.

Calif.

Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass. Foxboro Co., The, Foxboro, Mass.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 226, 227.
Industrial Electronics Co., Inc., Hanover, Mass.
Industrial Timer Corp., 115 Edison Pl., Newark 5, N. J. Ingraham Co., E., Bristol, Conn.
Lektra Laboratories, 154 11th Ave., New York, N. Y.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

III.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
ORTHON CORP., 196 Albion Ave., Peterson 2, N. J. ADV. PG. 362.
Paragon Electric Co., Two Rivers, Wis.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 278.
Reliance Automatic Lighting Co., 1919 Mead St., Racine, Wis.

Wis.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
Rutherford Electronics Corp., 3707 S. Robertson Blvd.,
Culver City, Calif.
STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 494.
STICHT CO., HERMAN H., 27 Park Place, New York 7,
N. Y. ADV. PG. 502.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades
Park, N. J.

Park, N. J. Technical Associates, 140 W. Providencia Ave., Burbank,

Calif.
TELECHRON DEPT., GENERAL ELECTRIC CO., Ashland,
Mass. ADV. PG. 23.
Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
Walser Automatic Timer Corp., Graybar Bldg., New
York, N. Y.

Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,

Westronic Co., 19500 W. Eight Wile Rd., Detroit 19, Mich.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J. 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 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.

CRAMER CO., INC., R. W. Box 13, Centerbrook, Conn. ADV. PG. 400.
Deitz Co., S. J., 38 River Rd., River Edge, N. J. Eagle Signal Corp., Moline, Illinois.
Electronic Processes Corp., 328 N. Market, San Jose 18,

Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.
GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J.

GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J. ADV. PG. 245.
Gorrell & Gorrell, Haworth, N. J. HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 226, 227.
Industrial Electronics Co., Inc., Hanover, Mass.
Lektra Laboratories, 154 11th Ave., New York, N. Y. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

III.
ORTHON—CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Paragon Electric Co., Two Rivers, Wisconsin.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Quaker City Gear Works, Red Lion & Philmont Rd.,
Bethayres, Pa.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,
Mich.

WESTINGHOUSE ELECTRIC CORP., P. 0. Pittsburgh 30, Pa. ADV. PG. 109-115. P. O. Box 5578,

### TIMERS-Hour Counting

Amglo Corp., 2037 W. Division St., Chicago 22, III.
Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn.
ADV. PG. 400.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

N. Y.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 226, 227.
J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. AD. PG. 457.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, 111

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 284. Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford,

Conn.
WESTINGHOUSE ELECTRIC CORP., P. 0.
Pittsburgh 30, Pa. ADV. PG. 109-115. P. O. Box 5578,

### TIMERS—Impulse

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England. CRAMER CO. INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 400. Electronic Processes Corp., 328 N. Market, San Jose 18, Calif.

Calif.
Engineering Research Associates, Inc., 1902 W. Minnehaha, Ave., St. Paul, Minn.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 198.
Industrial Electronics Co., Inc., Hanover, Mass.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

III.
X-Ray Dept. of General Electric Co., 4855 Electric Ave.,

Milwaukee 14, Wis. Zenith Electric Co., 152 W. Walton St., Chicago 10, III.

### TIMERS—Inertia

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

# TIMERS—Motor Operated

Amglo Corp., 2037 W. Division St., Chicago 22, III.
Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG
CORP., Janesville, Wis. ADV. PG. 492, 493.
Bristol Co., The, Waterbury 20, Conn.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn.
ADV. PG. 400.
Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
Eagle Signal Corp., Moline, Illinois.
Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,
N. Y.

Y. Soldiers Field Rd., General

Boston 34, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Gleason-Avery Co., Auburn, N. Y.
Gorrell & Gorrell, Haworth, N. J.
Hagen Mfg. Co., Inc., Baraboo, Wis.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury,
Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 Elm St., Torrington,
Conn. ADV. PG. 226, 227.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8,
Calif.

Ohio.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind. ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.

ORTHON CORP., 196 Albion Ave., Paterson 2, 10. 0. AOV. PG. 362.
Paragon Electric Co., Two Rivers, Wisconsin.
RED BANK DIV., Bendix Aviation Corp., Red Bank, N. J. AOV. PG. 125, 126.
Reliance Automatic Lighting Co., 1919 Mead St., Racine, Wis.
Reynolds Electric Co., 3000 River Rd., River Grove, III.
SESSIONS CLOCK Co., Forestville, Conn. ADV. PG.

330, 331.
STANDARD ELECTRIC TIME CO., THE, 89 Logan St., Springfield, Mass. ADV. PG. 494.
Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Zenith Electric Co., 152 W. Walton St., Chicago 10, III.

### TIMERS—Multicontact

Amglo Corp., 2037 W. Division St., Chicago 22, III.
Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

CRAMER CO., INC., R. W., Box 13, Centerbrook Conn.

ADV. PG. 400.

ADV. PG. 400.

Igle Signal Corp., Moline, Illinois.

Illinois.

Illinois.

Illinois.

Illinois.

N. Y.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury,
Conn. ADV. PG. 198.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn.
ADV. PG. 226, 227.
Industrial Electronics Co., Inc., Hanover, Mass.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

III.
Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
Reynolds Electric Co., 3000 River Rd., River Grove, III.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.
Zenith Electric Co., 152 W. Walton St., Chicago 10, III.

### TIMERS—Percentage

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 400. Eagle Signal Corp., Moline, III. Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 198. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

III.
Paragon Electric Co., Two Rivers, Wis.
Tuttle & Kift, 1823 N. Monitor St., Chicago 39, III.
Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.
Zenith Electric Co., 152 W. Walton St., Chicago 10, III.

### TIMERS—Photoelectric

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 523.
Automatic Temperature Control Co., Inc., 5212 Pulaski

Automatic

Automatic Temperature Control Co., Inc., 5212 Fulaski Ave., Philadelphia 44, Pa. Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England. Deitz Co., S. J., 38 River Rd., River Edge, 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. 1-23.
Industrial Electronics Co., Inc., Hanover, Mass.
Lektra Laboratories, 154 11th Ave., New York, N. Y.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,

Pedersen Electronics Co., Mount Diablo Bivd., Lafay-

Pedersen Electronics Co., Mount Diable State, Calif.
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd.,
Great Neck, N. Y. ADV. PG. 278.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 490.
STICHT CO., INC., HERMAN H., 27 Park Place, New
York 7, N. Y. ADV. PG. 502.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### TIMERS—Sequence

Amglo Corp., 2037 W. Division St., Chicago 22, III.
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.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn.
ADV. PG. 400.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Gale, Dirichtea Mechanisms. 81-01 Broadway, Elmhurst,

Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst, N. Y.
General Control Company, 1200 Soldiers Field Rd.,

Boston 34, Mass. Glannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena I, Calif. GLASER-STEERS CORP., 2 Main St., Belleville 9, N. J.

GLASER-SIEERS CURP., 2 Main St., Deleting 7, No. ADV. PG. 245.

HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 198.

HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 226, 227.

Industrial Electronics Co., Inc., Hanover, Mass.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, III.

III.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Paragon Electric Co., Two Rivers, Wisconsin.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Reynolds Electric Co., 3000 River Rd., River Grove, III.
Robotron Corp., 21300 W. Eigh: Mile Rd., P. O. Box
4885, Detroit 19, Mich.
Taffet Radio & Television Co., 2530 Belmont Ave., New
York 58, N. Y.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.

ADV. PG. 311.
Walkirt Co., 145 W. Hazel, Inglewood, Calif.
Weltronic Co., 19500 West Eight Mile Rd., Detroit 19,

Mich.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Zenith Electric Co., 152 W. Walton St., Chicago 10, III.

### TIMERS—Thermal

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
EDISON, INC., THOMAS A., INSTRUMENT DIV., 81
Lakeside Ave., West Orange, N. J. ADV. PG. 88, 89.
G-V Controls Inc., 28 Hollywood Plaza, East Orange, N. J.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J.
ADV. PG. 410.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

### TIMERS—Welding, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Clark Controller Co., 1146 E. 152nd St., Cleveland 10,

St., Newark 3, N. J. ADV. PG. 362.

Electronic Processes Corp., 328 N. Market, San Jose 18,

Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass. Federal Tool Engineering Co., 532 Mulberry St., Newark

5, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Litton Industries, San Carlos, Calif.
Peschel Electronics, Inc., 13 Garden St., New Rochelle,

N. Y.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Robotron Corp., 21300 W. Eight Mile Rd., P. O. Box
4885, Detroit 19, Mich.
Weltronic Co., 19500 West Eight Mile Road, Detroit 19,
Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

# TITRATION APPARATUS—Electronic

Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.
Coleman Instruments, Inc., 318 Mission St., Maywood, III.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III.

# 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,

# TOOLS—Hand or Mechanical

Note: Includes grinders, pliers, punches, screwdrivers, wrenches, etc. For further particulars, consult advertisement of manufacturer in this issue.

Apco Mossberg Co., Attleboro, Mass. Bonney Forge & Tool Works, Allentown, Pa.

CHICAGO TOOL & ENGINEERING CO., 8380 S. Chicago Ave., Chicago 17, III. ADV. PG. 423. Gaston Power Tools, Inc., 14829 Loomis St., Harvey, III. Greenlee Tool Co., 2136 12th St., Rockford, III. Klein & Sons, Mathias, 3200 Belmont Ave., Chicago 18, III.
Millers Falls Co., Greenfield, Mass.
Moody Machine Products Co., Inc., 42-46 Dudley St.,
Box 205, Providence 5, R. I.
Sargent & Co., New Haven, Conn.
Stanley Tools Div., The Stanley Works, Elm St., New
Britain, Conn.
Sturtevant Co., P. A., 333 W. 1st St., Elmhurst, III.
Technical Service Corp., 3116 Michigan Drive, Louisville 5, Ky.
Vaco Products Co., 317 E. Ontario St., Chicago 11, III.
Wilton Tool Mfg. Co., 925 Wrightwood Ave., Chicago 14,
III. 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,

### TRACERS-Manual, for Oscilloscopes

Feiler Engineering & Mfg. Co., Dept. EBG, 8026 N. Monticello Ave., Skokie, III.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.

### TRACERS—Signal

See Instruments—Electrical Measuring

### TRANSCEIVERS-Aviation

Acme Telectronix Div., NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
Avion Instrument Corp., Paramus, N. J.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif. Magnavox Co., The, Components Div., Fort Wayne 4, Mitchell Industries, Inc., Camp Wolters, Mineral Wells, National Aeronautical Corp., 180 S. Main St., Ambler, TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

TRANSCEIVERS—Lifeboat

Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.

### TRANSCEIVERS—Portable

Acme Telectronix Div., NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.

Bassett, Inc., Rex., 307-311 N.W. First Ave., Fort Lauderdale, Fla.

Condor Radio Mfg. Co., 116 N. Montezuma, Prescott, Ariz. Ariz.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Farmers Engineering & Mfg. Co., 549 Brushton Ave.,
Pittsburgh 21, Pa.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7,
Calif. Magnavox Co., The, Components Div., Fort Wayne 4, Magnavox Co., 116, Co., 1001 First Ave., Asbury Ind.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

### TRANSCEIVERS-uhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
TRAD TELEVISION CORP., 10
Park, N. J. ADV. PG. 262. 1001 First Ave., Asbury

### TRANSCEIVERS-vhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Bendix Radio Division, Bendix Aviation Corp., Baltimore
4, Md. Condor Radio Mfg. Co., 116 N. Montezuma, Prescott, Ariz.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Kaar Engineering Co., 2995 Middlefield Rd., P. 0. Box 1320, Palo Alto, Calif. Magnavox Co., The, Components Div., Fort Wayne 4, National Aeronautical Corp., 180 S. Main St., Ambler, Pa. Radio Transceiver Laboratories, 116-23 Jamaica Ave., Richmond Hill 18, N. Y.

Radiomarine Corp. of America, 75 Varick St., New
York 13, N. Y. York 13, N. Y.
Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 262.

### TRANSDUCERS

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleve-land 14, Ohio. ADV. PG. 312, 313. Doelcam Inc., 56 Elmwood St., Newton 58, Mass. Electro-Mec Laboratory, 19 Murray St., New York 7, N. Y.
Electronic Engineering Associates, Ltd., 1048 Brittan
Ave., San Carlos, Calif.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
Eltran Corp., St. Anne, III.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa.
ADV PG 271 ADV. PG. 271.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
Giannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena 1, Calif.
Glasscraft Co., 5210 E. Olympic Blvd., Los Angeles 22, Glenco Corp., Metuchen, N. J.
Gulton Mfg. Corp., Metuchen, N. J.
HANSELL, INC., U., THE, Westerly, R. I. ADV. PG. 406.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St.,
Detroit 10, Mich. ADV. PG. 122, 123.
Industrial Research Products, Inc., 9400 Belmont Ave.,
Franklin Park, III.
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, III.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 44, 45.

Maico Co., Inc., 21 N. 3rd St., Minneapolis 1, Minn.

Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.

Pfanstiehl Chemical Co., Metallurgical Div., 104 Lake View Ave., Waukegan, III.

Piezo Products Co., Whitney St., Framingham, Mass.

RAHM INSTRUMENTS, INC., 12 West Broadway, New York 7, N. Y. ADV. PG. 522.

RAYTHEON MFG. Co., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

Rich-Roth Laboratories, East Hartford, Conn.

SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 392.

Sperry Products, Inc., Danbury, Conn.

Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.

Trans-Sonics, Inc., Bedford Airport, Bedford, Mass.

Ultrasonic Engineering Co., P. O. Box 46, Maywood, III.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

Westline Electronics Co., 11656 Olympic Blvd., Los Angeles 25, Calif. Angeles 25, Calif.

# TRANSFORMERS

### Audio

- 1. Input, Output or Interstage
- 2. Modulator
- 3. Very Low Frequency

# Power

- 4. Current Limiting
- 5. Isolation
- 6. Plate, Filament or Bias—Under 500 Watts
- 7. Plate, Filament or Bias—Over 500 Watts
- 8. Saturable
- 9. Variable
- 10. Vibrator
- 11. Voltage Regulating
- 12. Welding
- 13. X-Ray

# NOTE: (h) includes hermetically sealed types.

A. C. Transformer Corp., 21 Prospect St., Newark, N. J. 4-5-6-7-11-12. (h)
ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. 1-4-5-6-7-8-10-11. ADV. PG. 334.
Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. 1-2-3-5-6-8-10. (h) (h) ro Transformer Mfg. Corp., 26-92 Fourth St., Astoria 2, N. Y. 1-2-3-5-6-7-10.

AIRCRAFT TRANSFORMER CORP., West & Willow Aves. Long Branch, N. J. 1-2-3-4-5-6-8-9-10-11. ADV PG. 276. AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa 1-5-6-8-10. ADV. PG. 517.

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-2-3-4-5-6-7-8-10-11. ADV. PG. 343. AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-2-3-4-5-6-7-8-10-11. ADV. PG. 343.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 1.

Amplifier Corp. of America, 398 Broadway, New York 13, N. Y. 1-6-11.

Arco Transformer & Electric Co., 1602 South Hanna St., Fort Wayne, Ind. 1-2-5-6-10.

AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. 1-2-4-5-6-7-10. ADV. PG. 368. (h) Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. 1-2-6-10. BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. 8. ADV. PG. 153. BORG EQUIPMENT DIVISION, THE GEORGE W. BORG. CORP., Janesville, Wis. 13. ADV. PG. 492, 493. Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47. III. 1-2-3-4-5-6-8-10-12-13. (h) CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III. 1-2-3-4-5-6-7-8-10. ADV. PG. 56. (h) Cinaudagraph Speakers, 7334 N. Clark St., Chicago 26, III. 1. III. 1.
COMMUNICATION ACCESSORIES CO., Box 345, 110th
St. & Hillcrest Rd., Hickman Hills, Mo. 8. ADV.
PG. 290.
Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, III. 1.
Control Corp., 718 Central Ave., Minneapolis 14, Minn. 5-6.
Cossor (Canada), Ltd., 30-303 Windsor St., Halifax, N. S., Canada. 5-6. (y-h)
CREST LABORATORIES, INC., Whitehall Bldg., Far Rockaway, N. Y. 1-6. ADV. PG. 515. (h)
Crest Transformer Corp., 1834-36 W. North Ave., Chidago 22, III. 1-2-3-5-6-7-9-10-11-12. (h)
DANO ELECTRIC CO., Main St., Winsted, Conn. 11.
ADV. PG. 508.
Delco Radio Div., General Motors Corp., Kokomo, Ind. 1-10. ADV. PG. 307. (h)
DIT-MCO INC., 729 Baltimore Ave., Kansas City 6,
Mo. 1-6-7. ADV. PG. 452.
Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago
14, III. 1 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. 1-6. 14, III. 1.

Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. 1-6-7-10. (h)

Dresser Electric Co., 942 E. Larned St., Detroit 7, Mich. 4-5-8-9-11.

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. 5-7-9-11-12. ADV. PG. 362.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. 6-7.

Electran Mfg. Co., 1901 N. Clybourn, Chicago, Ill. 5.

Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. 1-2-3-4-5-6-7-8-10-11.

Electricoil Transformer Co., Westerly Rd., Ossining, N. Y. 1-5-6-7-8-12-13.

[h] 1-5-6-7-8-12-13.

Electro Acoustic Industries, Ltd., 366 Madison Ave., New York 17, N. Y. 1.

Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. 7-11.

ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. 1-2-3-4-5-6-7-8-9-10-11.

ADV. PG. 383.

EMPIRE COIL CO., INC., 85 Beechwood Ave., New Rochelle, N. Y. 1-2-3-4-5-6-7-8-10-13. ADV. PG. 422.

Ensign Coil Co., 2516 S. Pulaski Rd. Chicago III. Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.
1-2.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn
17, N. Y. 1-2-3-5-6-7-10-12. ADV. PG. 274. (h)
Etraco Mfg. Co., Inc., Woods Church Rd., Flemington,
N. J. 1-4-5-6-7-12. (h)
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland
Rd., Clifton, N. J. 5. APV. PG. 189-193.
FERRANTI ELECTRIC, INC., 30 Rockfeller Plaza, New
York 20, N. Y. 1-2-5-6-7-8-10. ADV. PG. 188. (h)
Foster Transformer Co., Inc., 3820 Colerain Ave., Clinclinati 23, Ohio. 1-2-3-4-5-6-8-9-10-11. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. 1-2-3-4-5-6-7-8-10-11-12. ADV.
PG. 297. (h)
Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8,
Calif. 5-6-7-12-13. (h)
Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 E. End Ave., New York 21, N. Y.
6-7-8.

General Controls Co., Glendale 1, Calif. 11.
GENERAL ELECTRIC CO., Apparatus Sales Dvi., 1 River
Rd., Schenectady 5, N. Y. 1-2-4-5-6-7-11-12. neral Controls Co GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. 5-6-7. ADV. PG. 525. (h) General Magnetics, Inc., 135 Bloomfield Ave., Bloom-field M.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield N. J. R.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 1-2-9. ADV. PG. 82, 83.
General Transformer Co., 18240 Harwood Ave., Home-wood, Ill. 1-2-4-5-6-7-10-11. (h)
Geotronic Labs., Inc.. Dallas 8, Texas. 1-3-6-8. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. 1-2-3-4-5-6-7-8-9-10-11. ADV: PG. 292. (h) Gramer Transformer Co., 2734 N. Pulaski Rd., Chicago 39, III. 1-2-5-6-7-10.

Halldorson Co., The, 4500 Ravenswood Ave., Chicago 40, III. 1-2-5-6-9-10-11.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12. ADV. PG. 412. (h)
Holl Audio Industries, 5014 N. Encinita Ave., Temple City, Calif. 1.
Industrial Electronics Co., Inc., Hanover, Mass. 4-5-6-7-8. Industrial Transformer Co., Gouldsboro, Pa. 1-2-3-4-5-6-7-8-9-10-11-12-13.

James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, III. 10.

Jefferson Electric Co., Bellwood, III. 1.

Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, III. 1. (h)
K-V Transformer Corp., 4414 Park Ave., New York 57,
N. Y. 1-2-3-4-5-6-7-8-9-10-11. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St.,
New York 59, N. Y. 1-2-4-5-6-7-10. ADV. PG. 196. (h)
KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City,
N. J. 6-8. ADV. PG. 415. (h)
Kinetix Instrument Co., Inc., 902 Broadway, New York
10, N. Y. 4-5-6.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, NGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. 1-2-3-4-5-6-7-8-9-10-12-13. ADV. PG. 438. LaRose & Associates, W. T., P. O. Box 55, Troy, N. 6-7. (h)
LAVOIE LABORATORIES, Morganville, N. J. 1-2-6.
ADV. PG. 339.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
4-11. LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. 1-2-3-4-5-6-7-8-10. ADV. PG. (h)
Light Electric Corp., 214 Lackawanna Ave., Newark 4,
N. J. 5-6-7-11-12.
MAGNATRAN, INC., 248 Schuyler Ave., Kearny, N. J.
1-2-3-4-5-7-8-9-11-12-13. ADV. PG. 148. Magnavox Co., The, Components Div., Fort Wayne 4, Ind. 1-2-3-6-10.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55. N. Y. 1-7. ADV. PG. 361.

Magnetic Windings Div., Essex Wire Corp., Freemansburgh Ave. at Hobson Blvd., Easton, Pa. 1-2-5-6-8-9-10.

(h) 8-9-10. (h)
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,
III. 1-2-3-5-6-7-10-11. (h)
Melpar, Inc., 452 Swann Ave., Alexandria, Va. 6. (h)
Merit Coil & Transformer Corp., 4427 N. Clark St.,
Chicago 40, III. 1-2-5-6-7-10. (h)
Mid-West Coil & Transformer Co., 1642 N. Halsted St.,
Chicago 14, III. 1-2-5-6-7-8-9-10-11-12-13. (h)
Millivac Instrument Corp., 444 Second St., Box 997,
Schenectady, N. Y. 6.
Muirhead & Co., Ltd., Beckenham, Kent, England. 1.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England. 12.
Newcomb Audio Products Co., 6824 Lexington Ave.,
Hollywood 38, Calif. 1.
MEW YORK TRANSCORMER CO. INC. Third Ave. Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. 1.

NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. 1-2-5-6-7-10. ADV. PG. 346. (h)

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. 13.

Nothelfer Winding Labs., 9 Albermarle Ave., Trenton 3, N. J. 3-4-5-6-7-12-13.

ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. 1-2-3-4-5-6. ADV. PG. 362. (h)

Oxford Electric Corp., 3911 S. Michlgan Ave., Chicago 15. III. 1. 15, III. 1.
Parmeko Ltd., 366 Madison Ave., New York 17, N. Y. 1-2-4-5-6-7-8-10-11-12-13. (h)
Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. 1-2-3-5-6-7-12. (h)
Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 1.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. 1-2-3-10. ADV. PG. 375. (h)
Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y. 13. Power Conversions, 2635 W. Grand Ave., Chicago 12, III. 1-2-3-4-8-9-11-12-13. Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J. RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. 2-6-7. ADV. PG. 295, Inside Back & Back Covers. & Back Covers.
Radio Music Corp., 84 South Water St., Port Chester,
N. Y. 1-3.
Randall, Inc., Douglas, 102 High St., Westerly, R. I.
1-2-3-4-5-6-7-8-9-11.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. 1-2-3-4-5-6-7-8-9-10-11-12-13. ADV.
PG. 336. 337. (h) 54, Mass. 1-2-3-4-5-6-7-8-9-10-11-12-13. ADV. PG. 336, 337. (h)
Rola Co., Inc., 2530 Superior Ave., Cleveland 14, Ohio. 1.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, 711 Rollins Corp. P. O. Box 213, Lewes, Del. 1-2-3-5-6-7-8-10. Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III. 1-3. S N C Mfg. Co., Inc., Box 277, Oshkosh, Wis. 1-2-5-6-7-10. Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, III. SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 56, III. 11. ADV. PG. 317. (h)
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 6-8-9. ADV. PG. 168, 169.

Sorgel Electric Co., 838 W. National Ave., Milwaukee 4, Wis. 4-5-7-8-12. Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Tex. 1-2-3-5-6. Specialties, Inc., Skunks Misery Rd., Syosset, N. A-6-11.

SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. 1-2-4-5-6-8-10. ADV. PG. 347 (h) Standard Electronics Corp., 285 Emmet St., Newark, N. J. 1-2-6-7-9-11. (h) Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W. C. 2, England. 1-2.

Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, Ill. 1-2-5-6-7-9-10-11. (h) Super Electronic Products Corp., 46 Oliver St., Newark, N. J. 1.

SUPERIOR ELECTRIC CO., 4000 Thure Ave., Bristol, Conn. 9. ADV. PG. 133-135. T V Products Corp., 907 E. 23rd St., Paterson, N. J. 1-6. Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif. 1-2-5-6-8-10.
Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif. 1-5-6. (h) Calif. 1-3-0. (h)
Ther Electric & Machine Works, 15 S. Jefferson St.,
Chicago, III. 5.
Thermador Electric Mfg. Co., 5119 District Blvd., Los
Angeles 22, Calif. 1-2-5-6-7.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III.
1-2-4-5-6-7-8-9-10-11-12-13. (h) 1-2-4-5-6-7-8-9-10-11-12-13.
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
1-3-4-5-6-7-8-10.
Transformer Engineers, 389 S. Arroyo Parkway, Pasadena, Calif. 1-2-5-6-10.
TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa.
1-2-3-4-5-6-7-8-10-11-13. ADV. PG. 379.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y.
1-2-3-5-6-7-8-10. ADV. PG. 427.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. 1-2-3-5-6-7-10. ADV. PG. 302.
(h) UNION ELECTRIC PRODUCTS CO., 24 Edison Pl., Newark 2, N. J. 1-4-5-6-11. ADV. PG. 526.
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.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. 1. ADV. PG. 338.
Utah Radio Products Co., Inc., 1123 E. Franklin St., Huntington, Ind. 1-6-7.
Varo Mfg. Co., Inc., Box 638, Garland, Texas. 1-2-3-5-6-7-8.
WESTINGHOUISE ELECTRIC CORP. P. O. Pay ESTA WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. 1-2-3-4-5-6-7-12-13. ADV. PG. ADV. PG. WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. 1-2-3-5-6-7-8-10. ADV. PG. 491. (h) White Tuning Corp., 421 W. 54th St., New York, N. 1-2-3-5-6-7-8-11. X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis. 13. TRANSFORMERS—Instrument AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 343.
Annis Co., R. B., 1101 North Delaware St., Indianapolis,

Ind.

Arco Transformer & Electric Co., 1602 South Hanna St., Fort Wayne, Ind.

Associated Research, Inc., 3788 W. Belmont, Chicago 18, III.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 368.
Burlington Instrument Co., Burlington, Iowa.
CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501
W. Addison St., Chicago 18, III. ADV. PG. 56. (h)
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15. Calif.

TS, Cair.
CREST LABORATORIES, INC., Whitehall Bldg., Far
Rockaway, N. Y. ADV. PG. 515. (h)
Cycle Electronic Laboratories, 356 Glenwood Ave., East
Orange, N. J. 1-4-5-6-7.

Orange, N. J. 1-4-5-6-7. ormeyer Industries, 3418 N. Milwaukee Ave., Chicago EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362. ELECTRO-TECH EQUIPMENT CO., 55 Lispenard St., New

ELECTRO-1ECH EQUIPMENT CO., 55 Elspenaro 3C., New York 13, N. Y. ADV. PG. 354.

ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 383.

EMPIRE COIL CO., INC., 85 Beechwod Ave., New Rochelle, N. J. ADV. PG. 422.

EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 274.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Indianapolis, Inc.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. (h)
General Transformer Co., 18240 Harwood Ave., Homewood, III. (h)

wood, III.
Geotronic Labs., Inc., Dallas 8, Texas.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St.,
Burbank, Callf. ADV. PG. 292.
Halldorson Co., The, 4500 Ravenswood Ave., Chicago 40,

Industrial Instruments, Inc., 17 Pollack Ave., Jersey City

Industrial Transformer Co., Gouldsboro, Pa. (h)
Instrument Laboratories, 315 W. Walton Place, Chicago 10, III. V Transformer Corp., 4414 Park Ave., New York 57, (h) KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 415.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. Light Electric Corp., 214 Lackawanna Ave., Newark 4, MAGNATRAN, INC., 248 Schuyler Ave., Kearny, N. J. ADV. PG. 148.

ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.

Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, 111. ADV. PG. 375.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. 1-5-10. 1-5-10.

RANDAII, Inc., Douglas, 102 High St., Westerly, R. I. (h)

RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337. (h)

Rollins Corp., P. O. Box 213, Lewes, Del.

Sierra Electronic Corp., San Carlos, Calif.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)

SPERRY GYROSCOPE CO., Div., of The Sperry Corp.,

Great Neck, N. Y. ADV. PG. 139, 140.

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16,
Calif.

Codd-Tran Corp., 156, Gramatan, Ave., Mt. Vernon. Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, TRANSFORMERS, INC., 532 North St., Endicott, N. TRANSFORMERS, INCI, 532 NOTE SCI, (h)
ADV. PG. 427.
(h) UNITED TRANSFORMER CO., 150 Varick St., New York
13, N. Y. ADV. PG. Inside Front Cover.
Varo Mfg. Co., Inc., Box 638, Garland, Texas.
(h)
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
St., Waterbury 91, Conn. ADV. PG. 491.
(h)

#### TRANSFORMERS-Microwaye

City 1, N. Y.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362.
Industrial Transformer Co., Gouldsboro, Pa. (h)
K-V Transformer Corp., 4414 Park Ave., New York
57, N. Y. (h) K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 438.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.
Peerless Electrical Products Co., Div. of Altec-Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Callf. PRODUCT DEVELOPMENT CO., INC., 307 Bergen Ave., Kearney, N. J. ADV. PG. 515.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
(h)
SPERRY GYROSCOPE CO., Div., of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
(h)
Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn. Thomaston,

Transco Products, Inc., 12210 Nebraska Ave., Los Angeles

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island

25, Calif. Waveline, Inc., North Caldwell, N. J.

TRANSFORMERS—Precision Matched AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. ADV. PG. 276. (h) AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 343.
Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, III.
Dane Electronic Labs., Inc., 316 Stuart St., Boston, DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 14, EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 362.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th
St., New York, N. Y. ADV. PG. 383. (h)
EPCO ELECTRONICS, 140 Liberty St., New York, N. Y. ADV. PG. 372.

FREED TRANSFORMER CO., INC., 1736 Welrfield St., Brooklyn 27, N. Y. ADV. PG. 297. (h)
Geotronic Labs., Inc., Dallas 8, Texas. (h)
Goodmans Industries, Ltd., Axlom Works, Wembley, Middlesex, England.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 292. (h) Burbank, Calif. ADV. PG. 292. (h Industrial Transformer Co., Gouldsboro, Pa. (h K-V Transformer Corp., 4414 Park Ave., New York 57 N. Y.

KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 196. KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 415. (h)
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23,
N. Y. ADV. PG. 438.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
(h) Southwestern Industrial Electronics Co., 2831 Post 0ak Rd., P. O. Box 13058, Houston 19, Tex. (h) SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347.
(h) Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif.
(h) TRANSCOMMENS. MAG. 25 Mill River Rd., (h) TRANSFORMERS, INC., 532 North St., Endicott, N. ADV. PG. 427. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles, Calif. ADV. PG. 302.
UNITED TRANSFORMER CO., 150 Varick St., New York
13, N. Y. Inside Front Cover.
Varo Mfg. Co., Inc., Box 638, Garland, Texas. (h)
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
St., Waterbury 91, Conn. ADV. PG. 491. (h)

# TRANSFORMERS—Pulse

ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.

AIRCRAFT TRANSFORMER CORP., West & Willow Aves.,
Long Branch, N. J. ADV. PG. 276.

AIRDESIGN INC., 241 Fairfield Ave., Upper Darby,
Pa. ADV. PG. 517.

AIRPAX PRODUCTS CO., Middle River, Baltimore 20,
Md. ADV. PG. 343.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif.

Arco Transformer Mfg. Corp., 21-20 33rd Ave., Long
Island City, N. Y.

AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 368.

(h)
Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln,
Mass. BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, BOGUE ELECTRIC MFG. CU., 52 lowa Ave., Paterson 3, N. J. ADV. PG. 153.

BRUBAKER MFG. CO., INC., 9151 Exposition Drive, Los Angeles 34, Calif. ADV. PG. 529.

Central Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, III.

CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III. ADV. PG. 56. 56. COMMUNICATION ACCESSORIES CO., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Mo. ADV. PG. 290.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax,
N. S., Canada. N. S., Canada.

DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave.,
Chicago 47, III. ADV. PG. 294.

Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Electricoil Transformer Co., Westerly Rd., Ossining III.

ELECTRONIC COMPUTER CORP., 160 Avenue of the Americas, New York 13, N. Y. ADV. PG. 298.

ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.

Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.

EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 274.

Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio. (h) Foster Transformer Co., Inc., 3026 (h)
cinnati 23, Ohio.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 297. (h)
FUGLE-MILLER LABORATORIES, INC., 398 Main St.,
Metuchen, N. J. ADV. PG. 512, 513.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-23. (h) GENERAL ÉLECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. (h) GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 292. (h) HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412. (h) Industrial Transformer Co., Gouldsboro, Pa. (h) Joyner Corp., 462 N. Parkside Ave., Chicago 44, III. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h) N. Y.
KENYON TRANSFORMER CO., INC., 840 Barry St.
New York 59, N. Y. ADV. PG. 196.
(h.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23
N. Y. ADV. PG. 438. 840 Barry St., 6. (h) N. Y. ADV. PG. 438.

LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 339.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st St.,
Brooklyn, N. Y. ADV. PG. 491. (h)
Magnavox Co., The, Components Div., Fort Wayne 4, Ave. & Hobson Blvd., Easton, Pa. (h)
Minnesota Electronics Corp., 47 W. Water St., St. PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. Parmeko Ltd., 366 Madison Ave., New York 17, N. Y. Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Bivd., Beverly Hills, Calif.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, III. ADV. PG. 375. (h)

POLYPHASE INSTRUMENT CO., 705 Haverford Rd., Bryn Mawr, Pa. ADV. PG. 519.
Power Conversions, 2635 W. Grand Ave., Chicago 12, Radio Music Corp., 84 S. Water St., Port Unester, N. Y.

(h) Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

(h) Rollins Corp., P. O. Box 213, Lewes, Del.

Sierra Electronic Corp., San Carlos, Calif.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

(h) SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347.

Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, Ill. Radio Music Corp., 84 S. Water St., Port Chester Chicago 18, III.

Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif.

TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 509. (h)

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif. (h) Transformer Engineers, 389 S. Arroyo Parkway, Pas TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV. PG. 379.

TRANSFORMERS, INC., 532 North St., Endicott, N. Y.
ADV. PG. 427.

TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
Los Angeles Calif. ADV. PG. 302. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

Utah Radio Products, Inc., 1123 E. Franklin St., Hunt-WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 491. (h)
White Tuning Corp., 421 W. 54th St., New York, N. Y. (h)

Aero Coil Inc., 507 26th St., Union City, N. J. Aerolite Electronics Corp., 507 26th St., Union City,

N. J.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
Hills, Calif.
Automatic Mfg. Corp., 65 Gouverneur St., Newark 4,

# TRANSFORMERS-r-f and i-f

N. J. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, Coll Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.
COIL CRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill.
ADV. PG. 506.
Custom Electronics Corp., 738 Speedwell Ave., Morris Plains, N. J.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 307. (h)
PG. 307. (h)
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y. (h)
Essex Electronics, Berkeley Heights, N. J. (h)
Essex Electronics, Berkeley Heights, INC., 398 Main St., Metuchen, N. J. ADV. PG. 512, 513. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 292. (h)
GUthman, Inc., Edwin I. 15 S. Throop St., Chicago, III.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. ADV. PG. 398.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 514.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, III.
LEONARD ELECTRIC PRODUCTS CO., INC., 1562 61st St., Brooklyn N. Y. ADV. PG. 491. (h)
Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
Maissner Mfg. Div. Magnire Industries, Inc., Mt. Carmel, Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III. (h) Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
Miller Co., 1255 S. Michigan Ave., Chicago, Ill.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 328, 329.
Partridge Transformers, Ltd., Roebuck Rd., Tolworth,
Surrey, England. (h)
Peerless Electrical Products Co. Div. of Altec-Lansing
Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Radio Condenser Co., Camden, N. J.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers.

RAYTHEON MEG. CO. Equipment Sales Div. Welthere RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337. (h)
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 152.
Rollan Electrical Co., 8020 S. South Park, Chicago 19, 111. III.

Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.

Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.

Sierra Electronic Corp., San Carlos, Calif.

SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 347. (h) STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 59. Stanwyck Winding Company, 137 Walsh Ave., Newburgh, N. Y. Super Electric Products Corp., 46 Oliver St., Newark Teleradio Engineering Corp., 99 Wall St., New York 5, Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III. U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413. (h)
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

#### TRANSFORMERS—Subsonic

Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
AIRCRAFT TRANSFORMER CORP., West & Willow Aves.
Long Branch, N. J. ADV. PG. 276.
(h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20,
Md. ADV. PG. 343.
Arco Transformer & Electric Co., 1602 South Hanna St.,
Fort Wayne, Ind.
(h) Arco Transformer & Electric Co., 1602 South Hanna St., Fort Wayne, Ind.

ADDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 368.

CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501

W. Addison St., Chicago 18, III. ADV. PG. 56. (h)

ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th

St., New York, N. Y. ADV. PG. 383.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

(h)

Geotronic Labs., Inc., Dallas 8, Texas.

GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 292.

(h)

K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. N. Y.

LANGEVIN MFG. CORP., 37 W. 65th St., New York 23,
N. Y. ADV. PG. 438.

Rarmeko Ltd., 366 Madison Ave., New York 17, N. Y.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337.

(h)

Southwestern Industrial Electronics Co., 2831 Post Oak
Rd., P. O. Box 13058, Houston 19, Texas.

(h)

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16,
Calif.

Thermador Electric Mfg. Co., 5119 District Blvd.

(h) Calif.
Thermador Electric Mfg. Co., 5119 District Blvd., Los
Angeles 22, Calif.
Codd-Tran Corp., 156 Gramatan Ave., Mt. Vernon,
(h) Transformer Engineers, 389 S. Arroyo Parkway, Pasadena Calif.
TRANSFORMERS, INC., 532 North St., Endicott, N. UNITED TRANSFORMER CO., 150 Varick St., New York
13, N. Y. ADV. PG. Inside Front Cover.

TRANSFORMERS-TV Deflection AIRANSFORMERS—IV Deflection

AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 517.

Arco Transformer & Electric Co., 1602 South Hanna St., Fort Wayne, Ind.

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.

ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383. (h)

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, Ill. Halldorson Co., The, 4500 Ravenswood Ave., Chicago 40, Ill. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
Magnetic Windings Div., Essex Wire Corp., Freemansburg
Ave., at Hobson Blvd., Easton, Pa. (h)
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Merit Transformer Corp., 4427 N. Clark St., Chicago 40 III.

Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.

Parmeko, Ltd., 366 Madison Ave., New York 17, N. Y.
Philoc Corp., Tioga & C Sts., Philadelphia 34, Pa.

RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back
Covers. Covers.
Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347. (h)
Standard Transformer Corp., Elston, Kedzie & Addison,
Chicago 18, III.
Y Products Corp., 907 E. 23rd St., Paterson, N. J.
Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los
Angeles 37, Calif.
Teleradio Engineering Corp., 99 Wall St., New York 5.

Teleradio Engineering Corp., 99 Wall St., New York 5, Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif

Thordarson-Meissner Mfg. Divisions, Mt. Carmel, III. (h)
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 302. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 413.

#### TRANSFORMERS—Toroidal

AIRPAX PRODUCTS 60., Midd. ADV. PG. 343.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Pa. ADV. PG. 397. Darby, Pa. ADV. PG. 397.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,
N. J. ADV. PG. 153.

Chicago Electronic Engineering Co., 3223 W. Armitage 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. 56. Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y. Cole Instrument Co., 1300 S. Grand Ave., Los Angeles

Aero Coil Inc., 507 26th St., Union City, N. J. AIRPAX PRODUCTS CO., Middle River, Baltimore 20,

15, Calif.

COMMUNICATION ACCESSORIES CO., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Mo. ADV. PG. 290. DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. Dresser Electric Co., 942 E. Larned St., Detroit 7,

Electricoil Transformer Co., Westerly Rd., Ossining,

Mich.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.

Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinatl 23, Ohio.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.

(h)
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.

(h)
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.

HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 412.

(h)
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 172.

(h)
Lenkurt Electric Co., Inc., 1113 County Rd., San Carlos, Calif.

Magnetics, Inc., Box 230-E, Butler, Pa.
Parmeko, Ltd., 366 Madison Ave., New York 17, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

(h)
Sickles, F. W., Div. General Instrument Corp., 165
Front St., Chicopee, Mass.
Southwestern Industrial Electronics Co., 2831 Post Oak
Rd., P. O. Box 13058, Houston 19, Texas. (h)
SQUARE ROOT MFG. CORP., 391 Saw Mill River Rd.,
Yonkers, N. Y. ADV. PG. 347.

Standard Telephone & Cables, Ltd., Connaught House,
Aldwych, London, W. C. 2, England.

Standard Transformer Corp., Elston Kedzie & Addison,
Chicago 18, Ill.

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16,

Chicago 18, III.

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16,
Calif.

(h)

TRANSFORMERS, INC., 532 North St., Endicott, N. ADV. PG. 427.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,

N. J. ADV. PG. 413.
UNITED TRANSFORMER CO., 150 Varick St., New York
13, N. Y. ADV. PG. Inside Front Cover. (h)

#### TRANSFORMERS-Ultrasonic

ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. ADV. PG. 334. Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. ADV. PG. 276. (h) AIRPAX PRODUCTS CO., Middle River, Baltimore 20,

Md. ADV. PG. 343.

AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 368.
Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.

COMMUNICATION ACCESSORIES CO., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Mo. ADV. PG.

290.
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 383.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 297.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 292.
(h)
K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h)

LEONARD ELECTRIC PRODUCTS CO., INC., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491. Magnavox Co., The, Components Div., Fort Wayne 4,

Parmeko, Ltd., 366 Madison Ave., New York 17, N. Y. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337. (h) Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h) Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif.

Calif.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y.
(h)

ADV. PG. 427. (h)
UNITED TRANSFORMER CO., 150 Varick St., New
York 13, N. Y. ADV. PG. Inside Front Cover. (h)

#### TRANSISTORS

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Germanlum Products Corp., 26 Cornelison Ave., Jersey City, N. J.

NATIONAL UNION RADIO CORP., 350 Scotland Rd., Orange, N. J. ADV. PG. 310.

RAYTHEON MFG. CO., Receiving Tube Div., 55 Chapel St., Newton 58, Mass. ADV. PG. 336, 337.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Transistor Products, Inc., 970 New Brunswick Ave., Rahway, N. J.

#### 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. D. AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG.

477.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

APPLIED SCIENCE CORP. OF PRINCETON, P. 0. Box 44, Princeton, N. J. ADV. PG. 528.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.

Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave, Chicago 39, III.

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.

4, Md. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Doug-

laston, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chi-

cago 39, III.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.
National Aeronautical Corp., 180 S. Main St., Ambler,

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Covers.

Covers.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Sylvan Electronics Labs., Inc., Broadalbin, N. Y. Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

Wilcox Electric Co., 1400 Chestnut St., Kansas City.

#### TRANSMITTERS—Amateur

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

86, 87. Eldico of New York, Inc., 44-31 Douglaston Pkwy., Doug-

laston, N. Y. Harvey-Wells Electronics, Inc., North St., Southbridge, JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 248-

251. K-V Transformer Corp., 4414 Park Ave., New York 57,

N. Y. LETTINE RADIO MFG. CO., 62 Berkley St., Valley Stream, N. Y. ADV. PG. 156. Millen Mfg., Co., James, 150 Exchange St., Malden,

Mass.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
Radio Transceiver Labs., 116-23 Jamaica Ave., Richmond Hill 18, N. Y.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
Standard Transformer Corp., Elston, Kedzie & Addison,
Chicago 18, III.

Chicago 18, III.
Sylvan Electronic Labs., Inc., Broadalbin, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14, N. Y.

# TRANSMITTERS—Broadcast

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

COLLINS RADIO CO., Cedar Rapids, Idwar Abv. 1 d.
86, 87.
Continental Electronics Mfg. Co., 4212-20 S. Buckner
Blvd., Dallas 10, Texas.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.
Philmore Mfg. Co., Inc., 113 University Place, New York
3, N. Y.

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., 59 Myrtle Ave., Brooklyn 1, N. Y.
Standard Electronics Corp., 285 Emmet St., Newark,

N. J.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### 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.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

## TRANSMITTERS—Direction Finding

Aeronautical Communications Equipment, Inc., 3090
Douglas Rd., Miami 33, Fla.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.

Erco Radio Labs., Inc., East Stewart Ave., Garden City,
N. Y.

Magnavox Co., The, Components Div., Fort Wayne 4, Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,

New York 4, N. Y.
Taffet Radio & Television Co., 2530 Belmont Ave., New
York 1, N. Y.

#### TRANSMITTERS-f-m

Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.

86, 87. Communications Co., Inc., 300 Greco Ave., Coral Gables

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. Farmers Engineering & Mfg. Co., 549 Brushton Ave., pittsburgh 21, Pa.

Gates Radio Co., Quincy, III.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

Heintz & Kaufman Equipment, Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif. Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.

Link Radio Corp., 125 W. 17th St., New York, N. Y. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Measurement Engineering, Ltd., Arnprior, Ontario, Can-

ada.
Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III.
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.

Covers.
Radio Engineering Labs., Inc., 36-40 37th St., Long Island City, N. Y.
Sonar Radio Corp., 59 Myrtie Ave., Brooklyn 1, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
Standard Electronics Corp., 285 Emmet St., Newark, N. J.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Telemetering Associates, P. O. Box 6, Silver Spring, West Coast Electronics Co., 1601 S. Burlington St., Los

Angeles 6, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

## TRANSMITTERS—Facsimile

Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Hogan Laboratories, Inc., 155 Perry St., New York 14,

N. Y. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

N. Y.
McElroy Mfg. Corp., Littleton, Mass.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
New York 4, N. Y.
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. 526.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

# TRANSMITTERS—Fixed Frequency

Aeronautical Communications Equipment, Inc., 3090
Douglas Rd., Miami 33, Fla.
Aeronautical Electronics, Inc., Raleigh-Durham Airport,
P. O. Box 6043, Raleigh, N. C.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 397.
Bassett, Inc., Rex., 307-311 N. W. First Ave., Fort
Lauderdale, Fla. Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, III.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. Communications Co., Inc., 300 Greco Ave., Coral Gables Communications Co., Inc., 300 Greco Ave., Loral Gables 34, Fla.
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.
EL-TRONICS INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG, 451.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y. N. Y.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.
Heintz & Kaufman Equipment, Div of the Robert Dollar
Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box
1320, Palo Alto, Calif.
LETTINE RADIO MFG. CO., 62 Berkley St., Valley
Stream, N. Y. ADV. PG. 156.
Link Radio Corp., 125 W. 17th St., New York, N. Y.
Magnavox Co., The, Components Div., Fort Wayne 4,
Ind. 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, III.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.

ADV. PG. 328, 329.

Radio Engineering Laboratories, Inc., 36-40 37th St.,

Long Island City 1, N. Y.

Railway Communications Inc., Smith Road & Glenwood, Railway Communications Inc., Smith Road & Glenwood, Raytown, Mo.
Sierra Electronic Corp., San Carlos, Calif.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Sylvan Electronic Labs., Inc., Broadalbin, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.

# TRANSMITTERS—Fixed Station Communication

Aeronautical Communications Equipment, Inc., 3090 Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Bassett Inc., Rex, 307-311 N. W. First Ave., Fort Lauderdale, Fla.

Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, III.

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md. BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, N. J. ADV. PG. 153. COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. Communications Co., Inc., 300 Greco Ave., Coral Gables Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

CROSBY LABS., INC., Robbins Lane, Hicksville, N. Y. ADV. PG. 356.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.

EL-TRONICS INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451. Pa. ADV. PG. 451. Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y. Farmers Engineering & Mfg. Co., 549 Brushton Ave., Parmers Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh 21, Pa.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kings-land Rd., Clifton, N. J., ADV. PG. 189-193.
Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Heintz & Kaufman Equipment, Div. of The Robert Dollar Co., 50 Drumm St., San, Francisco 11, Calif.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
LETTINE RADIO MFG. CO., 62 Berkley St., Valley Stream, N. Y. ADV. PG. 156.
Link Radio Corp., 125 W. 17th St., New York, N. Y. McElroy Mfg. Corp., Littleton, Mass.
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, III.
NATIONAL CO., INC., 61 Sherman St., Malden 48,
Mass. ADV. PG. 328, 329.
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. Radiomarine Corp. of America, 75 Varick St., New York

Radiomarine Corp. of America, 75 Varick St., New York
13, N. Y.
Schuttig & Co., Inc., 9th & Kearny St., N. E., Washington 17, D. C.
Sierra Electronic Corp., San Carlos, Calif.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, 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.
West Coast Electronics Co., 1601 S. Burlington St.,
Los Angeles 6, Calif.

Los Angeles 6, Calif. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

#### TRANSMITTERS-Loran

Radiomarine Corp. of America, 75 Varick St., New York

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Magnavox Co., The, Components Div., Fort Wayne 4, TRANSMITTERS—Marine AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Applied Electronics Co., 1246 Folsom St., San Francisco 3, Calif.
Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
Brelco Electronics Corp., 55 Vandam St., New York 13, 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.
Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.

GENERAL ELECTRIC CO., Electronics Div., Electronics
Park, Syracuse, N. Y. ADV. PG. 1-23.

Gray Radio Co., 501 Forest Hill Blvd., West Palm Gray Radio Co., 501 Forest Hill Color, Beach, Fla.

Beach, Fla.

Heintz & Kaufman Equipment Div. of the Dollar Co., 50 Drumm St., San Francisco 11, Calif.

Jefferson, Inc., Ray, 40 E. Merrick Road, Freeport, N. Y. Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.

Magnavox Co., The, Components Div., Fort Wayne 4, Ind. Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4. N. Y. New York 4, N. Y.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
Standard Electronics Corp., 295 Emmet St., Newark, N. J.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30 Pa. ADV. PG. 109-115.

## TRANSMITTERS-Microwave

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
LEONARD ELECTRIC PRODUCTS CO., 1562 61st., Brooklyn, N. Y. ADV. PG. 491.
Link Radio Corp., 125 W. 17th St., New York, N. Y. Magnavox Co., The, Components Div., Fort Wayne 4, Ind. Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. Motorola, Inc., 4545 Augusta Blvd., Chicago 51, III. RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Coyers. Covers. Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y. Railway Communications, Inc., Smith Rd. & Glenwood, RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.
Resdel Engineering, 2309 Riverside Drive, Los Angeles Reside Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213.

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.

BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3, . J. ADV. PG. 153. Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

FEDERAL TELEPHONE AND RADIO CORP.

Waveline, Inc., North Caldwell, N. J.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.
Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89 Mass Weymouth 89, Mass Wheeler Laboratories, Inc., Great Neck, N. Y

#### TRANSMITTERS—Portable and Mobile Radiotelephone

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.

AMERICAN ELECTRONEERING CORP., 5025-29 W. Jefferson Blvd., Los Angeles 16, Calif. ADV. PG. 396. ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 397.

Bassett Inc., Rex, 307-311 N. W. First Ave., Fort Lauderdale, Fla.

Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 Dickens Ave., Chicago 39, Ill.

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md. Bendix Radio Division, Bendix Aviation Corp., Baltimore
4, Md.
Bludworth Marine Div., National-Simplex-Bludworth,
Inc., 92 Gold St., New York 38, N. Y.
Brelco Electronics Corp., 55 Vandam St., New York N. Y. Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. Condor Radio Mfg. Co., 116 N. Montezuma, Prescott, Ariz.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.

LETTINE RADIO MFG. CO., 62 Berkley St., Valley Stream, N. Y. ADV. PG. 156.

Link Radio Corp., 125 W. 17th St., New York, N. Y. Magnavox Co., The, Components Div., Fort Wayne 4, Ind. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Measurement Engineering Ltd., Arnprior, Ontario, Canada. Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.

Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill. 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.

Schuttig & Co., Inc., 9th & Kearny Sts., N. E., Washington 17, D. C.

Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif. Calif.
Sylvan Electronic Labs., Inc., Broadalbin, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
New York 14, N. Y.
West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilcox Electric Co., 1400 Chestnut St., Kansas City,

#### TRANSMITTERS—Pulse Time Modulation

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 153.

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif. BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,

TRANSMITTERS—Radar AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. AIR ASSOCIATES, TWO, Tectors, N. J.
263.
Avion Instrument Corp., Paramus, N. J.
Bendix Radlo Division, Bendix Aviation Corp., Baltimore 4, Md.
Bludworth Marine Div., National-Simplex-Bludworth, Inc.,
92 Gold St., New York 38, N. Y.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
N. S., Canada.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,
Calif. FEDERAL TELEPHONE AND RADIO CORP. 88 Kingsland Rd, Clifton, N. J. ADV. PG. 189-793.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Leru Laboratories, Inc., Black Oak Ridge Rd., Wayne, N. J. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
Pacific Electronics, Saticoy, Calif.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 336, 337.

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N.Y.

VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213.

Video Corp. of America, 229 W. 28th St., New York 1, N. Y.

Waveline, Inc., North Caldwell, N. J. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

#### TRANSMITTERS—Radio Range

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
FEDERAL TELEPHONE AND RADIO CORp., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
H. M. R. Electronics, Inc., Grove St., New Canaan,

Magnavox Co., The, Components Div., Fort Wayne 4,

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

T. L. G. ELECTRIC CORP., 31 W. 27th St., New York 1,
N. Y. ADV. PG. 499.

# TRANSMITTERS-Railroad

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md. Communications Co., Inc., 300 Greco Ave., Coral Gables

34, Fla.
Farmers Engineering & Mfg. Co., 549 Brushton Ave.,

Pittsburgh 21, Pa.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
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., 59 Myrtle Ave., Brooklyn 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### 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, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4. N. Y.

New York 4, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
Camden, N. J. ADV. PG. 295, Inside Back & Back

Standard Electronics Corp., 285 Emmet St., Newark, N. J.

N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311.

#### TRANSMITTERS-uhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 263.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif. Gates Radio Co., Quincy, III.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
Sierra Electronic Corp., San Carlos, Calif.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.

ADV. PG. 311.

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. 263.
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 477.
AMERICAN ELECTRONEERING CORP., 5025-29 W.
Jefferson Bivd., Los Angeles 16, Calif. ADV. PG.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 86, 87

Communications Co., 300 Greco Ave., Coral Gables 34, Condor Radio Mfg. Co., 116 N. Montezuma, Prescott,

Ariz.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax,

Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Aye., Clifton, N. J. 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.

Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-23.
Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

Mitchell Industries, Inc., Camp Wolters, Mineral Wells,

Texas.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
National Aeronautical Corp., 180 S. Main St., Ambler,

National Aeronautical Corp., 100 S. Malden 48, Pa.

NATIONAL CÔ., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 328, 329.

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.

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

13, N. Y.
Sierra Electronic Corp., San Carlos, Calif.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Sylvan Electronic Labs., Inc., Broadalbin, N. Y.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG 311.

ADV. PG. 311.

Telemetering Associates, P. O. Box 6, Silver Spring, Md. Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Missouri.

#### TRAPS-Wave

Aerolite Electronics Corp., 507 26th St., Union City,

Aerolite Electronics Corp., 507 2001 50., Union 50., N. J.

N. J.

Andrew Corp., 363 E. 75th St., Chicago 19, 111.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,

Cambridge 38, Mass. ADV. PG. 437.

Decimeter, Inc., 1430 Market St., Denver 2, Colo.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

Calif.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
Essex Electronics, Berkeley Heights, N. J.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau
Ave., Brooklyn 22, N. Y. ADV. PG. 514.
Keystone Electronics Corp., 423 Broome St., New York

Keystone Electronics Corp., 125 Bookins St., 12, N. Y.
12, N. Y.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
Merit Coil & Transformer Corp., 4427 N. Clark St.,
Chicago 40, III.
Millen Mfg. Co., James, 150 Exchange St., Malden,
Macc

Mass.

Mass.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
ADV. PG. 362.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,
Calif.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski
Rd., Chicago 39, Ill. ADV. PG. 59.
Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
Teleradio Engineering Corp., 99 Wall St., New York,
N. Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
YONKERS INDUSTRIES, INC., 28 School St., Yonkers, N. Y. ADV. PG. 482.

#### TRIMMERS—Capacitors

See Capacitors

#### TUBE PARTS

#### Anodes, Carbon

NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 264.

Speer Carbon Co., Lincoln Ave., St. Marys, Pa. STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG.

Westinghouse Electric Corp., Electronic Tube & Lamp Parts Dept., Bloomfield, N. J.

#### Anodes, Gold

Andes, Gold

AMERICAN PLATINUM WORKS, N. J. R.R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, III.
Handy & Harman, 82 Fulton St., New York 38, N. Y. MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.
SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362.
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. 264.
Speer Carbon Co., Lincoln Ave., St. Marys, Pa. STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 154, 155.

#### Anodes, Metal

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa. FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193. GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516.

JOHNSON & HOFFMAN INC., 55-65 Ongley St., Rockville Center, N. Y. ADV. PG. 344, 345.

Pacific Electronics, Saticoy, Calif. Romac Products Co., 112 Bleecker St., New York 12, N. Y.

N. Y.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 38, 39.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34
96th Ave., Queens Village 8, N. Y. ADV. PG. 322.
Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

Wade Electric Products Co., 400 Jacob St., Stulys, Mich.
Westinghouse Electric Corp., Electronic Tube & Lamp
Parts Dept., Bloomfield, N. J.

#### Anodes, Metallized Graphite

Speer Carbon Co., Lincoln Ave., St. Marys, Pa-

#### Anodes, Silver

Anodes, Silver

AMERICAN PLATINUM WORKS, N. J. R.R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.
Eastern Smelting & Refining Corp., 108-109 W. Brookline St., Boston 18, Mass.
GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, III.
Handy & Harman, 82 Fulton St., New York 38, N. Y. MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.
SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362.
Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

#### Base Pins

Base Pins

AMERICAN BRASS CO., 25 Broadway, New York 4,
N. Y. ADV. PG. 373.

BEAD CHAIN MFG. CO., 110 Mountain Grove St.,
Bridgeport 5, Conn. ADV. PG. 503.

BIGELOW MFG. CORP., 225 W. Bigelow St., Newark 8,
N. J. ADV. PG. 410.

Edison Swan Electric Co., Ltd., (Clix Div.), 366 Madison
Ave., New York 17, N. Y.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

UNITED CARR FASTENER CORP., Cambridge, Mass.
ADV. PG. 100.

Westinghouse Electric Corp., Electronic Tube & Lamp
Parts Dept., Bloomfield, N. J.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24. AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. AMERICAN LAVA CORP., Oraclassicogo y, Shank PG. 95.
BIGELOW MFG. CORP., 225 W. Bigelow St., Newark 8, N. J. ADV. PG. 410.
Edison Swan Electric Co., Ltd., (Clix. Div.), 366
Madison Ave., New York 17, N. Y.
Electronic Mfg. Co., 20 Orange St., Newark, N. J.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.
ENGINEERING CO., 27 Wright St., Newark, N. J.
ADV. PG. 354. ADV. PG. 354.
GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.

LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y. Owens Illinois Glass Co., Closure & Plastics Div., 405 Lexington Ave., New York 17, N. Y. Shaw Insulator Co., 160 Coit St., Irvington 11, N. J. 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. 552-558. THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.

Westinghouse Electric Corp., Electronic Tube & Lamp Parts Dept., Bloomfield, N. J.

#### **Bulbs & Envelopes**

Corning Glass Works, Corning, N. Y.
WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG. 486.

#### **Button Stems**

BIGELOW MFG. CORP., 225 W. Bigelow St., Newark 8, N. J. ADV. PG. 410.
CHATHAM ELECTRONICS CORP., 475 Washington St., Newark, N. J. ADV. PG. 96, 97.
Electronic Enterprises, Inc., 67 Seventh Ave., Newark 4, N. J. HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293. SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 396.

AMERICAN BRASS CO., 25 Broadway, New York 4, N. Y. ADV. PG. 373.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95. Electronic Mfg. Co., 20 Orange St., Newark, N. J. ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 354.
GOAT CO., INC., FRED, 314 Dean St., Brooklyn, New York. ADV. PG. 516.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. ADV. PG. 498.
LaRose & Associates, W. T., P. O. Box 55, Troy, N. Y. 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. 552-558.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 322.
UCINITE CO. DIV., UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 101.

#### Cathode Ray Tube Powders

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 272.

# Cathode Ray Tube Side Contacts

BEAD CHAIN MFG. CO., 110 Mountain Grave St., Bridge-port 5, Conn. ADV. PG. 503. HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293. VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 322.

## Cathode Sleeves and Tubes

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. 497.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 38, 39.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.

#### Conductive Paints

#### See Paints, Conductive

Filament Wire
Alloy Metal Wire Co., 13th & Penna. Ave., Prospect
Park, Pa. Park, Pa.
BIGELOW MFG. CORP., 225 W. Bigelow St., Newark 8, N. J. ADV. PG. 410.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 120.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. New York 17, N. Y.

SECON METALS CORP., 228 E. 45th St., New York 17, N. Y.

ADV. PG. 362.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

Westinghouse Electric Corp., Electronic Tube & Lamp Parts Dept., Bloomfield, N. J.

GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516.

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. ADV. PG. 463. Romac Products Co., 112 Bleecker St., New York 12,

N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV.

#### **Grids and Supports**

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.

ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 120.

GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.

JOHNSON & HOFFMAN MFG. CO., 55-65 Ongley St., Rockville Centre, N. Y. ADV. PG. 344, 345.

KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 498.

METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 180.

Murex, Ltd., Rainham, Essex, England.

NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 264.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

Romac Products Co., 112 Bleecker St., New York 12,

Romac Products Co., 112 Bleecker St., New York 12, N. Y.

N. Y.
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. 552-558.
VARIAN ASSOCIATES, 990 Varian St., San Carlos,
Calif. ADV. PG. 213.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34
96th Ave., Queens Village 8, N. Y. ADV. PG. 322.
Wade Electric Products Co., 400 Jacob St., Sturgis,
Mich.

Wade Electric Fragata St., Mich.
Mich.
Westinghouse Electric Corp., Electronic Tube & Lamp
Parts Dept., Bloomfield, N. J.

#### Grid Wire

Alloy Metal Wire Co., 13th & Penna Ave., Prospect DRIVER-HARRIS CO., 201 Middlesex St., Harrison, DRIVER-HARRIS CO., 201 MINUSCOS 201, N. J. ADV. PG. 211.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 120.
Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Pansteel Metailurgical Corp., 2200 Sheridan Rd., North Chicago, III.
Murex, Ltd., Rainham, Essex, England.
North American Philips Co., Inc., 100 E. 42nd St.,
New York 17, N. Y.
SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

Westinghouse Electric Corp., Electronic Tube & Lamp Parts Dept., Bloomfield, N. J.

#### Heat Radiators

FEDERAL TELEPHONE AND RADIO CORP., 88 Kings-land Rd., Clifton, N. J. ADV. PG. 189-193. GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516. LAROSe & Associates, W. T., P. O. Box 55, Troy, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558. Westinghouse Electric Corp., Electronic Tube & Lamp Parts Dept., Bloomfield, N. J.

# **Metal Supports** Electronic Mfg. Co., 20 Orange St., Newark, N. J. Fansteel Metallurgical Corp., 2200 Sheridan Rd., North

Chicago, III. GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

Romac Products Co., 112 Bleecker St., New York 12, N. Y. 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. 552-558. Wade Electric Products Co., 400 Jacob St., Sturgis, Mich. Westinghouse Electric Corp., Electronic Tube & Lamp Parts Dept., Bloomfield, N. J.

#### Mica Supports

Laconia Corp., 37 S. 6th St., Newark 7, N. J.
Mica Fabricating Co., 53 Central Ave., Rochelle Park,
N. J. N. J.
Mica Insulator Co., Schenectady 1, N. Y.
MICACRAFT PRODUCTS INC., 703 McCarter Highway,
Newark 5, N. J. ADV. PG. 526.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.

#### Tube Seal Leads

ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 120.

Electronic Products Co., 111 E. Third St., Mt. Vernon, ENGINEERING CO., 27 Wright St., Newark, N. J. ADV.

PG. 354. Fansteel Metallurgical Corp., 2200 Sheridan Rd., North

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, III.
GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 77.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Romac Products Co., 112 Bleecker St., New York 12, N. Y.

N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.
Westinghouse Electric Corp., Electronic Tube & Lamp.
Parts Dept., Bloomfield, N. J.

#### Water Jackets

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. AV. PG. 472.

#### Wire Parts

BIGELOW MFG. CORP., 225 W. Bigelow St., Newark 8, N. J. ADV. PG. 410.
Electronic Mfg. Co., 20 Orange St., Newark, N. J. ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 120.
GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516. GOAT CO., INC., FRED, 314 Dean St., Brooklyn, N. Y. ADV. PG. 516.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
LEE MECHANICAL LABORATORIES, 30 Main St., Brooklyn 1, N. Y. ADV. PG. 365.
METAL TEXTILE CORP., 547 E. First Ave., Roselle, N. J. ADV. PG. 180.
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. 552-558.
VOLKEBT METAL STAMPINGS, INC., JOHN, 222-34
96th Ave., Queens Village 8, N. Y. ADV. PG. 322.
Westinghouse Electric Corp., Electronic Tube & Lamp Parts Dept., Bloomfield, N. J.

#### TUBES-Alpha or Beta Detection See Tubes-Radiation Counter

#### TUBES—Ballast

CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 162, 163. Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J. GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
NATIONAL UNION RADIO CORP., 350 Scotland Rd.,
Orange, N. J. ADV. PG. 310.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St.,
Newark 8, N. J. ADV. PG. 396.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

# TUBES—Battery Charger

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. Baldor Electric Co., 4353 Duncan Ave., St. Louis, Mo. CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG. GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. King Electric Equipment Co., 9123 Inman Ave., Cleve-

land 5, Ohio.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
ADV. PG. 295, Inside Back & Back Covers.
Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36,

Vacuum Tube Products, 506 S. Cleveland St., Ocean-

side, Calif.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div.,
P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES-Bolometer

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Pacific Electronics, Saticoy, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

#### TUBES—Cathode Ray, Instrument Use

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

DuMont Laboratories, Inc., Allen B., Television Trans-mitter Div., 1500 Main Ave., Clifton, N. J. Electronic Tube Corp., 1200 E. Mermaid Ave., Phila-

Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W.C. 2, England.
NATIONAL UNION RADIO CORP., 350 Scotland Rd.,
Orange, N. J. ADV. PG. 310.
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. 552-558.
Twentieth Century Electronics Ltd., Dunbar Works,
Dunbar St., West Norwood, London, S.E. 27, England.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside,
Calif.

Calif.
WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 52, 53.

# TUBES—Cathode Ray, Studio or Theatre

Cinema-Television, Ltd., Worsley Bridge R., London.

Cinema-Television, Ltd., Worsley Bridge R., London, S. E. 26, England.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293. Mullard Overseas Etd., 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.
Rauland Corp., The, 4245 N. Knox Ave., Chicago 41, III. Twentieth Century Electronics Ltd., Dunbar Works, Dunbar St., West Norwood, London, S.E. 27, England.

#### TUBES—Cathode Ray, Television Picture

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J. Eitel-McCullough, Inc., San Bruno, Calif. Eureka Television & Tube Corp., 69 Fifth Ave., Haw-thoma

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193. Fidelity Tube Corp., 900 Passaic Ave., East Newark, N. J. N. J.

N. J.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
General Vacuum Tube Corp., 45 Elm St., Ardsley, N. Y.
Glasscraft Co., 5210 E. Olympic Blvd., Los Angeles 22,
Calif.

General Vacuum Tübe Corp., 45 Elm St., Ardsley, N. Y. Glasscraft Co., 5210 E. Olympic Blvd., Los Angeles 22, Calif.
HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293. Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
Lansdale Tübe Corp., Lansdale, Pa. Mullard Overseas Ltd., Century House, Shaftesbury Avc., London, W.C. 2, England.
NATIONAL UNION RADIO CORP., 350 Scotland Rd., Orange, N. J. ADV. PG. 310.
National Video Corp., 3019 W. 47th St., Chicago, III. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Philico Corp., Tioga & C Sts., Philadelphia 34, Pa. Rauland Corp., The, 4245 N. Knox Ave., Chicago 41, III. RAYTHEON MFG. CO., Receiving Tübe Div., 55 Chapel St., Newton 58, Mass. ADV. PG. 336, 337.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 323.
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. 552-558.
TEL-O-TUBE CORP. OF AMERICA, 180 Van Riper Ave., East Paterson, N. J. ADV. PG. 460.
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. 334A, 334B.
Twentieth Century Electronics Ltd., Dunbar Works, Dunbar St., West Norwood, London, S.E. 27, England. Vacuum Tübe Products, 506 S. Cleveland St., Oceanside, Calif.
WESTINGHOUSE ELECTRIC CORP., Electronic Tübe Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.
Zetka Television Tübes, Inc., 131-37 Getty Ave., Clifton, N. J.

# TUBES—Electrometer

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
RAYTHEON MFG. CO., Receiving Tube Div., 55 Chapel St., Newton 58, Mass. ADV. PG. 336, 337.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

# TUBES-Geiger

See Tubes, Radiation Counter

# TUBES—Glow or Discharge

Amglo Corp., 2037 W. Division St., Chicago 22, III.
ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave.,
Brooklyn 37, N. Y. ADV. PG. 303.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 461.
BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass.
ADV. PG. 60, 61

ADV. PG. 60, 61.
CHATHAM ELECTRONICS CORP., 475 Washington St.,
Newark 2, N. J. ADV. PG. 96, 97.
CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

CONTINENTAL ELECTRIC CO., GENEVA, 1.1.

444.

DUMONT Laboratories, Inc., Allen B., Instrument Div.,
1500 Main Ave., Clifton, N. J.

ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP.,
Teterboro, N. J. ADV. PG. 127, 128.

Electronic Products Co., 111 E. Third St., Mt. Vernon,

ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J.

ADV. PG. 200.

GENERAL ELECTRIC CO., Lamp Div., Nela Park, Cleveland 12, Ohio. ADV. PG. 1-23.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

Huggins Laboratories, 734 Hamilton Ave., Menlo Park,

Taker Mendo Research Laboratory, Menlo Park, Calif.
Menlo Research Laboratory, Menlo Park, Calif.
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.
RED BANK DIV., BENDIX AVIATION CORP., Red Bank,
N. J. ADV. PG. 125, 126.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div.,
P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES-Hearing Aid

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
RAYTHEON MFG. CO., Receiving Tube Div., 55 Chapel St., Newton 58, Mass. ADV. PG. 336, 337.
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.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.

# TUBES—Ignitron

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. NATIONAL ELECTRONICS, INC., Geneva, III. ADV.

PG. 408.

RADIO CORP., OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers. WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES-lonization

Distillation Products Industries Div. of Eastman Kodak Co., 755 Ridge Rd., W., Rochester 3, N. Y. Eitel-McCullough, Inc., San Bruno, Calif. GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Nuclear Instrument & Chemical Corp., 223 W. Erie St.,

Nuclear Instrument & Chemical Corp., 223 W. Elle St., Chicago 10, III.
Pacific Electronics, Saticoy, Calif.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Radiation Counter Laboratories, Inc., 5122 W. Grove

Radiation Counter Laboratories, Inc., 5122 w. Grove St., Skokie, III.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.

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. 552-558.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside Calif.

side Calif.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div.,
P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES-Klystron

TUBES—Klystron

ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 127, 128. Eitel-McCullough, Inc., San Bruno, Calif. Litton Industries, San Carlos, Calif. Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. RAYTHEON MFG. CO., Power Tube Div., Waltham 54, Mass. ADV. PG. 336, 337. RED BANK DIV., BENDIX AVIATION CORP., Red Bank, N. J. ADV. PG. 125, 126. SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 323.

ADV. PG. 323.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140. Standard Telephones & Cables Ltd., Connaught Aldwych, London, W. C. 2, England. SYLVANIA ELECTRIC PRODUCTS, INC., 1740 way, New York 19, N. Y. ADV. PG. 552-558. VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 213.

## TUBES—Magnetron

TUBES—Magnetron

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. BOMAC LABORATORIES INC., Salem Rd., Beverly, Mass. ADV. PG. 60, 61.

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23-Litton Industries, San Carlos, Calif. MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.

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.

RAYTHEON MFG. CO., Power Tube Div., Waltham 54, Mass. ADV. PG. 336, 337.

SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 323.

Ind. ADV. PG. 323.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. 0. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES—Microwave Receiving or Transmitting

TUBES—Microwave Receiving or Transmitting

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y.
BOMAC LABDRATORIES, INC., Salem Rd., Beverly,
Mass. ADV. PG. 60, 61.

DOLLAR CO., THE, ROBERT, 947 Broadway, Redwood
City, Calif. ADV. PG. 487.

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.
Eitel-McCullough, Inc., San Bruno, Calif.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
MACHLETT LABORATORIES, Springdale, Conn. ADV.
PG. 300.
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.
RAYTHEON MFG. CO., Power Tube Div., Waltham 54,
Mass. ADV. PG. 336, 337.
RED BANK DIV., BENDIX AVIATION CORP., Red
Bank, N. J. ADV. PG. 125, 126.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
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. 552-558.
TAYLOR TUBES, INC., 2312 Wabansia Ave., Chicago
47, Ill. ADV. PG. 420.
VARIAN ASSOCIATES, 990 Varian St., San Carlos,
Calif. ADV. PG. 213.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div.,
P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES—Miniature

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97. ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128. GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Hytron Radio & Electronics Corp., 76 Lafayette St.,

1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
Lansdale Tube Corp., Lansdale, Pa.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL UNION RADIO CORP., 350 Scotland Rd., Orange, N. J. ADV. PG. 310.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., Receiving Tube Div., Waltham 54, Mass. ADV. PG. 336, 337.
RED BANK DIV., BENDIX AVIATION CORP., Red Bank, N. J. ADV. PG. 125, 126.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 323.
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.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 334A, 334B.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TURES—Phototubes

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
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.,
P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES—Phototubes, Multiplier

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 303. Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England. CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

444.

DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube
Div., 750 Bloomfield Ave., Clifton, N. J.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
ADV. PG. 295, Inside Back & Back Covers.

Resistor Sales of Neveda, P. O. Box 2502, Reno, Nev.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div.,
P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES-Photovoltaic See Cells, Photovoltaic

#### TUBES-Pirani

Distillation Products Industries, Div. of Eastman Kodak Co., 755 Ridge Rd., W., Rochester 3, N. Y. ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Pacific Electronics, Saticoy, 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. 552-558.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.

#### TUBES—Power Amplifier

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.
Eitel-McCullough, Inc., San Bruno, Calif.
Electronic Enterprises, Inc., 65 7th Ave., Newark 4,

FEDERAL TELEPHONE AND RADIO CORP., 88 Kings-

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Electronics, Inc., 101 Hazel St., Paterson, N. J. HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
Heintz & Kaufman Div. of the Robert Dollar Co., 947
Broadway, Redwood City, Calif.
Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.

N. J.
Lewis & Kaufman, Inc., P. O. Box 337, 90 El Rancho
Ave., Los Gatos, Calif.
MACHLETT LABORATORIES, Springdale, Conn. ADV.

MACHLETT LABORATORIES, Springdale, Conn. ADV. PG. 300.
NATIONAL UNION RADIO CORP., 350 Scotland Rd., Orange, N. J. ADV. PG. 310.
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., Power Tube Div., Waltham 54, Mass. ADV. PG. 336, 337.
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. 552-558.
TAYLOR TUBES, INC., 2312 W. Wabansia Ave., Chicago 47, III. ADV. PG. 420.
TUNG-SOL ELECTRIC, INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 334A, 334B.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### **TUBES**—Radiation Counter

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 303.
Clnema-Television, Ltd., Worsley Bridge Rd., London, S. F. 26. England Cinema-lefevision, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

DuMont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J.

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.

EL-TRONICS, INC., 2649 N. Howard St., Philadelphia 33, Pa. ADV. PG. 451. Electronic Products Co., 111 E. Third St., Mt. Vernon,

N. Y.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Georator Corp., 1820 N. Nash St., Arlington, Va.
Leighton Labs., H. W., 26 Herman St., Glen Ridge,

N. J.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
Nuclear Development Lab., Box 7034, Kansas City, Mo.
Nuclear Instrument & Chemical Corp., 223 W. Erie
St., Chicago 10, Ill.
NUCLEAR RESEARCH CORP., 2563 Grays Ferry Ave.,
Philadelphia 46, Pa. ADV. PG. 301.
Nucleonic Corp. of America, 497 Union St., Brooklyn
31 N.

Priladelphia 46, Pa. ADV. Fd. 301.
Nucleonic Corp. of America, 497 Union St., Brooklyn 31, N. Y.
Pacific Electronics, Saticoy, Calif.
R-C Scientific Instrument Co., 335 Culver Blvd., Playa Del Rey, Calif.

R-C Scientific Instrument Co., 335 Culver Blvd., Playa Del Rey, Calif. Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, III. 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. ADV. PG. 336, 337. RED BANK DIV., BENDIX AVIATION CORP., Red Bank, N. J. ADV. PG. 125, 126. Resistor Sales of Nevada, P. O. Box 2502, Reno, Nev. Technical Associates, 140 W. Providencia Ave., Burbank, Calif. Tracerlab, Inc., 130 High St., Boston 10, Mass.

Traceriab, Inc., 130 High St., Boston 10, Mass.
Twentieth Century Electronics, Ltd., Dunbar Works,
Dunbar St., West Norwood, London, S.E. 27, England.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside,

WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117. Wood Counter Laboratory, N., 5491 Blackstone, Chicago

#### TUBES—Receiving (for Home Entertainment)

British Industries Corp., 164 Duane St., New York 13,

N. Y.

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.

Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.

Lansdale Tube Corp., Lansdale, Pa.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.

NATIONAL UNION RADIO CORP., 350 Scotland Rd., Orange, N. J. ADV. PG. 310.

Orange, N. J. ADV. PG. 310.

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. ADV. PG. 336, 337.

SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 323,

SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 323.
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. 552-558.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 334A, 334B.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES—Rectifying, Gas Filled Type

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97. CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

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ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.
Eitel-McCullough, Inc., San Bruno, Calif.
Electronic Products Co., 111 E. Third St., Mt. Vernon,

N. T. ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 200. Federal Engineering Co., 37 Murray St., New York 7,

OR. Y. GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. General Electronics, Inc., 101 Hazel St., Paterson, N. J. Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3,

N. J.
MACHLETT LABORATORIES, Springdale, Conn. ADV.

PG. 300.

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, III. ADV. PG.

408.
Pacific Electronics, Saticoy, 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., Power Tube Div., Waltham 54,
Mass. ADV. PG. 336, 337.
RAYTHEON MFG. CO., Receiving Tube Div., 55 Chapel
St., Newton 58, Mass. ADV. PG. 336, 337.

RED BANK DIV., Bendix Aviation Corp., Red Bank, N. J. ADV. PG. 125, 126.

Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III. 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. 552-558.

TAYLOR TUBES, INC., 2312 Wabansia Ave., Chicago 47, III. ADV. PG. 420.

UNITED ELECTRONICS, 42 Spring St., Newark 2, N. J. ADV. PG. 207.

ADV. PG. 207. Vacuum Tube Products, 506 S. Cleveland St., Oceanside,

WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES—Rectifying, Vacuum Type

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97. CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

444.

DOLLAR CO., THE, ROBERT, 947 Broadway, Redwood City, Calif. ADV. PG. 487.

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.

Eithel-McCullough, Inc., San Bruno, Calif. Federal Engineering Co., 37 Murray St., New York 7,

N. Y.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Hytron Radio & Electronics Corp., 76 Lafayette St.,
Salom Macro

Hytron Radio & Electronics Corp., 76 Canagests Sal, Salem, Mass. Lewis & Kaufman, Inc., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif. MACHLETT LABORATORIES, Springdale, Conn. ADV. PG.

300. Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,

300.

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., 350 Scotland Rd., Orange, N. J. ADV. PG. 310.

Pacific Electronics, Saticoy, 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. 336, 337.

RAYTHEON MFG. CO., Receiving Tube Div., 55 Chapel St., Newton 58, Mass. ADV. PG. 336, 337.

RED BANK DIV., BENDIX AVIATION CORP., Red Bank, N. J. ADV. PG. 125, 126.

Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III. 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. 552-558.

TAYLOR TUBES, Inc., 2312 Wabansia Ave., Chicago 47, III. ADV. PG. 420.

TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 334A, 334B.

UNITED ELECTRONICS, 42 Spring St., Newark 2, N. J. ADV. PG. 207.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, ADV. PG. 207. Vacuum Tube Products, 506 S. Cleveland St., Oceanside,

WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. 0. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES—Scintillation

See Tubes, Radiation Counter

#### TUBES—Subminiature

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97. FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Dlv., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Lansdale Tire Co., Lansdale, Pa. NATIONAL UNION RADIO CORP., 350 Scotland Rd., Orange, N. J. ADV. PG. 310.
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. ADV. PG. 336, 337.
RED BANK DIV., Bendix Aviation Corp., Red Bank, N. J. ADV. PG. 125, 126.
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. 552-558.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 334A, 334B.
VICTOREEN INSTRUMENT CO., 5806 Hough St., Cleveland 3, Ohio. ADV. PG. 348, 349.

#### 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., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Marconi Wireless Telegraph Co., Ltd., 23025 Beaver St., New York 4, N. Y.

#### TUBES-Television Projection (for Home Entertainment)

American Television, Inc., 523 S. Plymouth St., Chicago

5, III.
Arcturus Electronics, Inc., 54 Clark St., Newark, N. J.
Cinema-Television, Ltd., Worsley Bridge Rd., London,
S. E. 26, England.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
NATIONAL—UNION RADIO CORP., 350 Scotland Rd.,
Orange, N. J. ADV. PG. 310.
North American Philips Co., Inc., 100 E. 42nd St., New
York 17, N. Y.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
RAD10 CORP. OF AMERICA, Tube Dept., Harrison, N. J.
ADV. PG. 295, Inside Back & Back Covers.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Tele-Ray Tube Co., Inc., 984 Saw Mill River Rd.,
Yonkers, N. Y.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4,
N. J. ADV. PG. 334A, 334B.

#### TUBES—Thyratron

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 60, 61.
CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.
CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG. 444. DuMont Laboratories, Inc., Allen B., Instrument Div., 1500 Main Ave., Clifton, N. J. Eitel-McCullough, Inc., San Bruno, Calif. Electronic Enterprises Inc., 65 7th Ave., Newark 4, N. J. ELECTRONS INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 200.

ELECTRONS INC., 12/ SUSSEX AVE., NEBROSCO., ADV. PG. 200.

ADV. PG. 200.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 189-193.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

General Electronics, Inc., 101 Hazel St., Paterson, N. J. Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. I.

MACHLETT LABORATORIES, Springdale, Conn. ADV. PG.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. NATIONAL ELECTRONICS, INC., Geneva, III. ADV. PG.

408. enta Laboratories, Inc., 216 N. Milpas St., Santa

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.
RED BANK DIV., Bendix Aviation Corp., Red Bank, N. J. ADV. PG. 125, 126.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
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. 552-558.
TAYLOR TUBES, INC., 2312 Wabansia Ave., Chicago 47, III. ADV. PG. 420.

III. ADV. PG. 420. UNITED ELECTRONICS, 42 Spring St., Newark 2, N. J.

MESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. 0. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES-TR, Pre TR & Anti TR

BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass.

BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 60, 61.

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.

MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston, Mass. ADV. PG. 447.

Pacific Electronics, Saticoy, Calif.

RED BANK DIV., Bendix Aviation Corp., Red Bank, N. J. ADV. PG. 125, 126.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

# TUBES—Travelling Wave (Amplifying Type)

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
Penta Laboratories, Inc., 216 N. Milpas St., Santa

Barbara, Calif.

SPERRY GYROSCOPE CO., Div. of the Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.

# TUBES-Voltage Reference or Regulation

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. ANTON ELECTRONIC LABORATORIES, INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 303.
CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. ADV. PG. 96, 97.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.
Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.

Electronic Products Co., 111 E. Third St., Mt. Vernon,

GENERAL ELECTRIC CO., Tubes Dept., Electronics Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. Hytron Radio & Electronics Corp., 76 Lafayette St.,

Hytron Radio & Electronics Corp., 70 Langette St., Salem, Mass.
Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,

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., Tloga & C Sts., Philadelphia 34, Pa. 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. ADV. PG. 336, 337.
RED BANK DIV., Bendix Aviation Corp., Red Bank, N. J. ADV. PG. 125, 126.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.

#### TUBES-X-Ray

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y. GENERAL ELECTRIC CO., Tubes Dept., Electronics Dlv., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23. MACHLETT LABORATORIES, Springdale, Conn. ADV.

PG. 300.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.

Pacific Electronics, Saticoy, Calif.

Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.

N. Y.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London W. C. 2, England.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div.,
P. O. Box 284, Elmira, N. Y. ADV. PG. 116, 117.
X-Ray Dept. of General Electric Co., 4855 Electric
Ave., Milwaukee 14, Wis.

#### -Aluminum Wavequide

Kaiser Aluminum & Chemical Sales Inc., 1924 Broadway, Oakland 12, Calif.
Kent Co., F. C., 64 Howard St., Irvington, N. J.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG.

80. Precision Tube Co., Inc., North Wales, Pa. Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y. Technicraft Laboratories, Inc., Thomaston-Waterbury Rd.,

Thomaston, Conn.

#### TUBING—Brass or Copper

AMERICAN BRASS CO., 25 Broadway, New York 4, N. Y. ADV. PG. 373.

BART LABORATORIES CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 406.

Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn. Chase Brass & Copper Co., Inc., 236 Grand St., Water-

Chase Brass & Copper Go., INC., 719 Main St., New KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.
Precision Tube Co., Inc., North Wales, Pa. Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
Shutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhutst, N. Y.
hurst, N. Y.

Mass. Uniform Tubes, Level Rd., Collegeville 2, Pa. Wells & Co., Inc., A. H., 181 E. Aurora St., Water-bury, Conn.

#### TURING-Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 95.
CENTRALAB DIV. GLOBE-UNION, INC., 914 E. Keefe
Ave., Milwaukee 1, Wis. ADV. PG. 71-74.
Colonial Insulator Co., 907 Grant St., Akron 11, Ohio.
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. 214. Electrical Refractories Co., 50 Clark St., East Palestine,

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477. ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. 497. KIRCHBERGER & CO., INC., M., 1425 37th St., Brook-lyn 18, N. Y. ADV. PG. 498. LOUTHAN MFG. CO., East Liverpool, Ohio. ADV. PG. 102.
Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV.
PG. 228, 229. PG. 228, 229.
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. 510.
Wisconsin Porcelain Co., Sun Prairie, Wis.

#### TUBING—Fabric

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.

Insulating Manufacturers Corp., 565, W. Washington Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, III. JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403. MITCHELL-RAND INSULATION CO., INC., 51 Murray
St., New York 7, N. Y. ADV. PG. 177.
Varflex Corp., 308 N. Jay St., Rome, N. Y.
Wilmington Fibre Specialty Co., P. O. Drawer 1028,
Wilmington 99, Del.

#### TUBING—Fibre

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 261. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.
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. 177.
National Vulcanized Fibre Co., Wilmington, Del. Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
PRECISION PAPER TUBE CO., 2033 W. Charlestom St., Chicago 47, III. ADV. PG. 470.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J. 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. Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, CAIH.
GENERAL CERAMICS & STEATITE CORP., Keasbey,
N. J. ADV. PG. 195, 197.
GENERAL ELECTRIC CO., Lamp Div., Nela Park, Cleveland 12, Ohio. ADV. PG. 1-23.

#### TUBING-Glass

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
BREEZE CORPS., INC., 41 S. Sixth St., Newark 7,
N. J. ADV. PG. 259.
Corning Glass Works, Corning, N. Y.
Fischer & Porter Co., 476 County Line Rd., Hatboro, Pa.
GENERAL ELECTRIC CO., Lamp Div., Nela Park, Cleveland 12, Ohio. ADV. PG. 1-23.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG.
486.

#### TUBING—Glass Fibre Insulation

ACCURATE PAPER TUBE CO., 801 N. Peoría St., Chl-cago 22, III. ADV. PG. 524. BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV. PG. 366.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.

ADV. PG. 222, 223.

Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

Insulation Manufacturers Corp., 565 W. Washington

Insulating Fabricators of New England, St., Watertown 72, Mass.

St., Watertown 72, Mass.

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, III.

IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.

MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.

Molded Insulation Co., 335 E. Price St., Philadelphia 44 Pa

D-121

National Electric Coil Co., Columbus 16, Ohio.
National Vulcanized Fibre Co., Wilmington, Del.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J.
ADV. PG. 479.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9,
N. J. ADV. PG. 471.
Varflex Corp., 308 N. Jay St., Rome, N. Y.

#### TUBING-Knitted Wire

METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 180.

#### TUBING—Metal and Alloy

Alleghany Ludlum Steel Corp., HW Oliver Bldg., Pittsburgh 22, Pa.

ALPHA METALS, INC., P. O. Box 34, 56 Water St.,
Jersey City, N. J. ADV. PG. 356, 357.

Bishop & Co., J., Platinum Works, Malvern, Pa.
Carpenter Steel Co., The, Union, N. J.
Carpenter Steel Co., 142 W. Bern St., Reading, Pa.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20. Conn. Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
DIVISION LEAD CO., 836 W. Kinzie St., Chicago 22, III. ADV. PG. 64, 65.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 211.
Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
Haynes Stellite Co., Division of Union Carbide & Carbon Corp., Kokomo, Indiana.
International Nickel Co., Inc., 67 Wall St., New York 5, N. Y. 5, N. Y. MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.
National Lead Co., 111\*Broadway, New York 6, N. Y.
Precision Tube Co., Inc., North Wales, Pa.
PRODUCTION ENGINEERING CO., 173 Sargeant Ave.,
Clifton, N. J. ADV. PG. 503.
Revere Copper & Brass, Inc., 230 Park Avenue, New
York 17, N. Y.
Standard Metals Corp., 262 Broad St., North Attleboro,
Masc Mass.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 38, 39.
Wells & Co., Inc., A. H., 181 E. Aurora St., Waterbury,

#### TUBING-Mica

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.

Mica Insulator Co., Schenectady 1, N. Y.

MITCHELL RAND INSULATION CO., INC., 51 Murray
St., New York 7, N. Y. ADV. PG. 177.

#### TUBING-Nickel

BART LABORATORIES, CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 406.
Bishop & Co., Platinum Works, Malvern, Pa.
International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
Precision Tube Co., Inc., North Wales, Pa.
Standard Metals Corp., 262 Broad St., North Attleboro, Mass.

Mass.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 38, 39.

# TUBING-Paper

ACCURATE PAPER TUBE CO., 801 N. Peoria St., Chicago 22, III. ADV. PG. 524.
CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 261.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, III. ADV. PG. 470.

# TUBING—Plastic

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, III. ADV. PG. 326.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.
Anchor Industrial Co., 533-541 Canal St., New York 13, N. Y.
Anchor Plastics Co., 533-541 Canal St., New York 13, N. Y. N. Y. B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
CLEVELAND CONTAINER CO., THE, 6201 Barberton
Ave., Cleveland 2, Ohio. ADV. PG. 261.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del.
ADV. PG. 222, 223. ADV. PG. 222, 223,

Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.
Formica Co., The, 4614 Spring Grove Ave., Cincinnati. 32, Ohio.
Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.

Gering Products, Inc., N. 7th St. at Monroe Ave., Kenilworth, N. J. Industrial Synthetics Corp., 225 North Ave., Garwood, 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. 62, 63.
Mica Insulator Co., Schenectady 1, N. Y.
MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
National Vulcanized Fibre Co., Wilmington, Del.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 479.
Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
PARAMOUNT PAPER TUBE CORP., 614 Lafavette St. Panelyte DIV., St. Regis Paper Co., 230 Park Ave., New York, N. Y.

PARAMOUNT PAPER TUBE CORP., 614 Lafayette St., Fort Wayne, Ind. ADV. PG. 440.

Parkwood Laminates, Inc., Wakefield, Mass.

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.

Plastic Process Co., Inc., 366 Madison Ave., New York 17, N. Y.

Plax Corp., P. O. Box 1019, Hartford, Conn.

PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. AD. PG. 470.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.

REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 377.

RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. AD. PG. 66. III. AD. PG. 66.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 409.
Synthane Corp., Oaks, Pa.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472.
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.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
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. 76.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
BART LABORATORIES, CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 406.
Bishop & Co., J., Platinum Works, Malvern, Pa.
GENERAL PLATE DIVISION, Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270.
Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I. 5, R. I. MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80. NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 465. Precision Tube Co., Inc., North Wales, Pa. Samuel & Co., Inc., J. A., 220 Broadway, New York 38, N. Y. SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362. 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., 165 Chestnut St., Newark 5, N. J.

#### TUBING-Steel

Allegheny Ludlum Steel Corp., HW Oliver Bldg., Pittsburgh 22, Pa.
Armco 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., The, 142 W. Bern St., Reading, Pa.
Fulton Sylphon Div., Robertshaw-Fulton Controls Co.,
Knoxville 4, Tenn.
Precision Tube Co., Inc., North Wales, Pa.
PRODUCTION ENGINEERING CO., 173 Sargeant Ave.,
Clifton, N. J. ADV. PG. 503.
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, III.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 38, 39.
Timken Roller Bearing Co., Canton, Ohio.
Uniform Tubes, Level Rd., Collegeville 2, Pa.

#### TUBING—Synthetic Resin

CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 261. CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.
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.
Insulation Manufacturers Corp., 565 W. Washington Blvd., Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, III.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 479.
Parkwood Laminates, Inc., Wakefield, Mass.
Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 377.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, III. ADV. PG. 66.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# TUBING—Varnished or Lacquered

B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
BENTLEY-HARRIS MFG. CO., Conshohocken Pa. ADV. BENTLEY-HARRIS MFG. CO., Conshohocken Pa. ADV. PG. 366.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
BRAND & CO., INC., WILLIAM, 104 Valley St., Williamantic, Conn. ADV. PG. 166, 167.
CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 261.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
Insulation Manufacturers Corp., 565 W. Washington Blvd., Insulation Manufacturers Corp., 565 W. Washington Blvd., Insulation Manager of Chicago 6, III.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Valued City. N. Y. ADV. PG. 477.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 479.
Philco Corp., Tloga & C Sts., Philadelphia 34, Pa. PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, III. ADV. PG. 470.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Varflex Corp., 308 N. Jay St., Rome, N. Y.

Varflex Corp., 308 N. Jay St., Rome, N. Y.

BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV.

#### TUBING—Varnished Cambric Insulation

PG. 366.

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.

Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.

FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.

GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford III. ADV. PG. 120. GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
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. 477.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 62, 63.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 177.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 479.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

## TUBING—Waveguide

BART LABORATORIES, CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 406.
GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. ADV. PG. 270.
Kent Co., F. C., 64 Howard St., Irvington, N. J.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.

Standard Metals Corp., 262 Broad St., North Attleboro,

Mass.
Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.

Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,

Waveline, Inc., North Caldwell, N. J.

#### TUNERS---a-m

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. Approved Electronic Instrument Corp., 928 Broadway, New

York 10, N. Y.

Collins Audio Products Co., P. O. Box 368, Westfield,

N. J.

Gonset Co., 801 S. Main St., Burbank, Calif.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington

Heights, III.

Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, III.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,

Inglewood, Calif.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,

III.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
Brooklyn 8, N. Y.
Pentron Corp., 221 E. Cullerton St., Chicago 16, III.
Sickles, F. W., Div., General Instrument Corp., 165
Front St., Chicopee, Mass.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski
Rd., Chicago 39, III. ADV. PG. 59.
Stromberg-Carlson Co., Rochester 3, N. Y.
Taffet Radio & Television Co., 2530 Belmont Ave., New
York 58, N. Y.

York 58, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,
N. J. ADV. PG. 262.
Weingarten Electronic Labs., Inc., 7556 Melrose Ave.,
Los Angeles 46, Calif.

#### TUNERS-f-m

Altec Lansing Corp., 9356 Santa Monica Blyd., Beverly

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.

BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.

Collins Audio Products Co., P. O. Box 368, Westfield, N.

N. J.

DuMont Laboratories, Inc., Allen B., Television Receiver
Div., Electronic Parts Dept., 35 Market St., East
Paterson, N. J.

Gonset Co., 801 S. Main St., Burbank, Calif.
Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, Ill.
HEATH CO., Benton Harbor, Mich. ADV. PG. 492.
Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,
Ill.

Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
Monarch Radio & Television Corp., 61 Crescent St.,
Brooklyn 8, N. Y.
Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34,

III.
Sargent-Rayment Co., 212 Ninth St., Oakland, Calif.
Sickles, F. W., Div., General Instrument Corp., 165
Front St., Chiconee, Mass.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, III. ADV. PG. 59.
Stromberg-Carlson Co., Rochester 3, N. Y.
Taffet Radio & Television Co., 2530 Belmont Ave., New
York 58, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.

# TUNERS-f-m/a-m

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y. Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

N. Y.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 46.
Collins Audio Products, Co., P. O. Box 368, Westfield, N. J.
Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
Guthman, Inc., Edwin I., 15 S. Throop St., Chicacgo, III.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,

Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y. Radio Craftsmen, Inc., 1431 S. Michigan Ave., Chicago 5, III. Sargent-Rayment Co., The, 212 Ninth St., Oakland 7,

Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chi-Scott Radio Labs., Inc., 4451 N. navelistics 230 40, III.
Sickles, F. W. Div., General Instrument Corp., 165 Front St., Chicopee, Mass.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 59.
Stromberg-Carlson Co., Rochester 3, N. Y.
Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.

York 58, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
Park, N. J. ADV. PG. 262.
Weingarten Electronics Labs., Inc., 7556 Melrose Ave.,
Los Angeles 46, Calif.

# TUNERS-Klystron

KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384.

Wheeler Laboratories, Inc., Great Neck, N. Y.

# TUNERS-Microwave

BART LABORATORIES, CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 406.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
KINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.
KINGS MICROWAVE CO., INC., 719 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.
Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 218, 219.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif. 739, Calif.
Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif. Pransco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif. VECTRON, INC., 235 High St., Waltham, Mass. ADV. PG. 384. Waveline, Inc., North Caldwell, N. J. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. Wheeler Laboratories, Inc., Great Neck, N. Y.

#### TUNERS—Permeability

C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454.
Collins Audio Products Co., P. O. Box 368, Westfield, N. J. General Instrument Corp., 829 Newark Ave., Elizabeth Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, III.

Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34, III.

Radio Condenser Co., Camden, N. J.
Sickles, F. W. Div., General Instrument Corp., 165 Front
St., Chicopee, Mass.

#### TUNERS-Television

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. DuMont Laboratories, Inc., Allen B., Television Receiver Div., Electronic Parts Dept., 35 Market St., East Paterson, N. J. Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.

General Instrument Corp., 829 Newark Ave., Elizabeth

Seneral Instrument Corp., 829 Newark Ave., Chizabeth 3, N. J.

LEONARD ELECTRIC PRODUCTS CO., 1562 61st St., Brooklyn, N. Y. ADV. PG. 491.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34, III.

34, III.
Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, III.
Philico Corp., Tioga & C Sts., Philadelphia 34, Pa.
Philmore Mfg. Co., Inc., 113 University Place, New York

3, N. Y. SARKES TARZIAN INC., 539 S. Wainut, Bloomington, Ind., ADV. PG. 323. ott Radio Labs., Inc., 4451 N. Ravenswood Ave.,

Chicago 40, III.
Sickles, F. W. Div., General Instrument Corp., 165 Front St., Chicopee, Mass.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,

Chicago 39, III. ADV. PG. 59.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park,
N. J. ADV. PG. 262.
Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y.

#### TUNERS-Television rf

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. DuMont Laboratories, Inc., Allen B., Television Receiver Div., Electronic Parts Dept., 35 Market St., East

Paterson, N. J.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.
General Instrument Corp., 829 Newark Ave., Elizabeth 3,

General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Radio Condenser Co., Camden, N. J.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 323.
Sickles, F. W., Div., General Instrument Corp., 165
Front St., Chicopee, Mass.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 59.

# TUNERS-uhf Ring

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

#### TUNING DEVICES—Receiver Mechanical

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. Collins Audio Products Co., P. O. Box 368, Westfield,

N. J. General Instrument Corp., 829 Newark Ave., Elizabeth 3, Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington

Heights, III.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Radio Condenser Co., Camden, N. J.

STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. ADV. PG. 59.

#### TUNING DEVICES—Transmitter Mechanical

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. General Instrument Corp., 829 Newark Ave., Elizabeth 3,

N. J. Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington

Heights, III. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

#### TURNTABLES—Recording and Transcription

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275. Callione Corp., 1041 N. Sycamore Ave., Hollywood 38,

Calif.
Fairchild Recording Equipment Co., 154th St. & 7th
Ave., Whitestone, N. Y.
Flock Process Co. Inc., 26 Fahey St., Springdale, Conn.
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.

Proctor Soundex Corp., 133 N. 6th Ave., Mt. Vernon, N. Y. Q. R. K. Electronic Products, 445 N. Circle Drive,

N. R. Rek-O-Kut Co., Inc., 38-03A Queens Blvd., Long Island
City, N. Y.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

#### TWEETERS

See Loudspeakers

#### ULTRASONIC EQUIPMENT

Refer to any of the following: Gages, Ultrasonic Thickness Generators, Ultrasonic

#### VACUUM GAGES

See Gages, Vacuum or Pirani

#### VACUUM INDICATING, RECORDING AND CONTROL EQUIPMENT

Balley Meter Co., 1044 Ivanhoe Rd., Cleveland 10,

Ohio.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York

1, N. Y. ADV. PG. 471.

BOWSER TECHNICAL REFRIGERATION DIV., BOWSER,
INC., Terryville, Conn. ADV. PG. 93, 94.

Bristol Co., The, Waterbury 20, Conn.

CONTINENTAL ELECTRIC CO., Geneva, III. ADV. PG.

Distillation Products Industries, Div. of Eastman Kodak
Co., 755 Ridge Rd. W., Rochester 3, N. Y.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis,

Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12,

Ohlo.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Hastings Instrument Co., Hampton 9, Va.
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUS-

TRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 304, 305.
National Research Corp., 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, III. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,

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.
Wallace & Tiernan Products, Inc., Belleville 9, N. J.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. Y. ADV. PG. 256.
Whittington Pump & Englneering Corp., 1126 Prospect St., Indianapolis 3, Ind.

#### VACUUM PUMPS

Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Beach-Russ Co., 50 Church St., New York 7, N. Y. Central Scientific Co., 1700 Irving Park Road, Chicago

13, III.
Distillation Products Industries, Div. of Eastman Kodak
Co., 755 Ridge Rd. W., Rochester 3, N. Y.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 127, 128.
EISLER ENGINEERING CO., INC., 740 S. 13th St.,
Newark 3, N. J. ADV. PG. 362.
Eitel-McCullough Inc., San Bruno, Calif.
GENERAL ELECTRIC CO., Tubes Dept., Electronics Div.,
1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
International Machine Works, 6904 Madison St., Guttenberg, N. J.

International Machine Works, 6904 Madison St., Guttenberg, N. J.

INTERNATIONAL PUMP & MACHINE WORKS, 11-13
Governor St., Newart 2, N. J. ADV. PG. 520.

KAHLE ENGINEERING CO., 1307 Seventh St., North
Bergen, N. J. ADV. PG. 419.

KINNEY MFG. CO., 3529 Washington St., Boston, Mass.
ADV. PG. 252.

Leiman Bros., Inc., P. O. Box 1339, Newark 5, N. J.

Litton Industries, San Carlos, Calif.

National Research Corp., 70 Memorial Drive, Cambridge 42, Mass.

Nelson Vacuum Pump Co., Geo. F., 2133 Fourth St.,

bridge 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.

Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O.,
Philadelphia 20, Pa.

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

Beach-Russ Co., 50 Church St., New York 7, N. Y.
BOWSER, TECHNICAL REFRIGERATION DIV., BOWSER
INC., Terryville, Conn. ADV. PG. 93, 94.
Buck Engineering Co., Inc., 37-41 Marcy St., Freehold,

N. J.

Distillation Products Industries, Div. of Eastman Kodak
Co., 755 Ridge Rd. W., Rochester 3, N. Y.

JENNINGS RADIO MFG. CO., 1098 E. William St.,
San Jose 12, Calif. ADV. PG. 25-27.

KINNEY MFG. CO., 3529 Washington St., Boston, Mass.

ADV. PG. 252.

MURPHY & MILLER INC., 1322 S. Michigan Ave.,
Chicago 5, III. ADV. PG. 352.

National Research Corp., 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.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,

N. Y. Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, 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. 358.
Vacuum Electronic Engineering Co., 756 Third Ave., Brooklyn 32, N. Y.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
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.

263.

Barber-Colman Co., Rockford, III.

BENDIX AVIATION CORP., PACIFIC DIVISION, 11600
Sherman Way, North Hollywood, Calif. ADV. PG. 129.
Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
Distillation Products Industries, Div. of Eastman Kodak
Co., 755 Ridge Rd. W., Rochester 3, N. Y.
General Controls Co., Glendale 1, Calif.
Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.
Skinner Electric Valve Div., The Skinner Chuck Co.,
40 Belden Ave., Norwalk, Conn.
STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd.,
Chicago 39, III. ADV. PG. 59.
Vacuum Electronic Engineering Co., 756 Third Ave.,
Brooklyn 2, N. Y.

#### **VARISTORS**

BRADLEY LABS., INC., 82 Meadows St., New Haven 10, Conn. ADV. PG. 254.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 204.

# VARNISH CAMBRIC COATINGS VARNISH, INSULATING

#### See Insulating Compounds

#### VIBRATION ANALYSIS EQUIPMENT

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.

Avion Instrument Corp., Paramus, N. J.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.

N. J.
CALIDYNE CO., THE, 751 Main St., Winchester, Mass. ADV. PG. 210.
Century Geophysical Corp., 1333 N. Utica, Tulsa 3, Okla. Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Passadena 8, Calif.
Davies Laboratories, Inc., The, 4705 Queensbury Rd., Riverdale. Md.

Davies Laboratories, Inc., The, 4705 Queensbury Rd., Riverdale, Md.
ELECTRO PRODUCTS LABS, INC., 4501 N. Ravenswood Ave., Chicago 40, III. ADV. PG. 413.
Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 82, 83.
Gulton Mfg. Corp., Metuchen, N. J.
INDUSTRIAL ELECTRONICS, INC., 8060 Wheeler St., Detroit 10, Mich. ADV. PG. 122, 123.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 324, 325.

ADV. PG. 324, 325. Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass. Miller Corp., William, 325 N. Halstead St., Pasadena 18, Calif.

18, Calif.

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 507.

ROBINSON AVIATION, INC., Teterboro Air Terminal, Teterboro, N. J. ADV. PG. 257.

Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.

Vibrascope Co., 6 E. 39th St., New York 16, N. Y. Walkirt Co., 145 W. Hazel, Inglewood, Calif.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

#### VIBRATION ANALYSIS EQUIPMENT-Electronic Balancing

Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind. Gisholt Machine Co., 1245 E. Washington Ave., Madison

Gisholt Machine Co., 1243 E. Washington, 3, Wis.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
ADV. PG. 324, 325.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp.,
Great Neck, N. Y. ADV. PG. 139, 140.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### VIBRATION ANALYSIS EQUIPMENT— Temperature Fatigue

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275. M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 459.

#### VIBRATION ANALYSIS EQUIPMENT-Vibration Fatigue

All American Tool & Mfg. Co., 1014 W. Fullerton St., All American Tool & Mfg. Co., 1014 W. Fullerton St., Chicago 14, III.

AUDIO & VIDEO PRODUCTS CO., 730 Fifth Ave., New York 19, N. Y. ADV. PG. 275.

CALIDYNE CO., THE, 751 Main St., Winchester, Mass. ADV. PG. 210.

Glenco Corp., Metuchen, N. J.

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. 459.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

# VIBRATION EXCITING EQUIPMENT

Duncan & Bayley, Inc., 785 Hertel Ave., Buffalo 7, N. Y. GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 525.
Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 459.
Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif.

# VIBRATORS

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 343.

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. ADV. PG. 334. Buck Engineering Co., Inc., 37-41 Marcy St., Freehold,

Cornell-Dubilier Electric Corp., South Plainfield, N. J. Fischer & Co., R. A., 517 Commercial St., Glendale 3, Calif.

Goodmans Industries Ltd., Axiom Works, Wembley, Middlesex, England.

James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18,

Kurman Electric Co., Inc., 35-18 37th St., Long Island

Kurman Electric Co., Inc., 35-18 37th St., Long Island City, N. Y.
Lansing Sound, Inc., James B., 2439 Fletcher Drlve, Los Angeles 26, Calif.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts., Racine, Wis. ADV. PG. 439.
Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio. Senn Corp., New Augusta, Ind.
VICTOREEN INSTRÜMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 348, 349.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

#### VIBRATORS—Multivibrators

Acme Telectronix Div., NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles

Audio Products Corp., 2205 Marian Bendix Aviation Corp., PACIFIC DIVISION 11600 Sherman Way, North Hollywood, Calif. ADV. PG. 129. BOGUE ELECTRIC MFG. CO., 52 Iowa Ave., Paterson 3,

N. J. ADV. PG. 153.
G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 454. ford, Conn. ADV. PG. 454.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles
15, Calif.

15, Calif.
DIGITAL PRODUCTS, INC., 7852 Ivanhoe Ave., La Jolla, Calif. ADV. PG. 378.
Minnesota Electronics Corp., 47 W. Water St., St. Paul

Ninnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140.

Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

Walkirt Co., 145 W. Hazel, Inglewood, Calif.

Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

#### VISCOSIMETERS WITH ELECTRONIC RECORDERS

Fischer & Porter Co., 476 County Line Rd., Hatboro, Pa. Foxboro Co., The, Foxboro, Mass.
Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, III.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, III.
Rich-Roth Laboratories, East Hartford, Conn.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

#### **VOLTAGE SUPPLIES—Decade**

KEPCO LABS., INC., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 236, 237.

# VOLTMETERS

VOLTMETERS—Crystal **VOLTMETERS**—Electronic

See Instruments—Electrical Measuring

## **VOLTMETERS**—Electrostatic

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 188.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-23.
Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
Sensitive Research Instrument Corporation, 9 Elm Ave., Mt. Vernon, N. Y.

# **VOLTAGE REGULATORS & STABILIZERS**

See Regulators, Voltage Regulators & Stabilizers

## VOLT-OHM-MILLIAMMETERS See Instruments—Electrical Measuring

#### WASHERS—Insulating

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va. Newport News, Va. Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
BIRNBACH RADIO CO., INC., 145 Hudson St., New
York 13, N. Y. ADV. PG. 342.
BIWAX CORP., 3445 Howard St., Skokie, III. ADV.
PG. 436

PG. 436.
CITATION PRODUCTS CO., 233 E. 146th St., New York S1, N. Y. ADV. PG. 512.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 222, 223.
Cortland Industries, Inc., 4545 Cortland St., Chicago

39, III.
ELECTRONIC MECHANICS, INC., 70 Clifton Blvd., Clifton, N. J. ADV. PG. 444.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498.
Felsenthal—& Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.
Felt Products Mfg. Co., 1504 West Carroll Ave., Chicago 7, III.

cago 7, III. Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del. NERAL CEMENT MFG. CO., 919 Taylor Ave., Rock-

GENERAL CEMENT MFG. CU., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 195, 197.
General Laminated Products, Inc., 2857 S. Halsted St., Chicago B. IIII.

Chicago 8, III.

Hayden Mfg. Co., 173 N. Peoria St., Chicago 7, III.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
Industrial Precision Products Co., 315-325 N. Hoyne

Ave., Chicago 12, III.

Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

St., Watertown 72, Mass.
Insulation Manufacturers Corp., 565 W. Washington Blvd.,
Chicago 6, III.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
Island City, N. Y. ADV. PG. 477.
ISOLANTITE MFG. CORP., Stirling, N. J. ADV. PG. Keystonc Electronics Corp., 423 Broome St., New York

12, N. Y.
KIRCHBERGER & CO., INC., M., 1425 37th St.,
Brooklyn 18, N. Y. ADV. PG. 498.
Laconia Corp., 37 S. 6th St., Newark 7, N. J.
Lavelle Rubber Co., 424 N. Wood St., Chicago 22, III.
MASTER APPLIANCE MFG. CO., Fourth & Ontario Sts.,
Racine, Wis. ADV. PG. 439.
Mica Fabricating Co., 53 Central Ave., Rochelle Park,
N. J.

Mic. Insulator Co., Schenectady 1, N. Y.
MICACRAFT PRODUCTS, INC., 703 McCarter Highway,
Newark 5, N. J. ADV. PG. 526.
Moore Co., Howard J., 266 William St., New York 38,

N. Y. Parisian Novelty Co., 3510 South Western Ave., Chicago

9, III. Penn Fibre & Specialty Co., 2020 E. Westmoreland St.,

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 34, Pa.
Polymer Corp., The, Reading, Pa.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 471.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 66.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.

Smith, Inc., Herman H., 436 18th St., Brooklyn 15, Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda,

N. Y.
Stronghold Screw Products, Inc., 216-222 W. Hubbard
St., Chicago 10, III.
Superior Steatite & Ceramic Corp., 32-49 Gale Ave.,
Long Island City 1, N. Y.
SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG.

499.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 510.
U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.
WILMAD GLASS CO., INC., Landisville, N. J. ADV. PG. 486.

PG. 486.
Wilmington Fibre Specialty Co., P. O. Drawer 1028,
Wilmington 99, Del.
Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee

# WASHERS-Lock

Allmetal Screw Products Co., Inc., 33 Greene St., New Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa.
American Nut & Bolt Fastener Co., 2045 Doerr St.,
Pittsburgh 33, Pa.
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. 342.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn. FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, III. ADV. PG. 498. Ferner Co., R. Y., 110 Pleasant St., Malden, Mass. Garrett Co., Inc., George K., D & Tioga Sts., Philadel-phia 34, Pa

Garrett Co., Inc., George K., D & Tioga Sts., Philadelphia 34, Pa.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG. 120.
Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.
INSULINE CORP. 0F AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 477.
METAL TEXTILE GORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 180.
National Lock Washer Co., 40 Hermon St., Newark 5, N. J.

N. J.

Philadelphia Steel & Wire Corp., Penn St. & Belfield Ave., Philadelphia, Pa.

Positive Lock Washer Co., 181 Miller St., Newark, N. J.

Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.

Ryerson & Sons, Inc., J. T., Box 8000-A, Chicago, III.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Shakeproof, Inc., Div. of Illinois Tool Wks., 2501 N.

Keeler Ave., Chicago 39, III.

Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.

Standard Locknut & Lockwasher, Inc., 510 N. Capitol Ave., Indianapolis, Ind. Star Stainless Screw Co., 206 Union Ave., Paterson 2,

Sterling Bolt Co., 363-405 W. Erie St., Chicago 10,

III. Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, III.
Thompson-Bremer Co., 1640 W. Hubbard St., Chicago,

Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

#### WATTMETERS

See Instruments-Electrical Measuring

#### WAVEGUIDE TEST EQUIPMENT

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, 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. 324, 325.

KINGS ELECTRONICS, 40 Marhledale Rd., Tuckahoe, N. Y. ADV. PG. 144, 145.

KINGS MICROWAVE CO., INC., 7.3 Main St., New Rochelle, N. Y. ADV. PG. 142, 143.

Lerner Instrument & Electronic Mfg. Corp., 47-49 Bergen St. Brooklyn 2 N. Y. St., Brooklyn 2, N. Y.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 232,

Resdel Engineering, 2309 Riverside Drive, Los Angeles 39, Calif SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 139, 140. Technicraft Laboratories, Inc., Thomaston-Waterbury Rd.,

Thomaston, Conn.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 311. Torngren Co., Inc., C. W., 236 Pearl St., Somerville Waveline, Inc., North Caldwell, N. J

## WAVEGUIDES

C—Combination Rigid & Flexible Type F-Flexible Type R-Rigid Type

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 464. R
AIRTRON, INC., 25 E. Elizabeth Ave., Linden, N. J.
ADV. PG. 360.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
Autel Electronics Co., 1946 Farmingdale Rd., Westfield, R N. J.

BART LABORATORIES, CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 406.

BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 335.

Reper St., Broadway, Glendale 4, Calif.

Representation of the control of the con Calif.

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island
C-R
City I, N. Y.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,
C-Riff
Calif. Calif.

ELECTRO PRECISION PRODUCTS, INC., 119-01 22nd
Ave., College Point, N. Y. ADV. PG. 431. C-R
Industrial Products Co., Danbury, Conn. RINGS ELECTRONICS, 40 Marbledale Rd., Tuckahoe,
N. Y. ADV. PG. 144, 145.
KINGS MICROWAVE CO., INC., 719 Main St., New
Rochelle, N. Y. ADV. PG. 142, 143. C-F-R
Lerner Instrument & Electronic Mfg. Corp., 47-49 Bergen
St., Brooklyn 2, N. Y. C-F.

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80.
Model Engineering & Mfg., Inc., Huntington, Ind. R
N. R. K. MFG. & ENGINEERING CO., 4601 W. Addison
St., Chicago 41, III. ADV. PG. 522.
Resdel Engineering, 2309 Riverside Drive, Los Angeles 39,
C-F-R Resdel Engineering, 2309 Riverance Clift, C-F-R Calif.

Calif.

Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.

SQUARE ROOT MFG. CORP., 391 Saw MIII River Rd., Corp., C Technicratt Laboratories, Inc., Inomaston-Waterbury Kor., Thomaston, Conn.

C.F.R.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 311.

R
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J.
ADV. PG. 399.

C.F-R
Mass.
F-R Waveline, Inc., North Caldwell, N. J. C-R 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, III.
MITCHELL-RAND INSULATION CO., INC., 51 Murray
St., New York 7, N. Y. ADV. PG. 177.

#### WIRE (for Magnetic Recording)

American Electric Cable Co., 181 Appleton St., Holyoke, wass.
Fidelitone, Inc., 1616 Devon Ave., Chicago 26, Ill.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, Ill. ADV. PG. 120.
Indiana Steel & Wire Co., 700 Council St., Muncle, Ind.
Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston,

Recordisc Corp., 395 Broadway, New York, N. Y. Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago

#### WIRE-Aluminum

ADVANCE INSULATED WIRE & CABLE CO., INC., 72
Woolsey St., Irvington, N. J. ADV. PG. 460.
Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York

Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
Columbia Wire & Supply Co., 2850 Irving Park Rd.,
Chicago 18, III.
CRESCENT CO., INC., Front & Central Ave., Pawtucket,
R. I. ADV. PG. 36.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp., 420 Lexington Ave., New York 17,
N. Y.

N. Y.
HUDSON WIRE CO., OssinIng, N. Y. ADV. PG. 231.
Indiana Steel & Wire Co., 700 Council St., Muncle, Ind.
Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway,
Oakland 12, Calif.
Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1,

Little Falls Alloys, Inc., 2.00
N. J.
North American Philips Co., Inc., 100 E. 42nd St.,
New York 17, N. Y.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
United States Rubber Co., 1230 Avenue of the Americas,
New York 20, N. Y.

#### WIRE-Annunciator

Anaconda Wire & Cable Co., 25 Broadway, New York 4, BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 277. Columbia V PG. 277.
Columbia Wire & Supply Co., 2850 Irving Park Rd.,
Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 138.

Diamond Wire & Cable Co., Sycamore, III.

Rhode Island Insulated Wire Co., Inc., Cranston, R. I.

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III.

United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

#### WIRE-Antenna

Alpha Wire Corp., 50 Howard St., New York, N. Y. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-cago 50, Ill. ADV. PG. 212.

Anaconda Wire & Cable Co., 25 Broadway, New York 4, Arygle Electronics Co., 8 W. 18th St., New York 11, BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N.Y. ADV. PG. 471.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV.

CHESTER CABLE CURP., Hill St., P. C. C., P. C. C., P. C. C., P. C

CORNISH WIRE CU., 50 Church St., New York 7, N. Y. ADV. PG. 138.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J., ADV. PG. 189-193. Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

General Cable Corp., 420 Lexington Ave., New York, N. Y.
N. Y.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 402, 403.
Jersey Specialty Co., Little Falls, N. J.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
PLASTOID CORP., 42-6124th St., Long Island City 1, N. Y. ADV. PG. 279.
Rome Cable Corp., 330 Ridge St., Rome, N. Y.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III.
Television Specialty Co., Haverstraw, N. Y.

# WIRE—Asbestos Insulated

American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.

Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Blake Co., Whitney, Dept. E, New Haven 14, Conn. CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 277. Collyer Insulated Wire Co., 249 Roosevelt Ave., Paw-Collyer Insulated wire co., tucket, R. I.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 211. General Cable Corp., 420 Lexington Ave., New York 17,

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
N. Y.
Holyoke Wire & Cable Co., Holyoke, Mass.
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
National Electric Products Co., 1356 Chamber of Commerce Bidg., Pittsburgh 30, Pa.
Okonite Co., Canal St., Passaic, N. J.
Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.

United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

# WIRE—Ceramic Insulated

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
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.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.

WIRE-Copper, Bare Alpha Wire Corp., 50 Howard St., New York, N. Y.
AMERICAN BRASS CO., 25 Broadway, New York 4,
N. Y. ADV. PG. 373.
Anaconda Wire & Cable Co., 25 Broadway, New York Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S.
Clinton St., Chicago 16, Ill.
Copperweld Steel Co., Glassport, Pa.
CORNISH WIRE Co., 50 Church St., New York 7, N. Y.
ADV. PG. 138.
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. 231.
National Electric Products Co., 1356 Chamber of Commerce Bidg., Pittsburgh 30, Pa.
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. York 5, N. Y.
Plume & Atwood Mfg. Co., 220 Broadway, New York,
N. Y. Roebling's Sons Co., John A., 640 Broad St., Trenton 2, ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 285.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III.
Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn. Standard Metals Corp., 262 Broad St., North Attleboro,

Mass.
Telegraph Construction & Maintenance Co., Ltd., Telecon Works, Greenwich, London, S.E. 10, England.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
Warren Wire Co., Pownal, Vt.

#### 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., 75

Woolsey St., Irvington, N. J. ADV. PG. 460.

Alpha Wire Corp., 50 Howard St., New York, N. Y.

American Electric Cable Co., 181 Appleton St., Holyoke,

Mass.

Mass.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. ADV. PG. 212.

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. 4, N. Y.
ANSONIA ELECTRICAL CO., 63 Main St., Ansonia, Conn.

ANSUNIA ELECTRICAL CO., 03 Main St., 1984 Apr. PG. 92.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.

Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

III.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
Blake Co., Whitney, Dept. E, New Haven 14, Conn.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St.,

Boston 125, Mass. ADV. PG. 475.

BRAND & CO., INC., William, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.

Carol Cable Co., 190 Middle St., Pawtucket, R. I.

Chase Brass & Copper Co., Inc., 236 Grand St., Water-

bury 20, Conn. CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 277. Collyer Insulated Wire Co., 249 Roosevelt Ave., Paw-

tucket, R. I.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York
22. N. Y. ADV. PG. 307.

COLUMBIA TECHNICAL CURP., 5 E. 37 III St., 1807 222, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd.,
Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S.
Clinton St., Chicago 16, III.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y.
ADV PG. 138.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 138.
CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.
Diamond Wire & Cable Co., Sycamore, III.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
Electro Wire Service, 5 Beekman St., New York 7, N. Y. Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. Flader, Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio. General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

General Cable Corp., 420 Lexington Ave., New Tork 17, N. Y. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, III. Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III. Hazard Insulated Wire Works Div., The Okonite Co., Wilbec-Rarre, Pa

Guthman Inc., Edwin 1., 10 S. Inroop St., Olineagy, I...
Hazard Insulated Wire Works Div., The Okonite Co.,
Wilkes-Barre, Pa.
Holyoke Wire & Cable Co., Holyoke, Mass.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 231.
Jersey Specialty Co., Little Falls, N. J.
Lenz Electric Mfg. Co., 1751 North Western Ave.,
Chicago 47, Ill.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
New England Electrical Works, Inc., Lisbon, N. H.
Okonite Co., Canal St., Passaic, N. J.
Paragon Electric Co., Two Rivers, Wis.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8,
Mass. ADV. PG. 175.
Phelps Dodge Copper Products Corp., 40 Wall St., New
York 5, N. Y.
Plastics Wire & Cable Corp., Jewett City, Conn.
PLASTOID CORP., 42-61 24th St., Long Island City 1,
N. Y. ADV. PG. 279.
Rea Magnetic Wire Co., Inc., E. Pontiac St., Fort
Wayne, Ind.
RFX CORP., 51 Lansdowne St., Cambridge 39, Mass.

Rea Magnetic Wire Co., Inc., E. Pulliac St., Political Wayne, Ind.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass.
ADV. PG. 377.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Riverside Electrical Mfg. Co., 10221 Michigan Ave.,
Dearborn, Mich.
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. 285.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III.
Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39. Mass.

Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn. Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn, N. Y.

N. Y.
SURPRENANT MFG. CO., 199 Washington St., Boston 8,
Mass. ADV. PG. 409.
Telegraph Construction & Maintenance Co., Ltd., Telcon
Works, Greenwich, London, S.E. 10, England.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St.,

TENSOLÎTE INSULÂTED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 458.

United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

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.

WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 491.

Whitaker Cable Corp., Kansas City 16, Mo.

#### WIRE—Cut and Stripped

Accurate Insulated Wire Corp., 25 Fox St., New Haven, ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 24. Mass. ADV. PG. 24.
American Electric Cable Co., 181 Appleton St., Holyoke,

Mass. Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.

Carol Cable Co., 190 Middle St., Pawtucket, R. I.

CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV.

CHESTER CABLE CORP., Hill St., Chester, N. T. ADV. PG. 277.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.
Electro Wire Service, 5 Beekman St., New York 7, N. Y.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Fidelity Chemical Products Corp., 472 Frelinghuysen Ave., Newark, N. J.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
Holyoke Wire & Cable Co., Holyoke, Mass.
Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, III.

47, III.
Lowell Insulated Wire Div., The Overlakes Corp., 171
Lincoln St., Lowell, Mass.
Mid-West Coil & Transformer Co., 1642 N. Halsted St.,
Chicago 14, III.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Riverside Electrical Mfg. Co., 10221 Michigan Ave.,
Dearborn, Mich.

Riverside Electrical Mfg. Co., 10221 Michigan Ave.,
Dearborn, Mich.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave.,
Chicago 41, III.
Sittler Corp., 18 N. Ada St., Chicago 7, III.
Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn,
N. Y.
Telectro Industries Corp., 35-18 37th St., Long Island
City 1, N. Y.

TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. town, N. Y. ADV. PG. 458. Products Co., 1535 N. Ashland Ave., Chicago

22, III.
Whitaker Cable Corp., Kansas City 16, Mo.

Acme Wire Co., New Haven 14, Conn. Alpha Wire Corp., 50 Howard St., New York, N. Y. Anaconda Wire & Cable Co., 25 Broadway, New York 4, Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342. Chase Brass & Copper Co., Inc., 236 Grand St., Water-

13, N. Y. ADV. PG. 342.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 486.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 211.
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. 231.
Instruments Wire Co., Guilford, Conn.
JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. ADV. PG. 494.
Lowell Insulated Wire Div., The Overlakes Corp., 171
Lincoln St., Lowell, Mass.
New England Electrical Works, Inc., Lisbon, N. H.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
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.

Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
Roebling's Sons Co., John A., 640 Broad St., Trenton

SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362. Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn. Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn,

N. Y.
Warren Wire Co., Pownal, Vt.
WHEELER INSULATED WIRE CO., INC., 150 (
Aurora St., Waterbury 91, Conn. ADV. PG. 491.

#### WIRE—Fine Wire Specialties

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago,

III.
Acme Wire Co., New Haven 14, Conn.
Alloy Metal Wire Co., 13th & Penna. Ave., Prospect

Park, Pa.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa. CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV.

PG. 277.
COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 486.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
Copperveld Steel Co., Glassport, Pa.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 211.

DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 211.

DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 108.

Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, III.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

HAYDU BROTHERS, Plainfield, N. J. ADV. PG. 293.
Holyoke Wire & Cable Co., Holyoke, Mass.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 231.
Improved Seamless Wire Co., 775 Eddy St., Providence

5, R. I.
Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
JELLIFF MFG. CORP., C. 0., 200 Pequot Ave., Southport, Conn. ADV. PG. 494.
LEE MECHANICAL LABORATORIES, 30 Main St.,
Brooklyn, 1, N. Y. ADV. PG. 365.
Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1,

N. J.
Lowell Insulated Wire Div., The Overlakes Corp., 171
Lincoln St., Lowell, Mass.
New England Electrical Works, Inc., Lisbon, N. H.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV.
PG. 465.
North American Philips Co., Inc., 100 E. 42nd St.,
New York 17, N. Y.

York 17, N. Y. FG. CO., INC., 24 Bedford St., Newark, N. J.

PIX MrG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 160. Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne,

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III. SECON METALS CORP., 228 E. 45th St., New York 17,

SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 409.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 458.
Universal Chain Co., 92 Burnett Ave., Maplewood, N. J. Warren Wire Co., Pownal, Vt.

#### WIRE—Glass Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven,

Conn

Acme Wire Co., New Haven 14, Conn.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
American Electric Cable Co., 181 Appleton St., Hol-

American Electric Caple Co., 101 Application St., yoke, Mass.

American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.

Anaconda Wire & Cable Co., 25 Broadway, New York,

4, N. Y.
BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York

1, N. Y. ADV. PG. 471.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St.,

Boston 52, Mass. ADV. PG. 475.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV.

PG. 277.

COLUMBIA TECHNICAL CORP., 5 E 57th St., New York 22, N. Y. ADV. PG. 307.

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.

DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. DDV PG. 211

N. J. ADV. PG. 211.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp, 420 Lexington Ave., New York 17,
N. Y.

Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
Holyoke Wire & Cable Co., Holyoke, Mass.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 231.
Lenz Electric Mfg., 1751 North Western Ave., Chicago 47, III.

Engineering Co., 52 Rubber Ave., Naugatuck,

Lewis Engineering Co., 52 Robots
Conn.
Okonite Co., Canal St., Passaic, N. J.
Phelps Dodge Copper Products Corp., 40 Wall St., New
York 5, N. Y.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Roebling's Sons Co., John A., 640 Broad St., Trenton 2,
N. J.

N. J. ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 285.

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave.,

Chicago 41 III Supreme Wire & Cable Inc., 1370 Raiph Ave., Brooklyn,

N. Y. SURPRENANT MFG. CO., 199 Washington St., Boston, Mass. ADV. PG. 409.

#### WIRE-Guy

Alpha Wire Corp., 50 Howard St., 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. 342.
Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank Calif.

Clear Beam Television Antenna Co., Burbank, Calif.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
Copperweld Steel Co., Glassport, Pa.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y.

CORNISH WIRE CU., 50 Church St., New York 7, N. Y.
ADV. PG. 138.
GENERAL CEMENT MFG. CO., 919 Taylor Ave., Rockford, III. ADV. PG.. 120.
Indiana Steel & Wire Co., 700 Council St., Muncie,

Ind.
JFD MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
Locke Dept. of General Electric Co., P. O. Box 57,
Baltimore 3, Md.
National Electric Products Co., 1356 Chamber of
Commerce Bldg., Pittsburgh 30, Pa.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles
18, Calif.
South River Metal Products Co., Inc., 377-379 Turnpike,
South River, N. J.

#### WIRE—High Voltage

Alpha Wire Corp., 50 Howard St., New York, N. Y. Anaconda Wire & Cable Co., 25 Broadway, New York 4. BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471. Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St.,

Boston 25, Mass. ADV. PG. 475.

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.

Carol Cable Co., 190 Middle St., Pawtucket, R. I.

Chase Brass & Copper Co., Inc., 236 Grand St., Water-

bury 20, Conn. CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York

22, N. Y. ADV. PG. 307. Columbia Wire & Supply Co, 2850 Irving Park Rd, Chi-

Columbia Wire & Supply Co, 2850 Irving Park Ro, Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S.
Clinton St., Chicago 16, III.
Copperveld Steel Co., Glassport, Pa.
CRESCENT CO., INC., Front & Central Ave., Pawtucket,
R. I. ADV. PG. 36.
General Cable Corp., 420 Lexington Ave., New York 17,
N. Y.

N. Y. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

Providence 5, R. I.

Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.

Plastic Wire & Cable Corp., Jewett City, Conn.

Rhode Island Insulated Wire Co., Inc., Cranston, R. I.

Roebling's Sons Co., John A., 640 Broad St., Trenton

2, N. J. Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn, N. Y. N. Y. SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 409. Warren Wire Co., Pownal, Vt. Whitaker Cable Corp., Kansas City 16, Mo.

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
ADVANCE INSULATED WIRE & CABLE CO., INC., 72
Woolsey St., Irvington, N. J. ADV. PG. 460.
ALDEN PRODUCTS CO., 112 W. Main St., Brockton
64, Mass. ADV. PG. 24.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
American Electric Cable Co., 181 Appleton St., Holyoke,
Mass.

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471. Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

III.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay
St., Boston 25, Mass. ADV. PG. 475.
BRAND & CO., INC., WILLIAM, 104 Valley St., WIIIImantic, Conn. ADV. PG. 166, 167.
CHESTER CABLE CORP., HIII St., Chester, N. Y. ADV.
PG. 277.

PG. 277. Clear Beam Television Antenna Co., 100 Prospect Ave.,

Burbank, Calif.
Iumbia Wire & Supply Co., 2850 Irving Park Rd.,
Chicago 18, III. Columbia

Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S.

Consolidated Wire & Associated Companies, 2030 C. Clinton St., Chicago 16, Ill.
Copperweld Steel Co., Glassport, Pa.
CORNISH WIRE CO., 50 Church St., New York 7,
N. Y. ADV. PG. 138.
Diamond Wire & Cable Co., Sycamore, 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.

Leneral Electric Co., Construction Materials Div.,
1285 Boston Ave., Bridgeport, Conn. ADV. PG. 1-23.
Holyoke Wire & Cable Co., Holyoke, Mass.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn,
N. Y. ADV. PG. 402, 403.
Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, III.
Lowell Insulated Wire Div., The Overlakes Corp., 171
Lincoln St., Lowell Mass.

Lincoln St., Lowell, Mass. PHALO PLASTICS CORP., 25 Forter St., Worcester 8, Mass. ADV. PG. 175. Philadelphia Insulated Wire Co., 220 N. 3rd St., Phila-

Philadelphia Insulated Wire Co., 220 Nr. 310 36, Finandelphia, Pa.
Plastic Wire & Cable Corp., Jewett City, Conn.
PLASTOID CORP., 42-61 24th St., Long Island City
1, N. Y. ADV. PG. 279.
REX CORP., 51 Landsdowne St., Cambridge 39, Mass.
ADV. PG. 377.
Rhode Island insulated Wire Co., Inc., Cranston, R. I.
Rockbestos Procducts Corp., 285 Nicoli St., New Haven

4, Conn.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y.
ADV. PG. 285.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave.,
Chicago 41, III.
Sequola Process Corp., Redwood City, Callf.
Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn,

N. Y.
SURPRENANT MFG. CO., 199 Washington St., Boston
8. Mass. ADV. PG. 409.

SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 409.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 458.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
Warren Wire Co., Pownal, Vt.
Whitaker Cable Corp., Kansas Clty 16, Mo.

#### WIRE-Litz

Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, BRAND & CO., INC., WILLIAM, 104 Valley St., WIIII-

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, III.
Holyoke Wire & Cable Co., Holyoke, Mass.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 231.
Instruments Wire Co., Guilford, Conn.
New England Electrical Works, Inc., Lisbon, N. H.
Philadelphia, Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.

delphia, Pa.
Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn

#### 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.

4, N. Y. Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,

III.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York
13, N. Y. ADV. PG. 342.
BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 312, 313.
Chase Brass & Copper Co., Inc., 236 Grand St., Water

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 307.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S. Ciinton St., Chicago 16, III.
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, Conn. ADV. PG. 1-23. Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, III. HUDSON WIRE Co., Ossining, N. Y. ADV. PG. 231. Instruments Wire Co., Guilford, Conn. Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif. Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass. National Electric Products Co., 1356 Chamber of Commerce Bidg., Pittsburgh 30, Pa. New England Electrical Works, Inc., Lisbon, N. H. 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.

Phelis Bodge copper Frouncis 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,

Rockbestos Products Corp., 285 Nicoll St., New Haven 4,

Roebling's Sons Co., John A., 640 Broad St., Trenton 2,

N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y.
ADV. PG. 285.
Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
Warren Wire Co., Pownal, Vt.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
St., Waterbury 91, Conn. ADV. PG. 491.

# WIRE—Molybdenum

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

Fansteel Metallurgical Corp., 2200 C., Chicago, III.
Murex, Ltd., Rainham, Essex, England.
North American Philips Co., Inc., 100 E. 42nd St., New York 17. N. Y.

York 17, N. Y.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
New York 19, N. Y. ADV. PG. 552-558.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### WIRE—Nickel Clad Copper

Alloy Metal Wire Co., 13th & Penna. Ave., Prospect Park, DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J.

ADV. PG. 211.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
Improved Seamless Wire Co., 775 Eddy St., Providence

5, R. I. Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1,

Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.

Standard Metals Corp., 262 Broad St., North Attleboro,

Mass.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578,
Pittsburgh 30, Pa. ADV. PG. 109-115.

#### WIRE-Phosphor Bronze

Alpha Wire Corp., 50 Howard St., New York, N. Y. Anaconda Wire & Cable Co., 25 Broadway, New York 4,

N. Y. BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. AV. PG. 342. Chase Brass and Copper Co., Inc., 236 Grand St., Water-

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, III.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 231.
Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1,

Phosphor Bronze Ccrp., 20 Franklin St., Seymour, Conn. Riverside Metal Co., Riverside, N. J. Scovill Manufacturing Co., Waterbury 20, Conn.

# WIRE—Plastic Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven,

Conn.
ADVANCE INSULATED WIRE & CABLE CO., INC., 72
Woolsey St., Irvington, N. J. ADV. PG. 460.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
American Electric Cable Co., 181 Appleton St., Holyoke,

Mass.
American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
ANSONIA ELECTRICAL CO., 63 Main St., Ansonia, Conn.

BEAM INSTRUMENT CORP., 350 Fifth Ave., New York

BEAM INSTRUMENT CORP., 350 Fifth Ave., New York 1, N. Y. ADV. PG. 471.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 342.
Blake Co., Whitney, Dept. E., New Haven 14, Conn.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 475.
BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 277.

Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket. R. I.

tucket, R. I.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22. N. Y. ADV. PG. 307.

Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.

Chicago 18, III.
Consolidated Wire & Associated Companies, 1635 S.
Clinton St., Chicago 16, III.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y.
ADV. PG. 138.
CRESCENT CO., INC., Front & Central Ave., Pawtucket,
R. I. ADV. PG. 36.
Diamond Wire & Cable Co., Sycamore, III.
Electro Wire Service, 5 Beekman St., New York 7, N. Y.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
Flader, Inc., Frederic, 1330 Laskey Rd., Toledo 12,
Ohio.
General Cable Communications

General Cable Corp., 420 Lexington Ave., New York 17,

Ohio.
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.
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.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 175.
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. 279.
REX CORP., 51 Landsdowne St., Cambridge 39, Mass. ADV. PG. 377.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
Roebling's Sons Co., John A., 640 Broad St., Trenton

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. 285.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III.
Sequela Process Corp., Redwood City, Calif.

Sequoia Process Corp., Redwood City, Calif. Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn,

Supreme Wre & Cable Inc., 1370 Raipin Ave., Brooklyii, N. Y.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 409.

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. 458.

U. S. GASKET CO., Fluorocarbon Products Div., P. O. Box 93, Camden, N. J. ADV. PG. 472.

United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

Whitaker Cable Corp., Kansas City 16, Mo.

#### WIRE—Platinum

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 76.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Bishop & Co., J., Platinum Works, Malvern, Pa.
COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt.
Vernon, N. Y. ADV. PG. 486.
Eastern Smelting & Refining Corp., 107-109 W. Brook-

line St., Boston 18, Mass.
GENERAL PLATE DIVISION, Metals & Controls Corp.,
Attleboro, Mass. ADV. PG. 270.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash
Ave., Chicago 2, III.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16,

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG.

Samuel & Co., Inc., J. A., 220 Broadway, New York 38,

N. Y.
SECON METALS CORP., 228 E. 45th St., New York 17,
N. Y. ADV. PG. 362.
Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, III.
Wildberg Bros., Smelting & Refining Co., 742 Market
St., San Francisco 2, Calif.
Wilson Co., H. A., The, 105 Chestnut St., Newark 5,

# WIRE—Resistance and Filament

Alloy Metal Wire Co., 13th & Penna. Ave., Prospect American Electric Cable Co., 181 Appleton St., Holyoke, American Electric Vaure vo., 103-117.

Mass.

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.

COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt.

Vernon, N. Y. ADV. PG. 486.

Columbia Wire & Supply Co., 2850 Irving Park Rd.,

Chicago 18, III.

DRIVER CO., WILBUR B., 150 Riverside Ave., Newark

4, N. J. ADV. PG. 108.

DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J.

ADV. PG. 211.

ADV. PG. 211. Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

JELLIFF MFG. CORP., C. O., 200 Pequot Ave., South-port, Conn. ADV. PG. 494. Kanthal Corp., Amelia Pl., Stamford, Conn. NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
SECON METALS CORP., 228 E. 45th St., New York 17,

N. Y. ADV. PG. 362.
Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.

#### WIRE—Shielded

Accurate Insulated Wire Corp., 25 Fox St., New Haven,

Conn.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
Mass. ADV. PG. 24.
Alpha Wire Co., 50 Howard St., New York, N. Y.
American Electric Cable Co., 181 Appleton St., Holyoke,

Ananconda Wire & Cable Co., 25 Broadway, New York 4,

ANSONIA ELECTRICAL CO., 63 Main St., Ansonia, Conn. ADV. PG. 92. BEAM INSTRUMENTS CORP., 350 Fifth Ave., New York

Boston 185, Mass. ADV. PG. 475.

BRAND & CO., INC., WILLIAM, 104 Valley St., Willimantic, Conn. ADV. PG. 166, 167.

Carol Cable Co., 190 Middle St., Pawtucket, R. I.

CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV.

CHESTER CABLE CURP., Fill St., Closs., P. P. C. 277.
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. 138.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 138.
CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.
Diamond Wire & Cable Co., Sycamore, III.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind. General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

N. Y. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. Hazard Insulated Wire Works Div., The Okonite Co.,

Hallett Wirg. Co., 1601 Florence Ave., Instruction Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
Holyoke Wire & Cable Co., Holyoke, Mass.
Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, III.
Lowell Insulated Wire Div., The Overlakes Corp., 171
Lincoln St., Lowell, Mass.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 175.
Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 377.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III. SURPRENANT MFG. Co., 199 Washington St., Boston

SURPREMANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 409.
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. 458.
Transradio, Ltd., 138 A Cromwell Rd., London S. W. 7, England England.

Uniform Tubes, Level Rd., Collegeville 2, Pa.
U. S. GASKET CO., Fluorocarbon Products Div., P. O.
Box 93, Camden, N. J. ADV. PG. 472.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave.,
Clifton, N. J.
Whitaker Cable Corp., Kansas City 16, Mo.

#### WIRE—Silver Plated

American Electric Cable Co., 181 Appleton St., Holyoke, Carol Cable Co., 190 Middle St., Pawtucket, R. I. CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV.

CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 36.
Eastern Smelting & Refining Corp., 107-109 W. Brook-

line St., Boston 18, Mass.

HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 231.

Improved Seamless Wire Co., 775 Eddy St., Providence

5, R. I. Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, III. Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 80. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 362. Standard Metals Corp., 262 Broad St., North Attleboro,

Mass. SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 409. Wilson Co., H. A., The, 105 Chestnut St., Newark 5,

#### WIRE—Stainless Steel

Allegheny Ludlum Steel Corp., HW Oliver Bldg., Pitts-burgh 22, Pa. Alloy Metal Wire Co., 13th and Penna. Ave., Prospect

Park, Pa.

American Steel & Wire Co., Div., U. S. Steel Co.,
Rockefeller Bldg., Cleveland 13, Ohio.

Carol Cable Co., 190 Middle St., Pawutcket, R. I.

Carpenter Steel Co., The, 142 West Bern St., Reading,

Pa. — CRUCIBLE STEEL CO. OF AMERICA, 405 Lexington Ave., New York 17, N. Y. ADV. PG. 281.

DRIVER CO., WILBUR B., 150 Riverside Ave., Newark, N. J. ADV. PG. 108.

DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 211.

Indiana Steel & Wire Co., 700 Council St., Muncie, Ind. Republic Steel Corp., Republic Building, Cleveland 1, Ohio.

Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, III. 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, III.

#### WIRE—Tungsten

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.

Murex Ltd., Rainham, Essex, England.

North American Philips Co., 100 E. 42nd St., New York 17, N. Y.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 552-558. WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.

#### WIRE STRIPPERS

See Machines, Wire Stripping

#### WOOFERS

See Loudspeakers

# X-RAY EQUIPMENT-Industrial

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32,

Central Research Laboratories, Inc., Red Wing, Mich. Dallons Labs., 5066 Santa Monica Blvd., Los Angeles,

Calif.
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass.
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.
St. John X-Ray Laboratory, Califon, N. J.
Triplett & Barton, Inc., 831 N. Lake St., Burbank, Calif.

Calif.
WESTINGHOUSE ELECTRIC CORP., P. 0. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
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. Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London W. C. 2, England.
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.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 5578, Pittsburgh 30, Pa. ADV. PG. 109-115.
X-Ray Dept of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

#### YOKES-DEFLECTION

Alpha Electronics, Inc., 53-57 Bergen Turnpike, Little

Ferry, N. J. Cleveland Electronics, Inc., 6611 Euclid Ave., Cleve-

land, Ohio.

DX RADIO PRODUCTS CO., INC., 2300 Armitage Ave., Chicago 47, III. ADV. PG. 294.

DuMont Laboratories, Inc., Allen B., Television Receiver Div., Electronics Parts Dept., 35 Market St., East Paterson, N. J.

Electro Engineering & Míg. Co., 627 W. Alexandrine Ave., Detroit 1, Mich.

GIARDIAN ELECTRIC MEG. CO. 2621 W. Walnut St.

Ave., Detroit 1, Mich.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St.,
Chicago 12, III. ADV. PG. 202.

Guthman Inc., Edwin I., 15 S. Throop St., Chicago, III.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Phila-

delphia 30, Pa.

Joyner Corp., 462 N. Parkside Ave., Chlcago 44,
Merit Transformer Corp., 4427 N. Clark St., (
40, III. Monroe Coil Co., 2839 N. Narragansett Ave., Chicago 34,

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. Philmore Mfg., Co., Inc., 113 University Place, New York 3, N. Y.

York 3, N. Y.
Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
RAMTHEON MFG. CO., Equipment Sales Div., Waltham
54, Mass. ADV. PG. 336, 337.
Rola Co., Inc., 2530 Superior Ave., Cleveland 14, Ohlo.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
Senn Corp., New Augusta, Ind.
Sickles, F. W., Div., General Instrument Corp., 165
Front St., Chicopee, Mass.
Standard Transformer Corp., Elston, Kedzie & Addison,
Chicago 18, III.
T V Products Corp., 907 E. 23rd St., Paterson, N. J.
Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave.,
Los Angeles 37, Calif.
Felectron Co., The, 4019 Prospect Ave., Cleveland 3,
Ohlo.

Teleradio Engineering Corp., 99 Wall St., New York

5, N. Y. Teletran Corp., Ramsey, N. J. Tel-Rad Mfg. Co., Inc., 7th & Madison St., Fennimore,

Telvision Laboratories, Inc., 5045 W. Lake St., Chicago Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif.



# 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-147. 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.

Surprenant Mfg. Co. A" NICKEL International Nickel Co., Inc. A BAR E Amalgamated Electronics ABRASO Roebling's Sons Co., John A.
ACA
Amplifier Corp. of America Industrial Nucleonics Corp.
ACCWIRE Accutrate Insulated Wire Corp. American Hard Rubber Co. Arro Expansion Bolt Co.
ACME-MOLD Acme Wire Co. Brush Development Co.
ACRAWAX C Giyco Products Co., Inc., ACROCEL Acromark Co., ACROCUT Acromark Co. Electric Heating Co. Acme Ele Acromark Co. Plastics Co., Inc. ACROGRAVE ACROMANE
ACROMEX
ACROMANE
ACROMANE
ACROMANE
ACROMANE
ACROMANE ACRO-INK ACROM Co. Acme Electric Heating Co. ACROMARKER Acromark Co. ACRO PLAC Acromark Co. ACROPRINTER ACROSNAP Acro Electric Co. ACROSOUND Acro Products Co.
ACROTOL
ACROVISION
Acro Products ACRYWELD American Phenolic Corp.
ACTONE Acton Co., H. W. ACTRON Radionic Transformer Co. ADAPTORS

ABC Radio Labs.

ADASHAFT Centralab Div. of Globe-Union, Inc. 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. Adams & Westfake Co. ADVANCETRON Advance Electronics Corp. American Electroneering Co.
ADVANCE

Driver-Harris Co. AECO

American Electric Cable Co.
AERIOTRON

Westinghouse Electric Corp.

Aeronautical Communications Equipment AEROCON Aerovex Corp. Shallcross Mfg. Co.
AEROFLEX
Anchor Industrial Co.
AEROFLEX Archer Plastics Co., Inc. AEROHEAD Giamini & Co., Inc., G. M. AEROLENE AERO-MAGNETTE Heinemann Electric Co. AERO SEAL AERO-THREAD Cook Electric Co. AEROTRON Aeronautical Electronics, Inc. AEROVANE Air Control Installations, Lid. A'G'A'

Elastic Stop Nut Corp of America

AGWADAG

Acheson Colloids Corp.

AH Arrow-Hart & Hegeman Electric Co. American Insulator Corp.
AIRACOUSTIC Johns-Manrille Sales Corp. Witchell Industries, Inc. AIRCORE Communication Products Co., Inc. AIRFLEX AIR GENERAL AIR INDUCTORS Barker & Williamson
AIR KING AIR-METER Hastings Instrument Co AIRSCOOT AIRSCOOL
Mitchell Industries,
AIR SPECIAL
Brach Mig. Corp.
AIPSTAT
Minneapolis-Honeywell Regulator Co.
Regulator Co. Minneapolis-Honeywell Regulator Co.
AIRTURN
Barber-Colman Co
AKRAOHM
Shaller Shellcross Mig. Co. du Pont de Hemours & Co., Inc., E. I. ALCOA ALCOA
Aluminum Company of America
ALCROHM Magnetic Metals Co.
ALCUPLATE
General Plate Division,
Metals & Control Corp.
ALFERON
Driver-V Driver-Harris Co.
ALGCO
Auburn Manufacturing Co. ALL-HYDRAULIC Hydraulic Press Mfg. Co. ALL-METL

Alloy Metal Wire Co. Arnold Engineering Co.
ALNICO Crucible Steel Co. of America ALNOR ALNOR
Illinois Testing Labs., Inc.
ALODINE ALPHATRON
Canadian Radium & Uranium Corp.
ALPHATRON Standard-Toch Chemicals, Inc.
ALRAY Alloy Metal Wire Co. ALROK
Aluminum Co. of America
ALSCO
Automatic Switch Co.
ALSIMAG
American Lava Corp.
ALSPLATE
General Plate Division,
Metals & Controls Corp.
ALUMATREET
Farmillor Co. ALUMAWELD Johnson Mig. Co., Inc.
ALUMILITE
Aluminum Co. of America
ALUNDUM num Co. of America American Instrument Co. AMBERYL AMCO Products Co. American Solder & Flor Co. American Condenser Co. American Electronics Corp.
AMERBESTOS AMERBESTOS
American Steel & Wire Co.,
U. S. Steel Corp., Sub.
AMERCLAD
American Steel & Wire Co.,
U. S. Steel Corp., Sub.
AMERFLEX
Blarco Industries
AMERGLASS
American Steel AMERICASS
American Steel & Wire Co.,
U. S. Steel Corp., Sub.
AMERICAN
Manning, Maxwell & Moore, inc.
AMERICAN BEAUTY cal Heater Co. American Electrical AMERINE American Insulator Corp. Electric Cable Co. AMERPLASTIC American Electric Cable Co. AMERSTRAND

American Steel & Wire Co.,
U. S. Steel Corp., Sub. AMERITAAN
American Transformer Co.
AMERITAAN Standard Electronics Corp.
AMINCO can Instrument Co. Westinghouse Electric Corp. General Cement Mfg. Co. Distillation Products Industries Div. of

Eastman Kodak Co.

AMPACET American Moiding Powder & Chemical Corp.

AMPCO Automatic Metal Products Co. Centralab Div.
Globe Union, Inc.
AMPEX Automatic Metal Products Co. AMPHENOL American Phenosic Corporation AMPLICALL Rapland-Borg Corp.
AMPLICORP
Amplifier Corp. of America
AMPLIFILM Aircraft Marine Products, Inc. Crystal Research Labs., Inc.
AMPLI-PRESS
Aircraft-Marine Products, Inc.
AMPLISET
Bristol Co., The
AMPLUG
Electroducts Electrodyne Co. At-Marine Products. Inc. AMPOLEX
Alected Marine Products, Inc. Aircraft-Marine Procucts, Inc.
AMPROSE
Pyramid Instrument Corp.
AMPTROL AMPTROL
Friez Instrument Div.
Bendix Aviation Corp.
AMPYROL
American Steel & Wire Corp.
U. S. Steel Corp., Sub.
AMRECON American fieldy & Controls, Inc. American Steel & Wire Co., U S Steel Corp., Sob. AMACONDA American Bratti Co.
AMADEL
Jeseph Dison Crucible Co.
ANGLE DRIVE James V Brapowr Co. AMKOSEAL Ambona Electrical Co. AMTELCO ANTELCO
Automatic Electric Co.
ANTEN-A-CATOR Gordon Specialities Co. ANTERNAPLEX Asido Corp. of America ANTENSIFIER Blonder T. Blonder-Tongue Laboratories, Inc. American Not & Bolt Fastener Co. APECO & Co. American Photocopy Equipment Co. APELCO Applied Electronics Co. Assembly Products, Inc. AQUALITE
Rational Vulcanized Fibre Co.
AQUALUX Westinghouse Electric Corp.
AQUAPLATE Co., Seman AQUATRATOR
Precision Scientific Co.
AQUATROL AQUATROL
Minneapolis-Honeywell Regulator Co.
AQUIFLUX
Special Chemicals Co.
A. R. C.
Aircraft Radio Corp.

Barry Corp.

Allen Mfg. Co.

Sheldon Electric Co.

D 54
Mallory & Co., Inc., P. R.
""P" NICKEL
International Nickel Co., Inc.
DAG
Acheson Colloids Co.
DAKA-WARE
Davies Molding Co., Harry
DALBAR
Electronic Enterprises DALBAR
Electronic Enterprises
DALE
Electronic Development Co.
DALMOTRON DALMOTRON
Dalmo Victor Co.
DALOHM
Dale Products, Inc.
DAMASCENE
Linick Chemical Co.
DAMASCITE
Amplex Div.
Chrysler Corp.
DANDEE
Aeroyox Corp. DANDEE
Aerovox Corp.
DA-NITE
Bendix Aviation Corp.
DASON
Davis & Co., J. W.
DAVENOIL
Daven Co.
DAVEY
Vibraces Co. Vibroscope Co. Daven Co.
DC SILICONES
Dow Corning Corp.
DE ARMOND Rowe Industries
DE FOREST
Radio Corp. of America
DECA SWEEP DECAL SWEEP
Decade Instrument Co.
DECALATOR
Decade Instrument Co.
DECASOL
Decimeter, Inc.
DECATRAN
Malco Products Inc. Melco Products, Inc. DECO
Dumont Electric Co.
DECOHM DECOHM
Davis Electric Co.
DEEMINITE
Crystal Research Labs., Inc.
DEEMINIZER
Crystal Research Labs., Inc.
DE-FROST-IT Paragon Electric Co.
DEHYDRA Wappler, Inc. Westinghouse Electric Corp.
DEKA-XTAL
Scientific Radio Products Co.
DELTABESTON DELTABESTON
General Electric Co.
DELTAMAX
Allegheny Ludlum Steel Corp.
DELTAMAX
Arnold Engineering Co.
DEMCO DEMCO
Dormitizer Electric Co., Inc.
DENSICHRON
Welch Scientific Co., W. M.
DENSITE
West Virginia Pulp & Paper Co.
DEOXIDINE
American Chemical Paint Co.
DEOXO
Baker & Co. DEOXO
Baker & Co., Inc.
DEPTHOMETER
Bludworth Marine Div.
National-Simplex-Bludworth, Inc. DESCO DESCO
Dietz Design & Mfg. Co.
DETECT-A-FIRE
Fenwal, Inc.
DETECTOMETER
DIllon & Co., Inc., W. C.
DETERMOHM
Obside Mfg. Co. DETERMOHM
Ohmite Mfg. Co.
DEW POINTER
Illinois Testing Labs., Inc.
DIABO
Tibbetts Industries, Inc.
DIACLOR
Sangamo Electric Co.
DIACONE
Alter Lagrice Co. Altec Lansing Corp.
DI-ACRO O'Neil Irwin Mfg. Co.
DIAL
Nebel Lab., R. E. DIALCO Dial Light Co. of America 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., General Instrument
Corp., F. W.
DIAMONTINE Linick Chemical Co.
DIAPHLEX
Cook Electric Co.
DIATRON DIATRON
Consolidated Engineering Corp.
DICHROIC
Liberty Mirror Div.,
Libbey-Owens Ford Glass Co.
DICO
Diamond Mfg. Co.
DICTABELT
Dictaphone Corp.
DICTACORD
Dictaphone Corp. Dictaphone Corp.
DIEFLEX
Insulation Manufacturers Corp.
DIEGRAF Grafo Colloids Corp.
DIELITE Wirt Co. DI-FAN Andrew Co. DIFFERENTIAL Electro-Voice, Inc. DI-FORMED Precision Paper Tube Co. DILECTO
Continental Diamond Fibre Co.
DI-MAX
Armco Steel Corp.
DIMMERETTE
Ward Leonard Electric Co.
DIPLOIT
Dielectric Materials Co.
DIP PAK
Fidelity Chemical Products Corp.
DIPWITE
Special Chemicals Co. DIPWITE
Special Chemicals Co.
DIPWRAP
Paisley Products Inc.
DIRECT-DRIVE
Shure Brothers, Inc.
DISCALOY
Westinghouse Flectric Westinghouse Electric Corp.
DISCAPS
Radio Materials Corp.
DISCOHM
Ward Leonard Electric Co.
DISKCHANGERS
Webster-Chicago Corp. Webster-Chicago Corp.
DISPATCHER
Motorola Inc.
DISPLAY KING
Gale Dorothea Mechanisms
DIVCO Division Lead Co. DIVERSE-ADAPTOR DIVERSE-ADAPTOR
Decimeter, Inc.
DIVIDOHM
Ohmite Mfg. Co.
DIXONAC
DIXON Crucible Co., Joseph
DOBRO Valco Mfg. Co. Valco Mfg. Co.
DOG
Radio Corporation of America
DOLFLEX
Dolph Co., John C.
DONUT Associated Research Inc. Belling & Lee, Ltd.
DOSIMETER Instrument Development Labs. DOT
United-Carr Fastener Corp.
DOUGLAS
British Industries Corp.
DOWMETAL Dow Chemical Co. DPR Hardman Co., Inc., H. V. D. R. C.
Davco Radio Corp.
DRIMETER
Fielden Electronics Inc.
DRI.N-TITE 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
Aeroyox Corp. Aerovox Corp.
DUAL-DRUM Gorrell & Gorrell
DUAL-HORN Brociner Electronics Laboratory
DUART
Mass & Waldstein Co.
DUBL-VEE Workshop Associates,
Div. of The Gabriel Co.
DUBL-X Telrex, Inc. du Pont de Nemours & Co., Inc., E. I.
DULAC
Mass & Waldstein Co.

DULUX du Pont de Nemours & Co., Inc., E. 1. DUOCARB Driver Co., Wilbur B. Duotone Co., Inc. DUOCREX
Horn Co., Inc., A. C.
DUODIAL
Helipot Corp.
DUODISC
Duotone Co., Inc.
DUO-FLEX
Dumore Co., The
DUOLITE
Dittsburgh Plate Glass Pittsburgh Plate Glass Co.
DUO-PULSATOR
Fischer & Co., R. A.
DUO-PULSE Automatic Temperature Control Co., Inc. DUOSCALE Tracerlab, Inc. Welch Scientific Co., W. M. DUOSONIC Sonic Industries, Inc. DUO-SPEED POU-SPEED
Pentron Corp.
DUO-SPEED
V-M Corp.
DUOTAPE
Duotone Co., Inc.
DUPLATE
Pitteburgh Plant Pittsburgh Plate Glass Co.
DUPLEX
Altec Lansing Corp.
DUPY Inet, Inc. DURALINE
Universal Drafting Machine Corp.
DURALON U. S. Stoneware Co.
DURANICKEL
International Nickel Co., Inc.
DURANITE
Aerovox Corp.
DURASHIELD
Plastic Sabricators Co. DURASHIELD
Plastic Fabricators Co.
DURATAPE
Rahm Instruments, Inc.
DURATIP
Weller Mfg. Co.
DUATRON
Hoffman Corp., C. L.
DURITE Borden Co., Chemical Div. Rogers Corp.
DURO-BOND
Electro Chemical Engineering Co.
DUROID NURUID
Rogers Corp.
DURO-KOTE
Electro Chemical Engineering Co.
DURON Electro Chemical Engineering Co.
DURO-PRENE Electro Chemical Engineering Co.
DURO XXX
Electro Chemical Engineering Co.
DURPOINT Duotone Co., Inc. National Lead Co. National Lead Co.
D-XER
JFD Mfa. Co., Inc.
DX MASTERSPEAKERS
DX Radio Products Co., Inc.
DYEPRINT
Times Facsimile Corp.
DYKANOL
Cornell-Dubilier Electric Corp.
DYNACONE
Lord Mfa. Co. Lord Mfg. Co. DYNACORD Califone Corp.
DYNAFOCAL Lord Mfg. Co. DYNA-GAGE DYNA-GAGE
Photocon Research Products
DYNALOG
Foxboro Co., The
DYNAMASTER
Bristol Co., The
DYNA-METER Industrial Electronics, Inc.
DYNAMIC Jackson Electrical Instrument Co.
DYNA-MIKE
Industrial Electronics, Inc. DYNAPRENE Blake Co., Whitney DYNA-TACH Electric Tachometer Corp. DYNATHERM
American Diathermy Products, Inc.
DYNATONE
Crosley Corp. DYNAURAL
Scott, Inc., Herman Hosmer
DYNETRIC
Gisholt Machine Co. DYNETRIC
Westinghouse Electric Corp.

Offner Electronics, Inc.
DYNOID McQuay-Norris Mfg. Co. E A D
Eastern Air Devices, Inc.
"E" NICKEL
The International Nickel Co., Inc. F-V Electro-Voice, Inc. Electronic Associates, Inc. EARSET Telex, Inc. EASY-FLO Handy & Harman EBKOK Richardson Co., The Electrovox Co., Inc.
ECCO
Triad Transformer Mfg. Co.
ECHOPHONE
Hallicrafters Co. ECKCO Eckstein Radio & Television Co.
ECO
Economy Fuse & Mfg. Co.
ECON-OHM ECON-OHM
Model Engineering & Mfg. Inc.
ECONO-SLIDE
Grant Pulley & Hardware Co.
ECONOSTAT
Barber-Colman Co.
ECONO-SWITCH
Controlled Div. of Centralab Div. of Globe Union, Inc. ECTROTHERM Electronic Processes Corp.
EDGEOHM
Ward Leonard Electric Co.
EDIPHONE EDIPHONE

Edison, Inc., Thomas A.

EDIPHONE-TELEDIPHONE Edison Inc., Thomas A.
EDIPROBE
Electronic Designs, Inc.
EDISWAN EDISWAN
Edison Swan Electric Co., Ltd.
EEI
Electronic Enterprises Inc.
EGYPTIAN TIP
Mitchell Industries, Inc.
EI
Electrical Industries, Inc.
FICO Electrical Industries, Inc.
EICO
Electronic Instrument Co., Inc.
EIGHT-BALL
Ward Products Corp.,
Div. of The Gabriel Co.
EIMAC Eitel-McCullough, Inc. EKOTAPE Webster Electric Co. EL Electrons, Inc. ELAC
Electro Acoustic Industries, Ltd.
ELAC-GEM
Electro Acoustic Industries, Ltd.
ELASTOBOND Paisley Products, Inc. ELASTRON Industrial Synthetics Corp. Armco Steel Corp. ELCOFONE LOTAL Electronics Corp.

ELDEC
Electro Development Corp.
ELECOTONE
Northeastern Engineering, Inc.
ELECTRACER Special Products Co.
ELECTREX
Gorrell & Gorrell
ELECTRICORD Pacific Electricord Company
ELECTRITE West Virginia Pulp & Paper Co.
ELECTRIX
U. S. Rubber Co.
ELECTRO-CAL
Industrial Electronics, Inc.
ELECTROCAM
West inchause Electric Comp Westinghouse Electric Corp.
ELECTRO-CHEMICAL
Electrovox Co., Inc.
ELECTROD Teletronics Corp.
ELECTRO-FLOW
Super Flow Solder Co., Inc.
ELECTRO-GLOW
Industrial Devices, Inc.
ELECTRO GRAPHIC
Profice Measurements Co. Precise Measurements Co. ELECTRO-LARYNX Aurex Coro.
ELECTROLIMIT
Pratt Whitney Div.,
Niles-Bement-Pond Co.
ELECTROMANOMETER
Sanborn Co.

DYNOGRAPH Annis Co., R. B. DYNOGRAPH

ELECTRO-MATIC
Automatic Signal Div.,
Eastern Industries Inc.
ELECTROMAX Leeds & Northrup Co.
ELECTROMET
Electro Metallurgical Division
Union Carbide & Carbon Corp.
ELECTRONAMIC ELECTRONAMIC
Precision Apparatus Co.
ELECTRONIC DOORMAN
John T. O'Connor & Co.
ELECTRONIC EAR
Sonotone Corp.
ELECTRONIC FEATHER
Westinghouse Electric Corp
ELECTRONIC HANDYMAN
John T. O'Connor & Co.
ELECTRONIC MEMORY
Webster-Chicago Corp.
ELECTRONIC STETHOSCOPE
Feller Engineering Co.
ELECTRONIK
Minneapolis-Honeywell Regul Corp. ELECTRONIK
Minneapolis-Honeywell Regulator Co.
ELECTROPHOTOMETER
Fisher Scientific Co.
ELECTROSCOPE FEIGURUSCOPE
Feiler Engineering & Mfg. Co.
ELECTROSE
Insulation Mfg. Co.
ELECTRO-SHIELD
American Cladmetals Co.
ELECTROSURG
Coles Corp. Coles Corp. ELECTROTEMP Westinghouse Electric Corp.
ELECTROX
Schauer Mfg. Corp.
ELECTR-O-VANE
Minneapolis-Honeywell Regulator Co.
ELECTRUNITE Republic Steel Corp.
ELECTROTUNER General Instrument Corp.
ELEKTRAN Ward Products Div. of The Gabriel Co. ELENCO Electronic Engineering Corp.
ELEPHANT
Phosphor Bronze Corp.
ELIMINOISE
Belling & Lee, Ltd.
ELINCO Electric Indicator Co. ELINCOR Electronic Indicator Corp. P. R. Mallory & Co., Inc. ELKONITE P. R. Mallory & Co., Inc. ELKONIUM P. R. Mallory & Co., Inc.
ELLANAR
L & R Mfg. Co.
EL-MENCO
Electro Motive Mfg. Co.
ELMET North American Philips Co., Inc. ELVANOL du Pont de Nemours & Co., Inc., E. I. Electric Machinery Mfg. Co. Electronic Measurements Corp. Howard Industries, Inc. Magnetic Devices Corp.
EMICO Electro-Mechanical Instrument Co. EMPCO
Electronic Mechanical Products Co.
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. Ceneral Insulated Wire Works, Inc.
ENERGIZED
Alpha Metals, Inc.
ENE-VOLT
Gorrell & Gorrell
ENGRAVOGRAPH
New Hermes New Hermes, Inc. Piqua Machine & Mfg. Co. ENVOY Ansley Mfg. Co., Arthur EONITE U. S. Rubber Co. (EOPRENE U. S. Rubber Co. EPC0 Etched Products Corp. EPLAB Eppley Lab., Inc., The EPUT

EQUALOAD
Keystone Carbon Co., Inc.
ERSIN MULTICORE Multicore Sales Corp. Electric Specialty Co. Electric Soldering Iron Co. ESNA Elastic Stop Nut Corp. ESNAILS Elastic Stop Nut Corp. Electro Chemical Engineering Co. 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 EUTECTOR
EUtectic Welding Alloys Corp.
EUTECTOR
EUTECTOR
EUTECTOR
EUTECTRODE
EUTECTRODE
EUTECTRODE
EUTECTRODE
EUTECTRODE
EUTECTRODE
EUTECTRODE Eutectic Welding Alloys Corp. Bache & Co., Semon EVALAST Bache & Co., Semon EVELYN Rubicon Co. EVEN-BREAK 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. Thompson-Bremer Co.
EVER-LOK
Russell & Stoll Co., Inc.
EXACT PHOTOCOPY
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.
EYE WITNESS Radio Corporation of America
E-Z
Pyramid Products Co.
E-Z CODE Western Lithograph Co. E-Z CUE Amplifier Corp. of America E-ZEE-ON Indiana Steel Products Co. EZSOL Hudson Wire Co. Cornell-Dubilier Electric Corp.
FARATRON
Lumenite Electric Co.
FARCO

FARADON FARCO Farrelloy Co. Fansteel Metallurgical Corp. Paisley Products, Inc. FASTACK Fansteel Metallurgical Corp.
FASTENEERING Central Screw Co. Paisley Products, Inc. FASTOP Lear, Inc. FAST'S Koppers Co., Inc. FATHOMETER Raytheon Mfg. Co.
FAXFILM
Brush Development Co.
FAXIMILE
Hogan Laboratories, Inc.
FAXPAPER Hogan Laboratories, Inc. FEATHERIDE Webster Electric Co. FEDCO Federal Engineering Co. FEDERAL RECORDER Conn Ltd., C. G. FEL-PAK Felt Products Mfg. Co. FEL-PRO Felt Products Mfg. Co. Farmers Engineering & Mfg. Co. FENOX

Bakelite Corp.

FERRAMIC General Ceramics & Steatite Corp.

Coastwire Electronic Co., Inc. Owen-Corning Fiberglas Corp. Monsanto Chemical Co.
FIBRACOUSTIC
Johns-Manville Sales Corp.
FIBRETONE Johns-Manville Sales Corp. 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 Glove-Union, Inc. Miles Reproducer Co., Inc. Driver-Harris Co. Centralab Div., Globe Union Inc.
FILTACOL
Magnetic Core Corp.
FILTERETTE Deutschmann Corp., Tobe
FILTERNOYS
Continental Carbon, Inc.
FILTEROL Sprague Electric Co. FILTER POINT Duotone Co., Inc. FILTERS L Sprague Electric Co. FILTERVOLT Insuline Corp. of America
FINNFLEX
Finn & Co., Inc., T. R.
FIRE DEVIL Littelfuse, Inc. Combustion Control Corp.
FIREWALL Rockbestos Products Corp.
FIREZONE
Rockbestos Products Corp.
FISCHERQUARTZ Fischer & Co., R. A. FISCHERSINE Fischer & Co., R. A. FISCHERTHERM Fischer & Co., R. A.
FISCO
Forman Insulating Screw Corp.
FISHERFONE Fisher Research Lab. Superior Electric Co., The FIVER Crosley Corp. FIXTOHM 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 FLASH
Sheldon Electric Co.
Div. of Allied Electric Products, Inc.
FLATACK
Paisley Products Inc.
FLATWRAP
Paisley Products Inc.
FLEET CONTROL
Hammarlund Mfg. Co. Hammarlund Mfg. Co. FLEXAGUIDE Airtron Inc. FLEX-A-POWER Trumbull Dept. of General Electric Co. FLEXARC FLEXARC
Westinghouse Electric Corp.
FLEXFLAT
Paisley Products Inc.
FLEXIFONE
Dykara, Corp. Dukane Corp. FLEXILUGS Frankel Connector Co. FLEXISPLICES Frankel Connector Co. FLEXITIP Weller Mfg. Co. FLEXI-TROL Wilson & Co., G. C. FLEXITUBE Walter L. Schott Co. Standard Pressed Steel Co. FLEXO-FLUTE

Arro Expansion Bolt Co.
FLEXOHM Clarostat Mfg. Co., Inc.

Flexonics Corp.
FLEXOPULSE

Eagle Signal Corp. 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
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.
FLUTED ELECTRODE
P. R. Mallory & Co., Inc.
FLUTO Pass & Seymour Inc. FLUX GATE Eclipse-Ploneer 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. & Engrg. Corp. FM-G General Controls Co.
F. N. A.
Paisley Products, Inc.
FOCALIZER FOCALIZER
Quam Nichols Co.
FONOGRAFS
Webster-Chicago Corp.
FOOTROL
General Control Company
FORDMICA
Ford Radio & Mica Corp.
FORMEX
General Floating Co. 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, Kester Solder Co.
"49" ALLOY
Magnetic Metals Co.
49ER
Forty Niner Corp.
FOSTERITE FOSTERITE
Westinghouse Electric Corp.
FOTO-FLO
Haloid Co., The
FOTOLECTRIC
Worner Electronic Devices
F. P. INDUCTUNER
Mallory & Co., Inc., P. R.
FRAHM
PRIME Co. FRAHM
Biddle Co., James C.
FREE-CUT INVAR "36"
Carpenter Steel Co.
FREED-EISEMANN
FREED-EISEMANN Freed Radio Corp. FREE-VANE Bristol Co., The FREQUEMATIC Federal Telephone & Radio Corp.
FRIGISTAT Minneapolis-Honeywell Regulator Co. 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.

Berkeley Scientific Corp.

FYBERGLASS
Rush Wire Stripper Div.,
Eraser Co., Inc., The
FYBEROID Wilmington Fibre Specialty Co. G-C
General Cement Mfg. Co.
GA&F CARBONYL
Antara Chemicals Division,
General Dyestuff Corp.
GALVO PROTECTOR
Audio Instrument Co., Inc.
GAMATEK GAMATEK
Consolidated Engineering Corp.
GAMMATRON
Heintz & Kaufman Div. of
The Robert Dollar Co. GARCEAU
Electro-Medical Lab., Inc.
GARDINER Federated Metals Div., American Smelting & Refining Co. GAROD Majestic Radio & Television Div of The Wilcox-Gay Corp. GEARMOTOR Motoresearch Co.
GENEMOTOR
Carter Motor Co.
GENERAL
Comments Commodore Record Co.
GENERAL BRAND
General Dry Batteries, Inc.
GENERALITIES
Fostoria Present Commonstration 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. Triad Transformer Mfg. Co. Goodrich Chemical Co., B. F. GER-HIDE Gering Products, Inc. Gering Products, Inc. GER-PAR
Gering Products, Inc.
GIBSILOY
Gibson Electric Co.
GLASOHM
Clarostat Mfg. Co., Inc.
GLASSEAL GLASSEAL
Pyramid Electric Co.
GLASS SEALING "42"
Carpenter Steel Co.
GLASSMIKE Condenser Products Co.
GLASTIC
Laminated Plastics, Inc.
GLENNITE GLENNITE
Gulton Mfg. Corp.
GLIDER
Shure Brothers
GLOBAL
Molded Insulation Co.
GLOBAR
Carbonization Carborundum Co.
GLOBE TROTTER
Radio Corporation of America
GLO-N-GLO Canadian Radium & Uranium Corp. GLO-TECH Fischer & Porter Co. 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. GOOD-RITE
Goodrich Chemical Co., B. F.
GOTHAM Shevers Inc., Harold Johnson Co., E. F. GP
Erie Resistor Corp.
GRACOIL
Gramer Transformer Co.
GRAFOIL
Brush Development Co.
GRAFOLUX
Grafo Colloids Corp.
GRAFO CONCENTRATE
Grafo Colloids Corp.
GRAIAB
Dimco-Gray Co. Dimco-Gray Co.

GRAMIX
U. S. Graphite Co. Div. of
The Wickes Corp.
GRANODINE American Chemical Paint Co. Graphite Metallizing Corp.
GRAPHITAR U. S. Graphite Co. Div. of The Wickes Corp. GRATRAN Gramer Transformer Co. GRAVIGAGE Ess Specialty Co. Equipment and Service Co.
GREEN GEM Rauland-Borg Corp.
GREENOHM GREENOHM
Clarostat Mfg. Co., Inc.
GRENZ
Westinghouse Electric Corp.
GRIDNIC
Driver-Harris Co.
GRIP-HOLD
JFD Mfg. Co.
GRIP-POINT Vaco Products Co. GRIP TIGHT GRIP TIGHT
Paisley Products, Inc.
GRIPMASTER
Walker Co., George
GRIPPER
Scovill Mfg. Co.
GRIPTITE
Stevens-Walden, Inc.
GRIZZLY
U. S. Rubber Co.
GROMMES
Precision Electronics
GTC
General Transformer Co. GIC
General Transformer Co.
GUEST TELEVISION
Industrial Television, 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.
HALLOWELL
Standard Pressed Steel Co.
HALLO HALO
Haloid Co., The
HALOBROME
Haloid Co., The
HALOWAX HALOWAX
Union Carbide & Carbon Corp.
HAM CRYSTALS
Nebel Lab., R. E.
HAMMERTONE
Maas & Waldstein Co.
HAMMETER
Simpson Electric Co. Div. of
American Gage & Machine Co.
HANDI-GLOW
Industrial Devices Inc.
HANDIE TALKIE
Motorola, Inc.
HANDY-FLUX
Handy & Harman
HANDYVAR
Martindale Electric Co. HANDYVAR
Martindale Electric Co.
HARTLEY-TURNER
Hartley Co., Ltd., H. A.
HARTRON
Hart & Co., Inc., Frederick
HARVEL
Livington Variable 2 Irvington Varnish & Insulator Co.
HARVEY
Harvey Wells Electronics, Inc.
HARVEY

HARVEY
Peck & Harvey
HASCROME
Haynes Stellite Co.,
Unit of Union Carbide & Carbon Corp.
HASTELLOY
Haynes Stellite Co.,
Division of Union Carbide & Carbon Corp.
HAYSTELLITE
Haynes Stellite Co.,
Unit of Union Carbide & Carbon Corp.
HAZACODE
HAZACODE
Hazard Insulated Wire Works Div.,
The Okonite Co.
HAZACORD
Hazard Insulated Wire Works Div., Hazard Insulated Wire Works Dlv.,
The Okonite Co.
HAZAKROME HAZAKROME

Hazard Insulated Wire Works Div.,
The Okonite Co.

HAZARDEX

Hazard Insulated Wire Works Div.,
The Okonite Co.

HAZEGAGE

Ess Specialty Corp.

HORNET

New York Transformer Co., Inc.

HOTSPOT Mitchell Industries, Inc.

HC
Nebel Lab., R. E.
HEAD
Industrial Electronics, Inc.
HEATEX
Acme Wire Co.
HEATHKIT
Heath Co. HEATHKII
Heath Co.
HEETMOR
Acme Electric Heating Co.
HELIOFLASH NO. 124
MacLeod & Hanopol
HELI-O-LITES
C. F. Pease Co.
HELIOS
Keuffel & Feser Co. Keuffel & Esser Co.
HERCOCEL A
Hercules Powder Co., Inc.
HERCOCEL E Hercules Powder Co., Inc. Acromark Co. Rubicon Co.
HERCULES
Shure Brothers, Inc.
HERCULITE Pittsburgh Plate Glass Co.
HERMETICIAN Fusite Corp. HERMICO Hermetic Seal Products Co. HEX-LOK Boots Aircraft-Nut Corp. HEX-SCRU Stronghold Screw Products HEYCO Heyman Mfg. Co. Arrow-Hart & Hegeman Electric Co. HI-BALL Radiart Corp. Shannon Luminous Materials Co. 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.
HIGH STABILITY Welwyn Electronic Components Co.
HIGHWAYMAN
JFD Mfg. Co., Inc.
HI-KAP HI-KAP
Centralab Div. of Globe-Union, Inc.
HI K CERAMICON
Erie Resister Corp.
HINJON HINJON
Thomas & Betts Co., Inc.
HIPERCO
Westinghouse Electric Corp.
HIPERNIK
Westinghouse Electric Corp.
HIPERSIL HIPEKSIL
Westinghouse Electric Corp.
HIPOWER
Radiart Corp.
HIS MASTER'S VOICE Radio Corporation of America HI-TEM Electro Chemical Engineering Co. HI-TEMP
Dielectric Materials Co.
HI-TEMP
Rome Cable Corp.
HI-TORK
Electro-Mechanical Instrument Co.
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.
HOLLYTRAN Transformer Engineers
HOLLYWOOD VIBRA-TONE
Fischer & Co., R. A.
HOLMES-ROLLIN Rollin Co. HOLTITE Continental Screw Co. HOMEASE Bogue Electric Mfg. Co. HORNAC Horn Co., Inc., A. C.

HOUSE OF HEARING Sonotone Corp. Hewlett-Packard Co. H-Q Hammariund Mfg. Co. HUBBELLOCK Hubbell, Inc., Harvey HUDSON
Hudson Wire Co.
HUDSON
Oxford Electric Corp.
HUDSON BAY
Refrigeration Systems. Inc.
HUMIDIGRAPH Bristol Co., The
HUMIDI-SEAL
Pyramid Electric Co.
HUMIDOLAIN Star Porcelain Co. Minneapolis-Honeywell Regulator Co. HURLETRON
Electric Eye Equipment Co.
HUSITE
Huse Liberty Mica Co.
HUSHATONE
Brush Development Co.
HUSKY
Price Electric Corp.
HYCAR
Goodsich Chamical Co. B. Goodrich Chemical Co., B. F. HYDENT Burndy Engineering Co. HYDEX
Jensen Mfg. Co.
HYDRAMOTOR
General Controls Co.
HYDRIFINED
Magnetic Metals Co.
HYDRIMET
Metal Hyrides, Inc.
HYDROCORDER Raymond Rosen Engineering Products, HYDROGRAF
Grafo Colloids Corp.
HYDROSEC U. S. Rubber Co. HYFLEX Irvington Varnish & Insulator Co. HYFLUX ALNICO Indiana Steel Products Company HYGRADE Mitchell-Rand Insulation Co., Inc HYGRODIAL Friez Instrument Div.,
Bendix Aviation Corp.
HYHERVAC
Central Scientific Co.
HYLINK HYLINK
Burndy Engineering Co.
HY LOW
Stevens Products Inc.
HYLUG
Burndy Engineering Co.
HYMU
Magnetic Matter Co. Magnetic Metals Co. HYMU "80" Carpenter Steel Co. HYPASS Sprague Electric Co. HYPENSIL Westinghouse Electric Corp. Radio Music Corp. HYPER-MAG Radic-Music Corp. HYPERSONIC Brush Development Co. HYPERVAC Central Scientific Co. Jensen Mfg. Co.
HYPOT
Associated Research, Inc.
HYPRESS Burndy Engineering Co. Sprague Electric Co. HYTOU Radio & Electronics Corp.
HYSOL
Houghton Laboratories Inc.
HYSPAR Midland Paint & Varnish Co. HYSTERSET Ward Leonard Electric Co.
HYTEMCO
Driver-Harris Co.
HYTOOL Burndy Engineering Co. Central Scientific Co. Aerovox Corp. ICA

Insuline Corp. of America
ICE-STIK
Paisley Products, Inc.
ICONIC Altec Lansing Corp. Computer Corp. of America
I. D. C.
Motorola Inc.

IDEAL Melody Master Mfg. Co. Dresser-Stacey Co. IDECO Illinois Condenser Co. Illinois Condenser Co.
ILLINI-HYCAP Illinois Condenser Co.
ILLUSTRAVOX Electro Engineering & Mfg. Co. Induction Motors Corp. Insulation Manufacturers Corp. IMCOR Insulation Manufacturers Corp.
IMMERSATHERM IMMERSATHERM
Mercoid Corp.
IMP
Carter Parts Co.
IMPEDOMETER
Electrodyne Company
IMPERIAL
Indiana Steel & Wire Co.
IMPERIAL
Tele-Tone Radio Corp. Tele-Tone Radio Corp.
IMPREGNITE
Standard Varnish Works
IMPRUVOL 20
Koppers Co., Inc.
INCA Phelps Dodge Copper Products Corp. 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.
INDUCTOROIDS

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
INERTAIRE
Westinghouse Electric Corp.
INERTEEN Westinghouse Electric Corp. Wirt Co.
INFRARED Fostoria Pressed Steel Corp. American Phenolic Corp.
INMANCO Insulation Manufacturers Corp. INPUTROL Wheelco Instruments Co. Instrument Resistors Co.
INSA-LUTE Sauereisen Cements Co. Westinghouse Electric Corp.
INSL
Insl-X Co., Inc.
INSTAGRAPH
Bristol Co., The
INSTANSOLDER
Colo Parkin My che Cole Radio Works
INSTOMATIC Sanborn Co. INSULAZED Magnetic Metals Co. Stupakoff Ceramic & Mfg. Co.
INSULUGS Burndy Englneering Co.
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"

IRC
International Resistance Co.
IRIS American Scientific Co. Orradio Industries, Inc. IRMCO Munston Mfg. & Service, Inc. IRN Williams & Co., C. K. IRON OILITE Amplex Div. Chrysler Corp. IRRADIOMETERS Sensitive Research Instrument Co. IRV-0-LITE Irvington Varnish & Insulator Co. IRV-0-VOLT Irvington Varnish & Insulator Co. ISATRON Consolidated Engineering Corp. ISO Isolantite Mfg. Corp. ISOMODE M B Mfg. Co. ISOPLANE Motorola, Inc.
ISO-Q
Isolantite Mfg. Corp. IS0-0 Motorola, Inc. Meck Industries, John
ISOTRON
Consolidated Engineering Corp.
ISOTRON Nuclear Instrument & Chemical Corp. Illinois Condenser Co. ITELITE
I-T-E Circuit Breaker Co. IVI-FLEX Irvington Varnish & Insulator Co.
IVITHENE Irvington Varnish & Insulator Co. Collyer Insulated Wire Co.

J. L. E.
Entwistle Co., James L.
J. S. C.
Jersey Specialty Co.
J-CAP
Jeffers Electronics Co.
J P CAPACITOR
Jeffers Electronics Co.
JACK KNIFE
Radio Merchandise Sales
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.
JETLINE
Carbonneau Industrles, Inc.
JETENNA
JFD Mfg. Co., Inc.
JIFFY
Minerallac Electric Co.
J.K
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

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, Inc.
KANTARK
Trico Fuse Mfg. Co.
KANTLINK
Positive Lock Washer Co.
KANTLINK
American Nut & Bolt Fastener Co.
KAPPA
Wright & Sons Co., William E.
KARADIO
Eckstein Radio & Television Co.

K-TRAN

Automatic Mfg. Corp.

KUPEC Centralab Div., Globe Union, Inc.

Johnson-Williams, Ltd.

KARBOMET KARBOMET
Driver-Harris Co.
KARMA
Driver-Harris Cc.
KARRO PAK
Felt Products Mfg. Co.
KASIL
Philadelphia Quartz Co.
KAYDEL
Hart Moisture Gauges Inc.
KAY-LAB
Kalbfell Labs Inc. Kalbfell Labs., Inc. KATOLIGHT Kato Engineering Co. Rogers Corp. KAYPAR Rogers Corp. Rogers Corp. KEL-F 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. Union Carbide & Carbon Co. KEMIGO
Markem Machine Co.
KENEX
Westinghouse Electric Corp.
KENITE
Keystone Electronics Corp.
KEN-RAD General Electric Co.
KETOS
.Crucible Steel Co. of America
KEYBOARD Weinschel Engineering Co.
KIC
Union Carbide & Carbon Corp.
KERATYM K-H Krohn-Hite Instrument Co. KILOVOLTER
Caddell-Burns Mfg. Co.
KING
Electric Heat Control Co., The
KING MARKWELL
Markem Machine Co.
KIRKSITE
National Lead Co.
KLAMP-TITE
LTLE Circuit Breaker Co. I-T-E Circuit Breaker Co.
KLIPLOK
Trico Fuse Mfg. Co.
KLIPSCHORN KLIPSCHUKN
Klipsch & Associates
KLIPXIT
Vaco Products Co.
KLIPZON
United Technical Laboratories
KLIXON
Spenger Theymostat Div Spencer Thermostat Div., Metals & Controls Corp.
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. Fastman Kodak Co. KODAPAK Eastman Kodak Co. Waldes Kohlnoor, Inc. KOILED KORD KOILED KORD
Kellogg Switchboard & Supply Co.
KOLORDISK
Centralab Div., Globe Union Inc.
KONAL
Westinghouse Electric Corp.
KON-NEC-TOR
General Electric Co.
KOOLOHM
Spranto Electric Co. 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.

KULGRID
Sylvania Electric Products, Inc.
KUM-KLEEN
Avery Adhesive Label Corp.
K-V-O
Sprague Electric Co.
KWIKFLUX
Special Chemicals Co.
KWIK-KALL
Loge Sound Engineers, J. M.

"L" NICKEL
International Nickel Co., Inc.
LAB-BILT Specialty Battery Co.
LABCASE
Berkshire Laboratories
LABCHECK Berkshire Laboratories LABMARKER

Berkshire Laboratories
LABOHM Eerkshire Laboratories
LABPEAK
Berkshire Laboratories
LABRECT Berkshire Laboratories
LABSTROBE
Berkshire Laboratories
LABTEST LABIEST
Berkstire
LABTRANS
Berkshire
LABVAR
Laboratories Berkshire Laboratories Berkshire Laboratories LABVOLT LABVOLT
Electrodyne Co.

LAMCO
La Magna Mfg. Co., Inc.

LAMICOID
Mica Insulator Co.

LAMICOID
LAMICOID Insulating Fabricators, Inc. Magnetic Metals Co. Lamicoid Fabricators American Cyanamid Co. Magnetic Metals Co.
LAMITEX
Franklin Fibre-Lamitex Corp.
LAURETT Laurehk Radio Mfg. Co. Monsanto Chemical Co. Monsanto Chemical Co. Kirchberger & Co., Inc., M. LAVA
Maryland Lava Co.
LAVITE LAVITE
Steward Mfg. Co., D. M.
LAVOLAIN
Star Porcelain Co.
LAYTEX
U. S. Rubber Co.
LAZYX
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. LECITE
Electro Chemical Engineering Co.
LECTURN
J. M. Loge Sound Engineers
LECTROPACK
Telegraph Condenser Co., Ltd.
LECTROVISION
Transvilon Inc. Transvision, Inc. Leland, Inc., G. H. LEESONA Universal Winding Co.
L-F
Liebel-Flarsheim Co.
LEKTRO
Conn Ltd., C. G.
LE-LAND
Leland Flact Leland Electric Co. LERO Lynn Electronic Research Co. LEROY Keuffel & Esser Co. LEVEL White Rodgers Elec. Co. LIFE-LINE Westinghouse Electric Corp. LIFE SAVER Cole Radio Works

Carpenter Steel Co.

U. S. Radium Corp.

IONOTRON

LIFETONE
Duotone Co., Inc.
LIGHT WATCHMAN Ripley Co., Inc.
LIGHTNING
Vaco Products Co.
LIGHTNING BOLT
General Fuse Co.
LIGHTNING BUG
Vibroplex Co., Inc.
LIGNOTITE
Raidout Desducts L Paisley Products, Inc.
LIGNOTOX
Paisley Products, Inc.
LIMITROL LIMITRÓL
Wheelco Instruments Div.
Barber-Colman Co.
LIMITRON
Arma Corp.
LIN-DE
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
LINDOX
LINDOX LINDOX
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
LINE-0-FLO
Barber-Colman Co.
LINE-0-LIFE
Carter Motor Co.
LINE STARTER
Westinghouse Electric Corp. Westinghouse Electric Corp.
LITE-GAGE
Photocon Research Products
LITE-0-STAT Viewlex, Inc.
LITHOFAX TELEDELTOS
Western Union Telegraph Co.
LITHOFORM American Chemical Paint Co. LITTLE DEVIL
Ohmite Mfg. Co.
LITTLE GEM
Sickles Co., F. W.
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. LOABOND Catalin Corp. of America LOADED-X Radiart Corp., The Catalin Corp. of America
LOCALITE
Fostoria Pressed Steel Corp.
LOCK-0-SEAL Wolfe Co., Inc., Franklin C.
LOCKSEAM
Superior Tube Co.
LOCK-TITE Continental Screw 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.
LOOPOHM Ward Leonard Electric Co.
L. P.
Hickok Electrical Instrument Co.
LOS GATOS
Lewis & Kaufman, Inc.
L'TATRO Eckstein Radio & Television Co. LUCERO Driver-Harris Co. LUCITE du Pont de Nemours & Co., Inc., E. I.

LUCKY STRIKE

Precision Radiation Instruments Inc.

LUG-CLIP

Littelfuse, Inc.

LUKENWELD Lukens Steel Co.
LUMAPANE
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.

LUXIDE Rauland Corp. LUXIFLUX Special Chemicals Co. LUXOR Ace Mfg. Corp. LUXTAR Viewlex, Inc. Bradley Labs., Inc. Vaco Products Co. Rauland-Borg Corp.

M-C-R-W-S Stevens Mfg. Co., Inc. MACADIE MACADIE
British Industries Corp.
MAESTRO
Reeves Soundcraft Corp.
MAGATAPE
Crestwod Recorder Corp.
MAGIC CIRCLE
ARF Products, Inc.
MAGICORE
Crowley & Co., Inc., Henry L.
MAGIC RIBBON
Brush Development Co.
MAGIC WAND
Ward Products Corp. MAGIC WAND
Ward Products Corp.
Div. of The Gabriel Co.
MAGMOTOR
Carter Motor Co.
MAGNAC
Magnetic Devices, Inc.
MAGNAGLO
Magnaflux Corp.
MAGNA-STRIPE
Reeves Soundcraft Corp.
MAGNATELE
Electro Engineering & M Electro Engineering & Mfg. Co. MAGNATONE Magna Electronics Co. MAGNEBRAKE Vickers, Inc. MAGNECLUTCH Vickers, Inc. MAGNECORDER Magnecord, Inc. Lear, Inc.
MAGNEMATIC
Amplifier Corp. of America
MAGNEMUSE Amplifier Corp. of America
MAGNEPAINT
Micro-Circuits Co.
MAGNEPASTE

MIGNEFASTE
Micro-Circuits Co.
MAGNERAMA
Amplifier Corp. of America
MAGNERASER
Amplifier Corp. of America
MAGNERIBBON Amplifier Corp. of America
MAGNESCOPE
Amplifier Corp. of America
MAGNESIL

MAGNESIL
Magnetics, Inc.
MAGNESYN
Eclipse-Pioneer Div.,
Bendix Aviation Corp.
MAGNETAPE
Amplifier Corp. of America
MAGNETEX Califone Corp.
MAGNETONE

Brush Development Co.
MAGNETORQUE
Avion Instrument Corp.
MAGNETRONIC MAGNETIONIC
Cook Electric Co.
MAGNETURI
MAGNETURIN
ACTURED

Amplifier Corp. of America
MAGNILASTIC
Cook Electric Co.
MAGNISET

Bristol Co., Inc. Driver-Harris Co.
MAGNOGRAPH
Offner Electronics, Inc.
MAGNORITE

Norton Co. MAIL-A-VOICE Brush Development Co.
MALLOCENE
Mallory & Co., Inc., P. R.

MALLOSIL P. R. Mallory & Co., Inc. MALTESE

Bache & Co., Semon MAMCO Master Appliance Mfg. Co.

MARBELITE Good-All Electric Mfg. Co. MARCOL
Esso Standard Oil Co.
MARCONITE
Marconi Wireless Telegraph Co.

MARI-GUIDE
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
JED Mfg. Co., Inc.

MARINER
JFD Mfg. Co., Inc.
MARINERS PATHFINDER
Raytheon Mfg. Co.
MARK-TIME
Rhodes Inc., M. H.
MARKA-SWEEP
Kay Electric Co.
MARS-LUMOGRAPH
Staedtler, Inc., J. S.
MASCO
Simpson Mfg. Co., Inc.,
Simpson Mfg. Co., Inc.,

Simpson Mfg. Co., Inc., Mark

Kellogg Switchboard & Supply Co.
MASTERPHONE

MASIEKPHUNE
Kellogg Switchboard & Supply Co.
MASTERPRO
Rek-O-Kut Co.
MASTER-TAPE
Audio-Master Corp.
MATSURF
Akkeright Fisishing Co.

MAXIMAR
X-Ray Dept. of General Electric Co.
MAXISCOPE

X-Ray Dept. of General Electric Co.

Special Products Co.
M. B. C.
Ray-O-Vac Co.
MCA

MCA Molding Corp. of America MEASURTEST Marconi Instruments Ltd. MECATORN

Torngren Co., Inc., C. W. MECHA MECHA
Servomechanisms, Inc.
MECHANI-SEAL
Fafnir Bearing Co.
MEDIQUARTZ

Dallons Labs.
MEDI-SINE
Dallons Labs.
MEDI-SURGICAL
Dallons Labs.
MEDITHERM

Dallons Labs.
MEFCO
Production Engrg. Co.
MEG-METER Inc., The Winslow Co., 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

MEGAVAC
Central Scientific Co.
MEGA-X
Kay Electric Co.
MEGGER
Biddle Co., James G.
MEGOHMER

Sticht Co., Inc., Herman H. MEG-0-MAX

Sprague Electric Co. 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
Kemlite Labs.
MERCURY
Vulcan Electric Co.
MERCURYSTAT
West implayed Electric Westinghouse Electric Corp.
MERITONE
Autocrat Radio Co.
MERITONE

MERITONE
American Laubscher Corp.
MERITUNE
Polytech Devices, Inc.
META-BASAL PORTABLE

META-BASAL PORTABLE
Electro-Physical Laboratories, Inc.
METAL MIKE
Sperry Gyroscope Co.
Div. of the Sperry Corp.
METAL SHIELDED WIRE
Uniform Tubes
METALASTIC
Cook Electric Co.
METALBOSS
Telegraph Condenser Co., Ltd.
METALITE
Astron Corp.
METALIX
North American Philips Co., Inc.

North American Philips Co., Inc.
METALMITE
Telegraph Condenser Co., Ltd.
METALPACK

Telegraph Condenser Co., Ltd. METALSEAL

Brush Development Co.
METAMETER
Bristol Co., The
METAPHONE

Bristol Co., The
METAPLATING
Metaplast Process, Inc.
METAVANE

Bristol Co., The
METCLAD
I-T-E Circuit Breaker Co.
METERMAX Leeds & Northrup Co. METEROL

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.

Crystal Research Labs, Inc. METRONICS

METRONICS
Metropolitan Electronics & Instrument
Co.
METROSCOPE
Photocon Research Products
METROTHERM

METROTHERM
General Controls Co.
METSO
Philadelphia Quartz Co.
MEX
U. S Graphite Co., Div. of
The Wickes Corp.
MEXACOTE
U. S. Graphite Co.

MEXACOTE
U. S. Graphite Co., Div. of The Wickes Corp.
MEXALOY
U. S. Graphite Co., Div. of The Wickes Corp.
MEXATOP
U. S. Graphite Co., Div. of The Wickes Corp.
MEXATOP
U. S. Graphite Co., Div. of The Wickes Corp.
MEXITE BRIQUETIES
U. S. Graphite Co., Div. of The Wickes Corp.
MICABOND
MICABOND
Continental-Diamond Fibre Co.

MICADISC

Telegraph Condenser Co., Ltd. MICA-GLAS

MICANITE
Mica Insulator Co.
MICARTA
Westinghouse Electric Corp.
MICO

Mica Insulator Co.
MICRO
Minneapolis-Honeywell Regulator Co.
MICRO

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.
MICRODRILL
Teletronics Laboratory, Inc.

MICRODUAL Transradio, Ltd.

LUXAN

Rauland Corp.

MICRODYNE Audak Co. MICROFLASH General Radio Co. MICROFLEX
Eagle Signal Corp.
MICROLINE
Sperry Gyroscope Co., Div. of
The Sperry Corp.
MICROMATCH
Jones Electronics Co., M. C.
MICROMAX
Leeds & Northrup Co.
MICROMIKER
Kalbfell Labs., Inc.
MICROMITE
Telegraph Condenser Co., Ltd.
MICROMOTORS
Redmond Co., Inc.
MICRO-NAMIC
MICROMOTORS
Redmond Co., Inc.
MICRO-NAMIC
MICRO-Redmond Co., Inc.
MICRO-NAMIC
Micro Balancing, Inc.
MICROPACKS
Telegraph Condenser Co., Ltd.
Micro-Circuits Co.
MICROPOSITIONER
Barber-Colman Co.
MICROPOT
Borg Equipment Div.,
George W. Borg Corp.
MICRO-PULSER
Kay Electric Co.
MICROSEN
Manning, Maxwell & Moore, Inc.
MICRO-SET MANOSTAT
Precision Scientific Co.
MICROCRES
Magnetic Metals Co.
MICROSIL
Magnetic Metals Co.
MICROTESTERS
Simpson Electric Co. Div.,
American Gage & Machine Co.
MICROTHERM
Barber-Colman Co.
MICROTHERM
Barber-Colman Co. MICROTHERM
Barber-Colman Co.
MICROTHERM
Raytheon Mfg. Co.
MICROTORQUE
Giannini & Co., Inc., G. M.
MICRO-TROLLER
Westinghouse Electric Corp.
MICROTOMIC
Eherbard Esbas Bassing MICROTOMIC
Eberhard Faber Pencil Co.
MICROVAC
Stokes Machine Co., F. J.
MICROVOLTER
Ferris Instrument Co.
MICROWEAVE
Holliston Mills Inc. MICKUWEAVE
Holliston Mills Inc., The
MIDDLESEX
Bogen Co., Inc., David
MIDGET MIDGET
Sprague Electric Co.
MIDGETALK
Simpson Mfg. Co., Inc., Mark
MIDGETROL
Mallory & Co., Inc., P. R.
MIDOHM MIDOHM
Driver-Harris Co.
MIDWAY
Cardwell Mfg. Corp., Allen D.
MIGHTY MIDGET
Sperman Metal Specialties
MIJAKON
Fast & Co., John E.
MIKASUB Fast & Co., John E. MIKE
Cornell-Dubilier Electric Corp.
MILCO
Miller Mfg. Co., M. A.
MILLISEC
Stevens-Arnold, Inc.
MINALITE
Westinghouse Electric Corp.
MINATROL
Westinghouse Electric Corp.
MINERALIGHT
Ultra-Violet Products. Inc. MINERALIGHT
Ultra-Violet Products, Inc.
MINI-AMP
Industrial Devices, Inc.
MINI-CHOPPER Servomechanisms, Inc. MINIFUSE Belling & Lee, Ltd. MINIGRAPH MINIGRAPH
Westinghouse Electric Corp.
MINI MAX
National Carbon Division,
Union Carbide & Carbon Corp.
MINIMITE
Astron 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.
MINITAPF MINITAPE Stancil-Hoffman Corp. MINI-VOLT

MINSUA MINSUA
Keuffel & Esser Co.
MINUTE MAN
Ward Products Corp.,
Div. of The Gabriel Co.
MIRACLE POINT
Gerett Corp., M. A.
MIRAGLAS
Mitchell Rand Lavulation Gerett Corp., M. A.
MIRAGLAS
Mitchell-Rand Insulation Co., Inc.
MIROC
MITCHEL-Rand Insulation Co., Inc.
MIROPOINT
Duotone Co., Inc.
MIRROPANE
Liberty Mirror Div.,
Libbey-Owens-Ford Glass Co.
MIRROR TONE
Meck Industries, John
M. L. S.
Paisley Products Inc.
MOBIL-MIKE
Electro-Voice, Inc.
MOBIL-MIKE
Electro-Voice, Inc.
MODUFIOW
Minneapolis-Honeywell Regulator Co.
MODULITE
Berndt-Bach, Inc.
MODUTROL
Minneapolis-Honeywell Regulator Co.
MODUTROL
Minneapolis-Honeywell Regulator Co.
MODUTROL
Minneapolis-Honeywell Regulator Co.
MODUTROL
Minneapolis-Honeywell Regulator Co.
MODU-WAVE
Sciaky Bros., Inc.
MODU-MATA Minneapolis-Honeywell Regulator
MODU-WAVE
Sciaky Bros., Inc.
MOLDARTA
Westinghouse Electric Corp.
MOLDITE
National Moldite Co.
MOLDICK
American Brass Co.
MOLDTEX
Racon Electric Co.
MOLDTIE
United Condenser Corp.
MOLECULE SQUEEZER
Robinette Co., W. C.
MONISEAL
Magnetic Metals Co.
MONISEAL
MAGNETIC Co.
MONISEAL
MAGNETIC CO.
MONISEAL
MONISEA MONOBLOC
Winchester Electronics Co.
MONOCOIL
Kupfrian Mfg. Co.
MONO-DRUM
Gorrell & Gorrell
MONOMOTORS
Redmond Co. Inc. Redmond Co., Inc.
MONO-PAC
Beltone Hearing Aid Co.
MONOPHONE
Automobile Co. Automatic Electric Co.
MONOPLEX
Shires S Shure Brothers, Inc.
MONOSET MONOSET
Bristol Co., The
MONOSET
Telex, Inc.
MONOTUBE
Tuttle & Kift
MORFLEX
Moore Co., Howard J.
MORICONE
MORSE EUREKA
Morse Co., Frank W.
MORTEX
MOORE CO., Howard J.
MOTO-MITE
Globe Industries, Inc. MOTO-MITE
Globe Industries, Inc.
MOTORLITE
Ward Leonard Electric Co.
MOTOR WATCHMAN
Westinghouse Electric Corp.
MOTO-TROL
Westinghouse Electric Corp.
MOTRON
Rebigette MUTRON
Robinette Co., W. C.
MPB
Miniature Precision Bearings, Inc.
M-SCOPE
Fisher Research Lab.
MU Acro Mfg. Co. MUCHROHM Magnetic Metals Co.
MUFAX
Muirhead & Co., Ltd.
MULLARD MULLARD
International Electronics Corp.
MUL-TEL
Brach Mfg. Corp.
MULTI-ANALYST
Electronic Instrument Co., Inc.
MULTICARDIOTRON
Electro-Physical Labs. MULTICORE British Industries Corp.

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.
MULTIMET Haynes Stellite Co.
Unit of Union Carbide & Carbon Corp.
MULTIMETER MULTIMETER
Rawson Electrical Instrument Co.
MULTIPLANE
Lord Mfg. Co.
MULTIPLE SHOT
Gits Molding Corp.
MULTIPOT
Ford Engineering Co.
MULTIPOWER
E. A. Myers & Corp. MULTIPOWER
E. A. Myers & Sons
MULTI-RECTIFIER
Green Electric Co., Inc.
MULTISCO
Belling & Lee, Ltd.
MULTISCALER
Atomic Instrument Co.
MULTISCOPE
According To the Control of the Control o Acme Electronix Div.
Nea Service Inc.
MULTISOURCE MULTISOURCE
Applied Research Labs.
MULTI-SPEED
Pentron Corp.
MULTI-SWAGE PROCESS
Bead Chain Mfg. Co.
MULTITROL
Ward Leonard Electric Co.
MULTIVIDEO
Industrial Television, Inc.
MULTIVISION
Industrial Television, Inc.
MULTIVOLT
Ohmite Mfg. Co. Ohmite Mfg. 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. Concert Installations
MUSIC MASTER
Sonic Industries, Inc.
MUSIKING
Symphony Radio & Television Corp.
MUTED-STYLUS
Shure Brothers, Inc.
MYCALEX 400
Mycalex Corporation of America
MYCALEX 410
Mycalex Corporation of America
MYCALEX 410X
Mycalex Corporation of America
MYCALEX 410X
Mycalex Corporation of America
MYCALEX K
Mycalex Corporation of America
MYCALEX K
Mycalex Corporation of America Ohmite Mfg. Co. MUL-TV MYKALEX K
Mycalex Corporation of America
MYKAPLAST
United Condenser Corp.
MYKE-A-TROL MYKE-A-TROL
Industrial Electronics, Inc.
MYKROY
Electronic Mechanics, Inc.
MYVACENE-S
Distillation Products Industries
MYVAWAX-S
Distillation Products Industries Distillation Products Industries NALCO
National Lead Co.
NALCO
North American Electric Lamp Co.

NA-ALD
Alden Products Co.
NALCO
National Lead Co.
NALCO
North American Electric Lamp
NAMCO
National Acme Co.
NARCIOL
National Acme Co.
NARCIOL
National Aeronautical Corp.
NARCO
OMNIGATOR
National Aeronautical Corp.
NARCO OMNIGATOR
NATIONAL
Valonal Aeronautical Corp.
NASAT
Westinghouse Electric Corp.
NATCO
NATIONAL
Valco Mfg. Co.
NATVAR

NE-O-LITE
General Cement Mfg. Co.
NEPCO
National Electric Products Co.
NEPEC
Centralab Div.,
Globe Union Inc.
NEUTRASEAL Cook Electric Co. NEVERSLIP Philadelphia Steel & Wire Corp. Ney Co., J. M. NEY-ORO Ney Co., J. M. NICAD Nickel Cadmium Battery Corp.
NICHROME
Driver-Harris Co.
NICORO Western Gold & Platinum Works. NILSTAIN Driver Co., Wilbur B. NILVAR Driver-Harris Co. 999 "PLUS" Handy & Harman NIREX Driver-Harris Co. NITE-T-LITE Littelfuse, Inc. NITRON NITRON
Monsanto Chemical Co.
NITRONEAL
Baker & Co., Inc.
NOARK
Federal Electric Products Co.
NOBATRON
Sorensen & Co., Inc.
NOBLELOY NOBLELOY
Continental Carbon, Inc.
NOBLEWEST
Noble & Westbrook Mfg. Co.
NOFLAME-COR
Cornish Wire Co.
NOISERASER NOISERASER
Minnesota Electronics Corp.
NOKORODE
Dunton Co., D. W.
NOMU
Magnetic Metals Co.
NON-LINK
Positive Lock Washer Co.
NONSTRIP
Rex Corp. NONSTRIP

Rex Corp.

NO-OX
Walter L. Schott Co.
NORBIDE
Norton Co.
NORELCO
North American Philips Co., Inc.
NORLOC NORLOC
Norton Labs., Inc.
NORTHEAST
Delco Appliance Div.
General Motors Corp.
NTC
Keystone Carbon Co., Inc.
N. U.
National Union Radio Corp.
NULBIAC National Union Radio Corp NU-BLAC Star Porcelain Co. NU-BLOK United Mfg. & Service Co. NU BLOK, JR. United Mfg. & Service NU-BRAZEE American Silven Co. Loc NU-BRAZEE
American Silver Co., Inc.
NUCAMITE
National Union Radio Corp.
NUCLEOMETER ROULEUMETER
Radiation Counter Laboratories, Inc.
NUKEMITE
Nukem Products Corp.
NU PAMITE National Union Radio Corp.
NUSO
Esso Standard Oil Co.
NU TIP
P. R. Mailory & Co., Inc.
NU-WAY NU-WAY
Hatheway Mfg. Co.
NWL
Nothelfer Winding Labs.
NU WRINKLE CAP
P. R. Mallory & Co., Inc.
NYFORM
Acme Wire Co.
NYLASINT
Polymor Corp. Polymer Corp.
NYLATRON G & GS
Polymer Corp.
NYLEX Boston Insulated Wire & Cable Co.
NYLOK
Production Engrg. 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.

Industrial Devices, Inc.

MULTICOUNTER
Atomic Instrument Co.

OHIOM Ohio Carbon Co. Driver-Harris Co. OHMOLD Wilmington Fibre Specialty Co. OHM-SPUN States Co. Acheson Colloids Cq.
OIL-EX
Ton-Tex Corp.
OILITE Amplex Div., Chrysler Corp. Deutschmann Corp., Tobe DICLIP Burndy Engineering Co., Inc. OKOBESTOS Okonite Co. OKOGLASS OKOLENE Co. Okonite Co. Okonite Ca. OKOPRENE Okonite Co. Okonite Co. OMNI-GLOW Industrial Devices, Inc. 1000 SPAR Standard Varnish Works
OPTIMATIC Minneapolis-Honeywell Regulator Co. OPTIMIKE Instrument Development Laboratories, Inc.
OPTO-MATIC
Trico Fuse Mfg. Co. ORACO Oak Ridge Antennas Div. of Video Television Inc. ORIENTER Lear, Inc. 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 Chemical Co. OSCILLO-TRACER
Waters, Inc., Robert A.
OSCILLO-RECORD Fairchild Camera & Instrument Corp. Westinghouse Electric Corp.
OUNCER OUNCER
United Transformer Corp.
OXYHEMOGRAPH Photocon Research Products DXWELD Linde Air Products Co. Unit of Union Carbide & Carbon Corp. Beiling & Lee, Ltd. Zernickow Co., O. OZALID General Aniline & Film Corp.

OZAMATIC Ozalid Div. General Aniline & Film Corp P & B
Potter & Brumfield
PACE-SETTER
J F D Mfg. Co., Inc.
PACKMASTER Radio Specialty Mfg. Co. PAISOL Palsley Products, Inc. Paisley Products, Inc. Paisley Products, Inc.

Paisley Products, Inc. Audio Products Corp. Ney Co., J. M. Palnut Co., Inc. PAMARCO Paper Machinery & Research, Inc. PANADAPTOR
Panoramic Radio Products, Inc.
PANALYZOR Panaromac Radio Products, Inc. PANDEX Westinghouse Electric Corp. Clarkstan Corp.

PANELTONE Ansiey Radio Corp. St. Regis Sales Corp. PAN-I-LITE Aiden Products Co. PANORADIO PANORADIO
Panoramic Radio Products, Inc.
PANORAMOSCOPE Paneramic Radio Products, Inc. PANOSCOPE Panoramic Radio Products, Inc. PANTO Preis Engraving Machine Co. PAPERITE Acme Wire Co. Ward Products Corp.
Div. of The Gabriel Co.
PARACORE U. S. Rubber Co.
PARAFLUX
Radio Music Corp.
PARAFORMED Paramount Paper Tube Corp Keuffel & Esser Co. PARISIANOID Parisian Novelty Co. Parisian Novelty C PARTEK Magnaflux Corp. PATRICIAN Electro-Voice, Inc. PATTERSON du Pont de Nemours & Co., Inc., E. I. Phelps Dodge Copper Products Co. P. E. C. Centralab Div. Globe Union Inc. P.E.C. Precision Electronic Components Ltd. Pacific Electricord Co. PEDASINE Fisher & Co., R. A.
PEERLESS Airec Lansing Corp.
PEERLESS National Vulcanized Fibre Co. PEE-WEE Mueller Electric Co. Holliston Mills, Inc., The PEM Penn Engineering & Mfg. Corp.
PENACOLITE Koppers Co., Inc. PENDET
Centralab Div. of
Globe-Union, Inc.
PERFECT-O-CUT
Tablet & Ticket Co.
PERKINS Westinghouse Electric Corp.
PERMACEL
Industrial Tape Corp.
PERMACELL U. S. Rubber Co. PERMADINE American Chemical Paint Co. PERMAKAY Motorpla Inc. PERMALLOY Arnold Engineering Co.
PERMANICKEL
International Nickel Co., Inc.
PERMANITE Foote Mineral Co. PERMANITE
1-T-E Circuit Breaker Co.
PERMA-POWER
General Transformer Corp.
PERMA-SCAL
Sprague Electric Co.
PERMA-STAT
Trans-Gel Products, Inc.
PERMA-SWITCH
Contrality Obj. 26 Centralab Div. of Globe-Union, Inc. PERMENDUR PERMENDUR
Arnoid Engineering Co.
PERMENDUR
Telegraph Construction &
Maintenance Co., Ltd.
PERMENDORM
Arnoid Engineering Co.
PERMO COMPOUNDS
Hardman Co. Hardman Co., Inc., H. V. Fidelitone, Inc. Mitchell Industries, Inc. PFAN-TONE

Pfanstiehi Chemical Co., Metallurgical Div.

Dixon Crucible Co., Joseph PHANTOM Ward Products Corp. Div. of The Gabriel Co.

Dielectric Materials Co.

Eastern Specialty Co.

PHANO

PHASEFORMER

PHENOCOTE

Wirt Co.

PHENOFLEX

PHENOL FIBRE
Taylor Fibre Co.
PHENOLITE National Visicanized Fibre Co. PHENOWELD Hardman Co., Inc., H. V. PHELHARMONIC PHIL-TROL.
Phili-TROL.
Phili-TROL.
Philips Control Corp.
PHONOLA
Waters Conley Co.
PHONOPHRAGMS
Magnetic Marais Co. Magnetic Metals Co 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 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. Louis Bros. Commercial Research Labs. Inc. Pilot Radio Corp.
PilotROL
Balley Meter Co.
PINHEAD
Sprague Electric Co.
PIX-EYE
Radio Man. Radio Merchandise Sales, Inc. P-K Parker Kalon Corp. Penta Laboratories, Inc. PLASCAP Mallery & Co., Inc., P. R. PLASKON Libbey-Owens-Ford Glass Co. PLAST-ALLOY 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 1. Plastic Wire & Cable Corp.
PLASTICORD
Chester Cable Corp.
PLASTICORE Chester Cable Corp.
PLASTICOTE Chester Cable Corp. PLASTI-GRIP Aircraft-Marine Products, Inc PLASTIK-707 United Technical Laboratories PLASTILOKT Precision Paper Tube Co. PLASTIMOLD Emerson Radio & Phonograph Corp.
PLAST-IRON
Plastics Metals Division
National Radiator Co., The
PLASTISEL
Electronics Devices, Inc.,
Precision Rectifier Div.
PLASTITE
Whitney Bi-ty 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

PLAST-SPONGE
Plastics Metals Division
National Radiator Co., The

PLAST-STEEL
Plastic Metals Division
National Radiator Co., The
PLASTURBO Master Appliance Mtg. Co. PLATE-LOK Boots Aircraft feut Co. PLATO PLAXPAK PLAYAL Sanotone Corp. Reeves Soundcraft Corp Carbonneau Industries, Inc. PLAYSALL Carbonneau Industries, Inc. PLENTI-POWER Westinghouse Electric Corp. Erie Resistor Corp. Paisley Products, Inc Paisley Products, Inc Paisley Products, Inc Goodyear Tire & Rubber Co Goodyear Tire & Rubber Co. Goodyear Tire & Rubber Co PLIOTHERM Goodyear Tire & Rubber Co Goodyear Tire & Rubber Co. Goodyear Tire & Rubber Co. PLUG-IN JFD Mfg. Co., Inc. PLUG-STAT Control Products, Inc. PLUS SOUND Pentron Corp., Inc. PLYA-SEAL Fafinir Bearing Co. PLYMOUTH Meck Industries, John PLYOPHEN Reichhold Chemicais, Inc. Brush Development Co PNR
Rockbestos Products Corp
POCKETSCOPE
Waterman Products Co., Inc.
PODROMETER Branson Instruments, Inc. POINTARC
Western Union Telegraph Co
POLAROID
Pioneer Scientific Corp.
POLATENNA Capehart-Farnsworth Corp POLATRON Capehart-Farnsworth Corp POLECTRON Antara Chemical Division General Dyestuff Corp POLICARB Driver Co., Wilbur B Radio Apparatus Corp POLIMERATOR Short Wave Plastic Forming Co POLINEAR RECORDER Sound Apparatus Co POLYCO Polymer Corp., The Plax Corp. POLYMETER Sylvania Electric Products, Inc. POLY-PEDANCE Standard Transformer Corp
POLYPENCO
Polypenco Polymer Corp., The POLYPLASTIC Standard Varnish Works
POLYRANGER Sensitive Research Instrument Corp. POLYTHENE du Pont de Nemours & Co Inc., E. I. POLYTHERM Dielectric Materials Co POLY-VISO American Phenolic Corp POLYZOL POLYWELD Aircraft-Marine Products, Inc PORTA-FLEXER Miskella Infra-Red Co. PORTAPOWER Cornell-Dubiller Electric Corp PORTAPOWER
Electronic Labs., Inc PORTA-POWER General Transformer Corp. PORTENTIOTROL

Wheelco Instruments Co.

PORT-O-REEL Industrial Electrical Works

PORT PILOT Bludworth Marine Div., National-Simplex-Bludworth, Inc. PORTRAYA PORTRAYA
Haloid Co., The
PORTRONIC
Photographic Products, Inc.
POST-LITE
Littelfuse, Inc.
POTENTIOTIALS
Wheele Instruments Co. Wheelco Instruments Co.
POWDERMET
Powdered Metal Products Corp.
POWER BOOSTER McColpin-Christie Corp.
POWEREL
Industrial Electrical Works
POWERFAC POWERFAC
Schweitzer, Inc., Peter J.
POWER-FLEX
Dumore Co., The
POWERSEL POWERSEL
Electronic Devices, Inc.,
Precision Rectifier Div.
POWERSTAT
Superior Electric Co.
POWER STREAK American Electric Cable Co.
POWER VOICE Taybern Equipment Co.
POWMINCO
Powhattan Mining Co.
POWRMIKE
University Loudspeakers, Inc.
POWR-PAKT Alliance Mfg. Co. PRD
Polytechnic Research & Development
Co., Inc.
PRECEPTRON
Sonotone Corp.
PRECIPITRON
Westinghouse Electric Corp.
PRECISIONAIRE
Sheffield Corp. Sheffield Corp.
PRECISIONER Maico Co., Inc. PRECISION-GAUGED PRECISION-GAUGED
Precision Products Co.
PREDICO
Beam Instruments Corp.
PRE-FAB
Collins Audio Products Co.
PREGMOOD
Formica Co.
PREMAX Chisholm-Ryder Co., Inc. PREMIER-TONE Premier Metal Etching Co.
PRESET PRESET
Bristol Co., The
PRESSITE
West Virginia Pulp & Paper Co.
PRESSMASTER PRESSMASTER
Heiland Research Corp.
PRESSOVAC
Gentral Scientific Co.
PRES-SURE
Buchanan Electrical Products Corp.
PRESSUREGRAPH
Electro Products Labs., Inc.
PRES-SURE-SPLICE
Buchanan Electrical Products Corp. Buchanan Electrical Products Corp.
PRES-SURE-TOOL Buchanan Electrical Products Co.
PRESSURETROL
Minneapolis-Honeywell Regulator Co.
PRESSWOOD PRESSWOOD
Masonite Corp.
PRESTEEL
Worcester Pressed Steel Co.
PRESTITE
Westinghouse Electric Corp.
PREST-0-LITE
Linde Air Products Co.
Unit of Union Carbine & Carbon Corp.
PREST-0-WELD
Linde Air Products Co. PREST-O-WELD
Linde Air Products Co.
Unit of Union Carbine & Carbon Corp.
PRESTROL
Gerett Corp., M. A.
PRINTMASTER
Ozalid Div.,
General Aniline & Film Corp.
PRIVATE EYE
Television Utilities Corp.
PRIVATE TUTOR
Elidico of New York Inc. 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 PROGAR
Langevin Mfg. Co.
PROKAR
Sprague Electric Co.
PROMATIC
General Control Company
PROMCO Progressive Mfg. Co.

PROPELLAIR Robbins & Myers, Inc.
PROTECTOGLO
Minneapolis-Honeywell Regulator Co.
PROTECTORELAY Minneapolis-Honeywell Regulator Co. Brinnell Company, The
PROTELGRAM
North American Philips Co., Inc.
PROVAC PROVAC
Electronic Designs, Inc.
PRYSTAL
Catalin Corp. of America
P. S.
Motorola, Inc.
PULSESCOPE
Waterman Products Co., Inc.
PURATONE PURATONE
Brach Mfg. Corp.
PUREBON
Pure Carbon Co.
PURIFIL
Electric Eye Equipment Co.
PUROX
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
PUSHNUTS
Patinut Co., Inc.
PUSH-PULL
James Vibrapowr Co.
PWC
Plastic Wire & Cable Corp. PWC
Plastic Wire & Cable Corp.
PYGMY
Vulcan
PYRALIN

Electric Co. du Pont de Nemours & Co., Inc., E. I. PYRANOL General Electric Co. PYRA SHELL Auburn Button Works, Inc.
PYRA-SHELL
Shoe Form Co., Inc.
PYREX Corning Glass Works
PYROCON
Illinois Testing Labs., Inc.
PYROHM PYROHM
Aerovox Corp.
PYROLANCE
Illinols Testing Labs., Inc.
PYROMASTER
Bristol Co., The
PYROMATIC Welwyn Electronic Components, Inc.
PYROMIC PYROMIC
Telegraph Construction & Maintenance Co., Ltd.
PYROTESTER
Electro-Tech Equipment Co.
PYROTROL
Bristol Co., The
PYROTRON
Bailey Meter Co.
PYROVAC
Eitel-McCullough, Inc. Q-LACE

Q-LACE
Guthman Inc., Edwin I.
Q-MAX
Communication Prods. Co., Inc.
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.
QUADROCONDEX
Applied Research Laboratories QUANTUMETERS
Applied Research Laboratories
QUARTZ Q
Millen Mfg. Co., James
QUELARC QUARIZ 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-CALL
Motorola, Inc.
QUIK-CONNECT
Aircraft-Marine Products, Inc.
QUIK-ABEL
Brady Co., W. H.
QUIK-MASKS
Brady Co., W. H.
QUIK-RIG
JFD Mfg. Co., Inc.
QUIK-SIGN
Brady Co., W. H.
QUIK-SIGN
Brady Co., W. H.
QUINORGO
Johns-Manville.
QUINTERRA
Johns-Manville.

NR' MONEL
International Nickel Co., Inc., The.
RACON BROADBAND
Racon Electric Co.
RADACOL
Magnetic Core Corp.
RAD-A-COR
Magnetic Core Corp.
RADALR
Bassett Los. 2 RADAIR
Bassett Inc., Rex.
RADALARM
Communications Co., Inc.
RADAMETER RADAMETER
Raytheon Mfg. Co.
RADARANGE
Raytheon Mfg. Co.
RADAX
Electro-Voice, Inc.
RADELIN
U. S. Radium Corp.
RADEX U. S. Radium Corp.
RADEX
Boston Insulated Wire & Cable Co.
RADIAC
Arnhold Ceramics, Inc.
RADI-AIRE
Reynolds Electric Co.
RADIOCARB A
Driver Co., Wilbur B.
RADIOEAR
Myers & Sons, E. A.
RADIOFOCAL
Lord Mfg. Co.
RADIO INDUCTOGRAPH
Inductograph Lab.
RADIOHM
Driver-Harris Co.
RADIOHM
Centralab Div. of
Globe-Union, Inc.
RADIOLA
RAGIO Corp. of America.
RADIOMARINE
RAGIO Corp. of America.
RADIOMARINE
RADIOMETAL
Telegraph Construction & 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. Coles Corp.
RADIOTECHNIC
Peirce Wire Recorder Corp.
RADIOTHERM Westinghouse Electric Corp.
RADIOTOME
Coles Corp.
RADIOTRON
RADIOTRON Radio Corp. of America.
RAILITE
Amplex Div.
Chrysler Corp.
RAKSCOPE Waterman Products Co., Inc. Ranco, Inc.
RANGE LUGS
Frankel Connector Co.
RANGE MASTER RANGE MASIER
Bradshaw Instruments Co.
RANGER
JFD Mfg. Co., Inc.
RANGER RANGER
Sorensen & Co., Inc.
RANGER
Westinghouse Electric Corp.
RANGERECORD
Rangertone, Inc.
RANGERECORDER
Pagestone, Inc. Rangertone, Inc.
RANGESPECORDER
Rangertone, Inc.
RANGESPELICES
Frankel Connector Co.
RANGETAPS
Frankel Connector Co.
RANGETAPS
Frankel Connector Co.
RATOSIGHTS
Fisher & Porter Co.
RATOSIGHTS
Fisher & Porter Co.
RATOTRONIC
Fisher & Porter Co.
RAUTOMATIC
American Sclentific Co.
RAYBOULD
Scovill Manufacturing Co.
RAYCHRONNIX
Radioactive Products, Inc.
RAYCHRONMETER
Radioactive Products, Inc.
RAY-DEC
Fisher, Inc., Fredric
RAYDIST
Hastings Instrument Co.
RAYDNE Hastings Instrument Co. RAYDYNE 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. RAYPHOTO Times Facsimile Corp.

RAYSONDE Friez Instrument Div., Bendix Aviation Corp. RAYTHEON-BELMONT RAYTHEON-BELMONT
Belmont Radio Co.,
Div. Raytheon Mfg. Co.
RAYTHERM
Raytheon Mfg. Co.
RAY-X
Raytheon Mfg. Co.
R B & W
Russell, Burdsall &
Ward Bolt and Nut Co.
R/C R/C Radio Condenser Co. RCA RCA
Radio Corp. of America
RCA VICTOR
Radio Corp. of America
RdF STIKON 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. Heinemann Electric Co.
RECITALIST
Rek-O-Kut Co.
RECO Rectifier Engineering Co.
RECO
Reynolds Electric Co.
RECORDALL Miles Reproducer Co., Inc. RECORDIO Wilcox-Gay Corp.
RECORDION
Wilcox-Gay Corp.
RECORDIOPOINT
Wilcox-Gay Corp.
RECORDISES Recordisc Corp.
RECORD-LIFE
Minnesota Electronics Corp.
RECORDO Wilcox-Gay Corp. RE-CORD-0-FONE RE-GORD-U-FONE
Bell Sound Systems, Inc.
RECORDOMATIC TITRATOR
Precision Scientific Co.
RECTI-CHARGER
Rautheen Mf. C. RECTI-CHARGER
Raytheon Mfg. Co.
RECTI-FILTER
Raytheon Mfg. Co.
RECTIGON
Westinghouse Electric Corp.
RECTIGRAPH
Haloid Co. The Haloid Co., The RECTI-RINGER Raytheon Mfg. Co.
RECTODYNE
McColpin-Christie Corp.
RECTOMATIC Westinghouse Electric Corp.
RECTOPLATER
Mallory & Co., Inc., P. R.
RECTOPOWER
Mallory & Co. MAIlory & Co., Inc., P. R.
RECTOSTARTER
McColpin-Christie Corp.
RECTOSTARTER RECTOSTARTER
Mallory & Co., Inc., P. R.
RECTOTRUCK
Mallory & Co., Inc., P. R.
RECTOX
Westinghouse Electric Corp.
RED BALL
Columbia Resistors, Inc.
RED FLASH
Enthough & Socral Add. III. Enthoven & Sons, Ltd., H. J. REDFLASH Enthoven & Sons, Ltd., H. J.
REDFLASH
Vaco Products Co.
RED HEAD
Girdler Corp.
RED LETTER
Ruby Chemical Co.
RED SEAL
Radiart Corp.
RED SEAL
Radio Corporation of America
RED STREAK
Brown-Bridge Mills, Inc.
REEDEER
Reeder Co., Charles M.
REEVELEC
Reeve Electronics, Inc.
REFLECTAR
Back Video Corp., F. G.
REFLECTOGAGE
Sperry Products, Inc.
REFLECTOSCOPE
Sperry Products, Inc. Sperry Products, Inc. REFRACTALOY Westinghouse Electric Corp. REFRASIL Thompson Co., H. L. REGENCY REGENT Duotone Co., Inc.

Johns-Manville.

REGOHM Electric Regulator Corp. REGULITE REGULITE
Ward Leonard Electric Co.
REJAFIX
Popper & Sons, Inc.
REKORDER
Gorrell & Gorrell
REL
Radio Engineering Labs., Inc.
RELATROL
Automatic Towards Automatic Temperature Control Co.
RELAYMATIC
Kellogg Switchboard & Supply Co.
RELIO
U. S. Rubber Co.
REMACO Clarkstan Corp.
REMALLOY REMALLOY
Arnold Engineering Co.
REMBRANDT
Remington Radio Corp.
REMOTE-O-CABLE
JFD Mfg. Co., Inc.
REN
Nebel Lab., R. E.
REPEATER
Kemlite Labs.
RESIGUM
Paisley Products Inc. Paisley Products Inc.
RESIMENE
Monsanto Chemical Co.
RESIN-FIVE
Kester Solder Co.
RESINITE Precision Paper Tube Co.
RESINOX
Monsanto Chemical Co.
RESI-RAP Paisley Products Inc. Collyer Insulated Wire Co. Roanwell Corp.
REVERSIT Rattan Mfg. Co., The Crucible Steel Co. of America
REX
Shure Brothers, Inc.
REXOLITE
REX Corp.
REXTRUDE Rex Corp. REXVANE Westinghouse Electric Corp.
REZISTAL Crucible Steel Co. of America RHEOTROL Crucible Steel Co. of Amer
RHEOTROL
Wheelco Instruments Co.
RHINOBESTOS
Westinghouse Electric Corp.
RHOMAX
Magnetic Metals Co.
RHOMETAL
Telegraph Construction &
Maintenance Co., Ltd.
RHOMU
Magnetic Metals Co.
RHONITE
Rohm & Haas Co.
RHYTHMASTER
Rek-O-Kut Co.
RIBBON HEAT
Cox & Co., Inc.
RIBFLEX
Ward Leonard Electric Co.
RICHELAIN
Richardson Co., The
RIG-FAST Richardson Co., The Oak Ridge Products Mfg. Div., Video Television, Inc. RINKOLIN Standard Varnish Works.
R. I. P.
Westinghouse Electric Corp.
RITEOHM
Obmits Mc Ohmite Mfg. Co.
R & M
Robbins & Myers, Inc. R M B Landis & Gyr, Inc. Radio Materials Corp. R. M. C. Radio Music Corp. RME Radio Mfg. Engineers, Inc. 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. ROEBX Roebling's Sons Co., John A. ROFCLAD

ROEGLAS Roebling's Sons Co., John A.
ROEPLASTIC
Roebling's Sons Co., John A.
ROEPRENE Roebling'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. ROTALYZER Kay Electric Co. ROTA-TOWER Easy-Up Tower Co. ROTO-BEAM Gordon Specialties Co. ROTO BEAM King Electronics
ROTO-COUNT ROTO-COUNT
Automatic Temperature Control Co., Inc.
ROTO-DISPLAY KING
Gale Dorothea Mechanisms
ROTO FORMER
WestInghouse Electric Corp.
ROTO-LOCK
Simmons Fastener Corp.
ROTOMATIC Johnson Co., E. F.
ROTOMOUNT
Premax Products Div.
Chisholm-Ryder, Inc.
ROTOTROL Westinghouse Electric Corp.
ROTO-VISION Illinois Wood Products Corp.
RO-TRAN
Rome Cable Corp.
ROYAL ROYAL
General Lead Batteries Co.
ROYAL
U. S. Rubber Co.
ROYAL II
Electro-Voice, Inc.
ROYAL CORD
U. S. Rubber Co.
ROYAL GOLD
U. S. Rubber Co. U. S. Rubber Co.
ROYAL JEWEL
Jensen Industries, Inc.
ROYAL MASTER
U. S. Rubber Co.
ROYALITE U. S. Rubber Co. Resistance Products Co. S M C Radio Specialty Mfg. Co. R 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
RUBY-TEX
Richardson Co., The
RUBY-TEUID
Ruby Chemical Co. Ruby Chemical Co.
RUCCO
Ruby Chemical Co.
RUF KOAT
General Cement Mfg. Co.
RUSH Eraser Co., Inc. RUST-BAN Esso Standard Oil Co... Clarkstan Corp. RYERTEX Ryerson & Son, Inc., Joseph T. SAFE-T-GLOW Brach Mfg. Corp. SAFE-T-PLUG Industrial Devices, Inc.

Brach Mfg. Corp.
SAFE-T-PLUG
Industrial Devices, Inc.
SAFE-T-PLUG
Littelfuse Inc.
SAFE-T-SPARKY
Littelfuse Inc.
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.
SANACOUSTIC
Johns-Manville Sales Corp.
SAND-MEX
U. S. Graphite Co. Div. of
The Wickes Corp.
SANDSTEEL
Sandvik Steel, Inc.

SANFORD-BENNET Rubicon Co.
SARAN
Dow Chemical Co.
SAUTER Cramer Co., Inc., R. W. SAV-A-SHAFT National Union Radio Corp.
S/B
Vaco Products Co.
SCALE-0-MATIC Technical Associates
SCHENCK
Ferner Co., R. Y.
SCMATCO Stone City Machine & Tool Co.
SCPULUG
Burndy Engineering Co., Inc.
SCRIBE
Permoflux Corp.
SCOTCH Minnesota Mining & Mfg. Co. SCOTTIE Remler Co., Ltd.
SEAL SILICATE
Philadelphia Quartz Co.
SEALDOM Daven Co.
SEALEX
General Ceramics & Steatite Corp.
SEALNUT Radio Frequency Labs., Inc. SEAL-O-FLANGE SEAL-O-FLANGE
Communication Prods. Co., Inc.
SEALSTIX
Central Scientific Co.
SELECTO-CALL
Federal Telephone & Radio Corp.
SELECT-O-PHONE
Kellong Switchboard & Supply Co. Kellogg Switchboard & Supply Co.
SELECTOVISION
Communication Measurements Lab. Inc.
SELECTRO-PLATERS
Green Floatric Co. Green Electric Co., Inc.
SELETRON
Radio Receptor Co.
SELF CHECKING
Sensitive Research Instrument Corp.
SELFLUBE
Keystone Control Control Keystone Carbon Co., Inc.
SELF-INSTAL
Audicraft, Inc.
SEL-REX Rawt-Messing Corp.
SEMS
Lamson & Sessions Co.
SENNATHONIC
Senn Coro.
SENSATHERM Mercoid Corp.
SENSICON
Motorola Inc.
SENSITROL Weston Electrical Instruments Corp. SENSITRON Weston Electrical Instruments Corp.
SENTINEL Photobell Company
SENTINEL
Westinghouse Electric Corp.
SENTRY-LITE
Hobby & Brown Electronic Corp.
SEPIATONE Frederick Post 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
SERVOSYNC
Servo Corp. of America
SERVOSYNTH Servo Corp. of America SERVOTHERM Servo Corp. of America
SERV-RITE Gordon Co., Claud S. SESCO 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 Autotron Co., The SHAKEPROOF Illinois Tool Works SHELDON Allied Electric Products, Inc.

Jackson Industries, Inc.
SHELDON-MASTER
Sheldon Electric Co. Div.,
Allied Electric Products, Inc.
SHIELD BRAND SHIELD BRAND
Mitchell-Rand Insulation Co., Inc.
SHOCKPROOF
Industrial Transformer Co.
SHUFFL-LOK
Cascade Television Co.
SHUFFLE SCORE
Cascade Television Co.
SHUFFLO
Anchor Metal Co. Anchor Metal Co. SHUR GRIP SHUR GRIP
Parker-Kalon Corp.
SHURITE
J B T Instruments Inc.
S. I. E. C.
Sherman Industrial Electronics Co.
SIGHT METER
Weston Electrical Instrument Co.
SIGHT-TITE
Barker-Column Co. Barber-Colman Co. SIGNALINER Feiler Engineering Co.
SILANEAL
Dow Corning Corp.
SILASTIC Dow Corning Corp.
SILCAZ
Electro Metallurgical Co.
Unit of Union Carbide & Carbon Corp.
SILECTRON
Arnold Engineering Co.
SILENTBLOC
Engral Tire & Pubbon Co. General Tire & Rubber Co.,
The Silentbloc Div.
SILENT SENTINEL
Westinghouse Electric Corp.
SILIC-0-NETIC
Heinemann Electric Co.
SILFLEX
Variety Com Varflex Corp.
SIL-FOS
Handy & Harman
SILKENITE Acme Wire Co. 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.
SILVERMIKE Condenser Corp. of America SILVER-Q Decimeter, Inc. SILVERSTAT Westinghouse Electric Corp.
SILVERTONE Colonial Radio Corp.
SIMPAC
Westinghouse Electric Corp.
SIMPLI-FLEX
Radiart Corp., The
SIMPLYTROL
Assembly Products Inc. Assembly Products, Inc. Shure Brothers.
SKAN
G-M Laboratories
SKANASCOPE
SKaneateles Mfg. Co., Inc.
SKL Spencer-Kennedy Labs., Inc.
S. K. S.
Paisley Products, Inc.
SKYFONE
Hallicrafters Co.
SKYGUIDE Philco Corp. SKY-KING J. F. D. Mfg. Co., Inc. SKYPLY Skydyne, Inc. SKYROD SKYROD
Belling & Lee, Ltd.
SKY-STREAK
JFD Mfg. Co., Inc.
SKY-TOP
JFD Mfg. Co., Inc.
SKYTOWER
Belling & Lee, Ltd.
SKY-WEIGHT
Continental Electronics, Ltd.
SLIDEOHM
Approver Corp. Aerovox Corp. SLIM-AIRE Electro-Voice, Inc. SLIM-TRIM Electro-Voice, Inc. SLIPSTICK SLIPSTICK
Decimeter, Inc.
SLIPSYN
Westinghouse Electric Corp.
SLO-BLO
Litteffuse, Inc.
SMALL UNIDYNE
Shure Brothers, Inc.
SMITH-NATHANIEL BALDWIN
Consolidated Radio Products Co.

Roebling's Sons Co., John A.

Ess Specialty Corp.
SMUTBATH
Special Chemicals Co.
SMZ SMOKGAGE Electro Metallurgical Co.
Unit of Union Carbide & Carbon Corp.
SNAPIT SNAPIT
Cable Electric Products Co.
SNAP-LOCK
National Acme Co.
SNAP-LOCK
Oak Ridge Products Mfg. Div. of
Video Television, Inc.
SNIFFER Nuclear Instrument & Chemical Corp. SNOOPER Precision Radiation Instruments, Inc. Phelps Dodge Copper Products Co. SOLAVOLT Sola Electric Co. SOLDALOY 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.
SOLOTRON
Modern Hearing Aids Laboratories, The.
SOLU-BRIDGE Industrial Instruments, Inc. SONACTOR Kay Electric Co. SONA-GRAPH Kay Electric Co. SONALATOR Kay Electric Co. SONARMETER Raytheon Mfg. Co. SONIC EAR Taybern Equipment Co. SONISCAN Television Equipment Corp. SONIZON Magnaflux Corp. SONOCLE Sonotone Corp. Shure Brothers, Inc. SONO-PROBE Aircraft Electronics Associates, Inc. SONOWEAR Sonotone Corp. Chaslyn Co.
SOUND CELL
Brush Development Co.
SOUND ISOLATION BLANKET
Johns-Manville Sales Corp.
SOUNDMIRROR Brush Development Co.
SOUNDREEL
Simpson Mfg. Co., Inc., Mark.
SOUNDTRAP
Miles Reproducer Co., Inc. Tech-Master Products Co. SOUND-ZORBER Finn & Co., Inc., T. R. SOUTHCO
South Chester Corp. SPARKFLASH Triumph Mfg. Co.
SPAULDITE
Spaulding Fibre Co., Inc.
SPAULDO Spaulding Fibre Co., Inc. SPEAK-E-Z Airlectron, Inc. Pfanstieh! Chemical Co.
SPECO SPECO
Special Products Co.
SPECORAK
Special Chemicals Co.
SPECPLATER
Special Chemicals Co.
SPEC-POWER National Spectrographic Labs., Inc.
SPECTABLE
Special Chemicals Co.
SPECTRIFIER
Special Chemicals Co.
SPECTROPHOTELOMETER Central Scientific Co.
SPEECHMASTER Jensen Mfg. Co. SPEED CLAMPS Tinnerman Products Inc. SPEED CLIPS Tinnerman Products Inc. SPEE-DEE Peck & Harvey SPEE-DEE Radiart Corp.

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. SPEKALUMINITE Special Chemicals Co. SPEKLEEN Special Chemicals Co. SPEKWITE Special Chemicals Co.
SpekyELLO
Special Chemicals Co.
Special Chemicals Co. 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.
SPIN-HEX Vaco Products Co.
SPINLAB
Special Instruments Laboratory, Inc.
SPINTITE Stevens-Walden Inc.
SPIRALENE Surprenant Mfg. Co. SPIRALOCK Production Engrg. Co. Surprenant Mfg. Co. SPIRAMEG Sprague Electric Co. SPIRASHIELD Muter Co. SPLICE CAP Buchanan Electrical Products Corp.
SPONGEX
Sponge Rubber Products Co., Inc.
SPOT-0-GRAPH Audio-Master Corp. SPRAY SPRAY
Paisley Products Inc.
SPRING-ACTION
Sheldon Electric Co.
Div. of Allied Electric Products, Inc.
SPRING-KING Gorrell & Gorrell
SPRING-LIFE SPRING-LIFE
Cook Electric Co.
SPRING-LOCK
Simmons Fastener Corp.
SPRING-LOCK ANTENNA
Oak Ridge Products Mfg. Div. of
Video Television, Inc.
SQUEEZ-GRIP
C.O. Two Fire For Law C.O Two Fire Equipment Co.
SQUEEZE-LOCK
Buchanan Electrical Products Corp.
SRC British Radio Electronics Ltd.
SRHT Boston Insulated Wire & Cable Co. STABIFLO
Foxboro Co.
STABILINE Superior Electric Co. STABILOG Foxboro Co.
STABILOVOLT
Marconi Wireless Telegraph Co.
STABLOHMS Chase Resistor Co.
STACO
Standard Electrical Products Co.
STA-KON Thomas & Betts Co., Inc. STANCOR Standard Transformer Corp.
STANDARD New York Solder Co. STANDARD
Shure 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 STANDALROL
Bailey Meter Co.
STANDCO
Stieft Co., Inc., Herman H.
STANDEE
Clarostat Mfg. Co., Inc.

STAN-GARD JFD Mfg. Co., Inc. STANTEL Standard Telephones & Cables Ltd.
STANTOX
Standard-Toch Chemicals, Inc.
STAN-TRAN STAN-TRAN
Stanwyck Winding Co.
STAR
Duotone Co., Inc.
STAR J
Haynes Stellite Co.
Unit of Union Carbide & Carbon Corp.
STATIFLUX
Magnaflux Corp.
STATOMIC
Motorola Inc.
STA-TRAN
Stanwyck Winding Co. Stanwyck Winding Co. STEEL-SET Paisley Products, Inc. STEMAG Arnhold Ceramics, Inc. Stevens Mfg. Co., Inc. STENAFAX Times Facsimile Corp. Crescent Industries, Inc.
STENOVOX
Berlant Associates
STERILAIRE Ultra-Violet Products Inc.
STERILAMP Westinghouse Electric Corp.
STERILZONE Dallons Labs.
STERLING
Beam Instruments Corp.
STERLINE
Cossor (Canada) Ltd.
STERLING CABLES
Cossor (Canada) Ltd.
STETHERTRON
Mairo Co. Inc. Maico Co., Inc. STETHOSCOPE Feiler Engineering & Mfg. Co.
STEVENS
Leupold & Stevens Instruments, Inc.
STEWOVOX
Real-1 Berlant Associates
STILBEST
Linick Chemical Co.
STIMSONITE
A'G'A' Division of Elastic Stop Nut
Corp. of America
STOKATIMER
Mascald Corp. Mercoid Corp. STONEHART Titeflex, Inc. STRAIN ANALYZER Brush Development 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 Wastinghouse Electric Corp.
STREAMLINER Ozalid Div.
General Aniline & Film Corp.
STRESSCOAT
Magnaflux Corp.
STRESSITE STRESSITE
Amolex Div. Chrysler Corp.
STRING-A-LITE
Joy Mfg. Co.
STRIPMASTER
Ideal Industries, Inc.
STRIPOHM
Ward Leonard Electric Co.
STRIPSOL
Paisley Products, Inc.
STROBOCONN
Conn. Ltd., C. G.
STROBODYNE
Sperry Gyroscope Co. Div o 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. STYRACON Sprague Electric Co. STYRALOY

Dow Chemical Co.

STYRAMIC Monsanto Chemical Co. Phelps Dodge Copper Products Co.
STYROFOAM STYROFOAM
Dow Chemical Co.
STYROL AC
Standard Varnish Works
STYRON
Dow Chemical Co.
SUB-CYCLE
Lorain Products Corp.
SUNFLASH Kemlite Labs.
SUNSWITCH
Ripley Co., Inc.
SUPER B Ozalid Div. General Aniline & Film Corp.
SUPER-BEAM JFD Mfg. Co., Inc. SUPER DAVOHM Daven Co. SUPER EX. Telrex Inc. SUPERFLAKE SUPERILARE
Superior Flake Graphite Co,
SUPERIOR
Radiart Corp.
SUPERMALLOY
Arnold Engineering Co.
SUPER-OILITE
Assets Dis Character Corp. Amplex Div., Chrysler Corp. SUPER PRO SUPER PRO
Hammarlund Mfg. Co.
SUPER Q
Guthman, Inc., Edwin 1.
SUPERSEC
U. S. Rubber Co.
SUPER SONIC
Sonic Industrias Sonic Industries, Inc.
SUPERSONIC REFLECTOSCOPE SUPERSONIC REFLECTOSCOPE
Sperry Products Inc.
SUPER SPEED
Enthoven & Sons, Ltd., H. J.
SUPER-STRUCTURE
Radiart Corp.
SUPER TRACER
Precision Electronics
SUPERTROL
Control Corp.
SUPERVAC
Central Scientific Co.
SUPERVIEW
Brach Mfg. Corp.
SUPERWIRE
Audar Inc. Audar Inc. SUPER-X SUPER-X Telrex, Inc.
SUPER VEE
Radiart Corp., The
SUPREME Aim Industries
SUPREME
Grant Pulley & Hardware Co.
SUPRO Valco Mfg. Co. SURCO Surprenant Mfg. Co. Surprenant Mfg. Co. SURFLON
Surprenant Mfg. Co.
SURF FLUX
New York Solder Co.
SURFACE-ANALYZER
Brush Development Co.
SURFLEX
Surprenant Mfg. Co.
SURGYTHERM, JR.
Wappler, Inc.
SWEATLESS
Paisley Products Inc.
SWEET
Jensen Industries. Inc. Jensen Industries, Inc. SWELTERPROOF Roanwell Corp. SWING-WA Trumbull Dept. of General Electric Co SWITCH-LITE SWITCH-LITE
Littelfuse, Inc.
SWITCH-O-LITE
Hoffman Engrng. Corp.
SYLPHON
Fulton Sylphon Div.,
Robertshaw-Fulton Controls Co.
SYLVALOY
Driver Co., Wilbur B.
SYMPHONY MASTER
Monitor Products Co.
SYNCHRO-CHEK
lonic Electronic Equipment Co. SYNCHRO-CHEK
Ionic Electronic Equipment Co.
SYNCHRO-METER
Bailey Meter Co.
SYNCHRO-SPECIAL
Heiland Research Corp.
SYNCHRON
Hansen Mfg. Co., Inc.
SYNCHRONIZED
Self Windlan Clock Co. Self Winding Clock Co. SYNCHROTROL Westinghouse Electric Corp.
SYNCHRO-VALVE SYNCHROVERTER Bristol Co., The

SPEEDEX

General Cement Mfg. Co.

STANDLAC Standard-Toch Chemicals, Inc.

Standard Telephones & Cables Ltd.

STANELCO

SYNCROGEARS
U. S. Electrical Motors, Inc.
SYNCROLL
Fairchild Recording Equipment Co.
SYNCRO-MARKER
Electro Products Labs.
SYNCROMOUNT
Glanning & Co. Lec. C. M. Giannini & Co., Inc., G. M.
SYNCROPLEX
Television Equipment Corp.
SYNCROPRINTER Anelex Corporation
SYNCHRO-SWEEP
Oak Ridge Products Mfg. Div.,
Video Television, Inc.
SYNCTRON
Dormitzer Electric Co., Inc.
SYNITE SYNITE
Arco Co.
SYNKOTE
Plastoid Corp.
SYNRUB U. S. Rubber Co.
SYNTHINOL
Rome Cable Corp.
SYNTHO Electro Chemical Engineering Co.
SYNTHOGRAPHIC Synthane Corp.
SYNTHOLVAR
Varflex Corp.
SYNVAREN Synvar Corp.
SYNVARITE
Synvar Corp.
SYNVAROL Synvar Corp. SYROCOWOOD Syracuse Ornamental Co., Inc.

TABBY Division Lead Co.
TACO
Technical Appliance Corp.
TACOPLEX
Technical Appliance Corp.
TAG 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
Continental Screw Co.
TAPE-O-GRAPH
Audio Industries
TAPE RECORDER
Amony Floritic Corp. TAPE RECORDER
Ampex Electric Corp.
TAPER-TONE
Acton Co., H. W.
TAPE TITE
Palsley Products Inc.
TAPMASTER
Sheldon Electric Co.,
Div. of Allied Electric Products, Inc.
TARYTRON
Cook Electric Co. Cook Electric Co.
TATTELITE
Littelfuse, Inc.
T.C.C.
Telegraph Condenser Co., Ltd.
TEC Television Equipment Corp.
TECO
Teleradio Engineering Corp.
TEFLEX Boston Insulated Wire & Cable Co.
TEFSILON
Boston Insulated Wire & Cable Co.
T.E.I. Thomas Electronics, Inc. Fielden Electronics Inc. Magnetic Core Corp.
TEL-A-COR Magnetic Core Corp.
TELAMP
Miles Reproducer Co., Inc.
TELANTUNE Miles Reproducer Co., Inc.
TELANTUNE
Crystal Devices Co., Inc.
TELCOARC
Western Union Telegraph Co.
TELCOHESIVE
Telegraph Construction &
Maintenance Co., Ltd.
TELECOMPOUND
Telegraph Construction &
Maintenance Co., Ltd.
TELCON
Telegraph Construction &
Maintenance Co., Ltd.
TELCON
Telegraph Construction &
Maintenance Co., Ltd.
TELCONAX

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.
TELCUMAN
Telegraph Construction & Maintenance Co., Ltd.
TELEBOOSTER
Television Equipment Corp.

Television Equipment Corp.
TELECAP

Sprague Electric Co.
TELECENE
Enthoven & Sons, Ltd., H. J.
TELECOMMAND
Flader, Inc., Fredric
TELECORD

Blake Co., Whitney TELECORDER
Telecomputing Corp.
TELECOUPLER
Television Equipment Corp.
TELEDELTOS
Western Union Telegraph Co.
TELEDIPHONE

Edison, Inc., Thomas A.
TELEDUCT

Blake Co., Whitney
TELEDYNE
Flader, Inc., Fredric
TELEFAX
Western Union Telegraph Co.
TELEFLIGHT
Flader, Inc., Fredric
TELEFRAME
Blake Co. Whitney

Blake Co., Whitney
TELEGLAS
Pittsburgh Plate Glass Oo.
TELEHOME

Webster Electric Co.
TELEKRYPTON

Western Union Telegraph Co.
TELEMARK
Leupold & Stevens Instruments
TELEMASTER
Television Equipment Corp.
TELEMETROSCOPE
Deutschmann Corp., Tobe
TELEMIKE
Miles Reproducer Co. Miles Reproducer Co., Inc.
TELEMIRROR
House of Television Inc.
TELEPAGE

Webster Electric Co. TELEPHOTO Acme Telectronix Div. of NEA Service, Inc. TELEPLATE

Blake Co., Whitney
TELEPRENE Blake Co., Whitney TELEREADER

Telecomputing Corp.
TELE-ROTOR
Radiart Corp.
TELESEAL

Blake Co., Whitney
TELESET
Telex, Inc.
TELESONIC
U. S. Television Mfg. Corp.
TELESPATCH

Webster Electric Co. TELESPEAKER

Telexy, Inc.
TELESYMPHONIC
U. S. Television Mfg. Corp.
TELESYN
Ford Instrument Div.,
The Sperry Corp.
TELETALK
Webster Electric Co.
TELETHERM
Wortinghouse Electric Corp.

Westinghouse Electric Corp.
TELETORQUE
Kollsman Instrument Corp.
TELETRAP Crystal Devices Co., Inc.

TELETUNER Mallory & Co., Inc., P. R. TELEVAC Fredericks Co., Geo. E.

TELEVERTER
James Vibrapowr Co. TELE-VIDER Electro-Voice, Inc.

TELEVOICRITER Edison Inc., Thomas A. TELEVOLT
Sola Electric Co.

TELEVOX
Westinghouse Electric Corp. TEL-OHMIKE Sprague Electric Co.

TELOP Gray Research & Development Co., Inc. TELOPTICAN Gray Mfg. Co.

TEL-TENNA
Telvision Laboratories, Inc.
TELVAR Audar, Inc. Transmitter Equipment Mfg. Co., Inc.
TEMFLEX IEMFLEX
Irvington Varnish & Insulator Co.
TEMP COP
Micro Switch
TEMPERATURE COMPENSATOR "30"
Carpenter Steel Co., The
TEMPROOF
Lord Mfg. Co.

Lord Mfg. Co.
TEMSTART
Synchro Start Products, Inc.
TENITE

Tennessee Eastman Co.
TENITE I
Tennessee Eastman Co.
TENITE II

Tennessee Eastman Co.
TENNA-CLAMP
Mueller Electric Co.
TENNA ROTOR
Alliance Mfg. Co.
TENNA SCOPE

TENNA SCOPE
Alliance Mfg. Co.
TENNASTUB
Crystal Devices Co., Inc.
TENNA-TOP
Electro-Voice, Inc.
TENNEYZPHERE
Tenney Engineering, Inc.
TENSIOMETER
Sax! Instrument Co.
TENSITE
Driver Co., Wilbur B.

TENSITE
Driver Co., Wilbur B.
TENSOLON
Tensolite Insulated Wire Co., Inc.
TENS-0-TROL
Dillon & Co., Inc., W. C.
TENSULATION
Tensolite Insulated Wire Co., Inc.
TERMALINE
Bird Electronic Corp.
TERMEND
Buchanan Electrical Products Corp.
TERMIN 0 SEAL
Wolfe Co., Inc., Franklin C.
TEROMETER
Engineering Research Corp.

Engineering Research Corp. Esso Standard Oil Co. TESCO

Eastman Specialty Co.
TESTLITE-FUSPUL
Dante Electric Mfg. Co.
TEST-MIKE

Cornell-Dubilier Electric Corp.
TEST-0-LITES
Brach Mfg. Corp.
TEST-MASTER
Precision Apparatus Co.
TETCO

TETCO
Electric Tachometer Co.
TEXCEL
Industrial Tape Corp.
TEXTOLITE
General Electric Co.
THERACOUPLER
Marconi Instruments Ltd.
THERA-RAY
Edin Co., Inc.
THERATHERM
Marconi Instruments Ltd.

Marconi Instruments Ltd.
THERLO
Driver-Harris Co.
THERMALARM

Eastern Specialty Co.
THERMALL
LaRose & Associates, Inc., W. T.
THERM-A-NEERING

Westinghouse Electric Corp.
THERMATRON
Radio Receptor Co,
THERMEX
Girdler Corp.
THERMITE

Thermionic Engrg. Corp.
THERMOCAP
Niagara Electron Laboratories
THERMOCONTAX Rahm Instruments, Inc. THERMO-GRIP

Ideal Industries, Inc.
THERMOGUARD
Westinghouse Electric Corp.
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 Blake Co., Whitney THERMOSEN Sorensen & Co.

THERMOSHEET Cox & Co., Inc. THERMO-SNAP Spencer Thermostat Co. THERMOSWITCH Fenwal, Inc. THERM-OTROLS Wheelco Instruments Co.
THERMOVERTER
Bristol Co., The Bristol Co., THERMOWIRE Cox & Co., Inc. THERMU-TROL

THERMU-TROL

Mu Switch Div., Arco Switch Co.
THESAURUS
Radio Corp. of America
THINEX
Dixon Crucible Co., Joseph
THORDARSON
Meissner Mfg. Div.,
Maguire Industries, Inc.
THRED-LOCK
Continental Screw Co.
THREDMOUNT
National Union Radio Corp.

National Union Radio Corp.
THREE-PHASE

Sciaky Bros., Inc.
THROTTLTROLS
Wheelco Instruments Co.
THRURAY THRURAY
Sperry Products, Inc.
THYRITE
General Electric Co.
THYR-X
Liebel-Flarsheim Co.
TICONDEROGA
Dixon Crucible Co., Joseph
TIDLETRIK
American Lava Corp.
TI-MATIC
Westinghouse Electric Corp.

Westinghouse Electric Corp.

Paragon Electric Co.
TIMEFAX
Times Facsimile Corp.
TIME-MASTER TIME-MASTER
Dictaphone Corp.
TIME-O-GRAF
Borg Equipment Dlv.,
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.

INY-GLOW
Industrial Devices, Inc.
TINYMIKE
Cornell-Dubilier Electric Corp.
TINY TIM
Shure Brothers
TIOGA
Sheldon Electric Corp.

Sheldon Electric Co., Div., Allied Electric Products, Inc. TIPS Electronic Products Co.

TIREX
Simplex Wire & Cable Co.
TITAN

General Lead Batteries Co.
TITAN
Sonotone Corp.
TITEGRIP
Dante Electric Mfg. Co.
TITONE

TITONE
Sonotone Corp.
TITRILOG
Consolidated Engineering Corp.
TITRIMETER
Fisher Scientific Co.
TITROMETER
Precision Scientific Co.
T. W.
Paisley Products Inc.
TOM THUMB
Automatic Radio Mfg. Co., Inc.
TONEPAK
Lee Electric Co.
TONG TEST
Columbia Electric Mfg. Co.
TONG TEST
Martindale Electric Co.
TOP HAT
Times Facsimile Corp.
TOPHET
Driver Mfg. Co., Wilbur B.
TORKOTHERM
Tork Clock Co.
TORGIE DRIVE Sonotone Corp.

Tork Clock Co. TORQUE DRIVE

Electro-Voice, Inc. TORKMASTER Tork Clock Co., Inc.
TORSIOGRAPH
Commercial Research Labs., Inc.
TORSIOMETER

Commercial Research Labs., Inc. TOUCH-TIMER Kay Electric Co.

TRADIO
Trad Television Corp.

TRADIOPHONE Trad Television Corp. TRADIOVISION

Trad Television Corp.

TRADITION-CHROMA Staedtler, Inc., J. S. TRAFF-0-MATIC TRAFF-O-MATIC
Automatic Signal Div.,
Eastern Industries, Inc.
TRAIL BLAZER
Meck Industries, John
TRAIN EAR
Maico Co., Inc.
TRAN-COR
Armoo Steel Corp.
TRANOORS
Lenkurt Electric Co., Inc.
TRANSALOID
Haloid Co.. The TRANSALOID

Haloid Co., The
TRANSFAX

Eastman Kodak Co.
TRANSFILTER
Brush Development Co.
TRANSFLEX
Irvington Varnish & Insulator Co.
TRANSITE
Johns-Manville Sales Corp.
TRANSITONE
Philco Corp.
TRANSKOTE
Pancro \_Mirrors, Inc. TRANSKOTE
Pancro Mirrors, Inc.
TRANS-0-METER
Westinghouse Electric Corp.
TRANSTAT
Standard Electronics Ccrp.
TRANSVERTER
Hertner Electric Co.
TRAVELLER TRAVELLER
JFD Mfg. Co., Inc.
TRAVERTONE
Armstrong Cork Co.
TRENTWELD
Crucible Steel Co. of America
TRIANGLE T
Amaloameted Amalgamated Electronics
TRIAXIAL
Jensen Mfg. Co.
TRICENE Enthoven & Sons., Ltd., H. J.
TRI-CORE
Alpha Metals, Inc.
TRIG ARIDIA WELLIS, INC.
TRIG
Rostan Corp.
TRI-LOK
Boots Aircraft Nut Corp.
TRIMTHERM
General Controls Co.
TRI-O-MATIC TRI-0-MATIC
V-M Corp.
TRIONODE
Walkirt Co.
TRI-0-SPEED
V-M Corp.
TRIONIC
Clarkstan Corp.
TRI-PLEX
Jensen Mfg. Co.
TRIPLOC
Pyle-National Co. Pyle-National Co.
TROLLEYPHONE
Farmers Engineering & Mfg. Co.
TRONEX Wheaton Co., T. C., Electronic Div. TRUARC
Waldes Kohinoor Inc.
TRUCOPYPHOTE
General Photo Products Co.
TRUE-BRAND
Carbonneau Industries, Inc.
TRU FIDELITY
Meissner Mfg. Div.,
Maguire Industries, Inc.
TRUFLEX
General Plate Division,
Metals & Control Corp.
TRU-FLEX
Peerless Photo Products
TRU-GRAF
Peerless Photo Products Peerless Photo Products
TRULUME Reeves Soundcraft Corp. Model Engrng. & Mfg. Co. TRUSCON Republic Steel Corp. TRU-SONIC Stephens Mfg. Corp. TRU-VAC TRU-VAC
Continental Electric Co.
TRYLON
Wind Turbine Co.,
Tower & Antenna Div.
TUBE-MASTER
Precision Apparatus Co.
TUBE-U-LAR
Preside Electric Co. Pyramid Electric Co.
TUBE VISE
Precision Plastic Products, Inc.
TUCK-AWAY
JFD Mfg. Co., Inc.
TUFFERNELL
Westingburg Electric Co. Westinghouse Electric Corp.
TUFFY Insulation Manufacturers Corp.
TUFLEC Laminated Plastics Inc.
TUF-ON
Brooklyn Paint & Varnish Co., Inc.
TUNE-0-MATIC
Electro-Voice, Inc.

TURBOGLAS
Brand & Co., Inc., William
TURBOLAC
Brand & Co., Inc., William
TURBOSIL
Brand & Co., Inc., William
TURBO PRENE
Brand & Co., Wm.
TURBOTHERM
Brand & Co., William TURBOTHERM
Brand & Co., William
TURBOTHERMS
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
TWIN FAST
Blake & Johnson Co. Blake & Johnson Co.
TWINTACTS
Weston Electrical Instrument Co.
TWIN-TRAX Amplifier Corp. of America
TWINKORD
Ansonia Electrical Co.
TWINROD Belling & Lee, Ltd.
TWINSET Telex, Inc.
TWINSULATION
U. S. Rubber Co.
TWIN-VISO Sanborn Co. TWISTAB National Union Radio Corp.
TWISTAGUIDE Airtron, Inc. TWIST-LOCK Hubbell, Inc., Harvey TWIST-LOK Sprague Electric Co. TWIST-MOUNT Pyramid Electric Co.
TWIST-TITE
Hubbell, Inc., Harvey
TWOFOLD Mitchell Industries, Inc. Air Associates, Inc. U. S. Stoneware Co.
TY-LOK TY-LOK
Air Associates, Inc.
TYNISWITCH
Sessions Clock Co.
TYMIT
Tork Clock Co.
TYNEE-DRY
Pyramid Electric Co.
TYPE-0-WRITER
Kellogg Switchboard & Supply Co.
TYPHONITE ELDORADO
Dixon Crucible Co., Joseph
TY-PLY
Marbon Corp. 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.
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-CAL
Cubic Corp.
ULTRACOMPACT
United Transformer Co.
ULTRA LINEAR
Acro Products Co.
ULTRASCALER
Nuclear Instrument & Chemical Corp.
ULTRASONORATOR
Crystal Research Labs., Inc.
ULTRATONE
Audio Industries
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.
UNICLOSED
U. S. Electrical Motors, Inc.

UNICON
United Condenser Corp.
UNI-CRIMP UNI-CRIMP
Sherman Mfg. Co., H. B.
UNIDYNE
Shure Brothers, Inc.
UNI-FLEX
Dumore Co., The
UNILECTRIC
United Mfg. & Service Co.
UNI-FLEX
Miskella Infra-Red Co.
UNI-FLO
Barber-Colman Co. Barber-Colman Co.
UNIFORMITY ANALYZER
Brush Development Co.
UNI-MATIC Calbest Engineering & Electronics Co. Maxson Corp., W. L. UNIONMELT Linde Air Products Co., Unit of Union Carbide & Carbon Corp. UNIPLEX
Shure Brothers, Inc.
UNIPOINT Shure Brothers, Inc. UNIPOLE Andrew Co.
UNI-SHAFT
Mailory & Co., Inc., P. R.
UNITACT Bristol Co., The UNITED Jackson Industries, Inc.
UNITONE Duotone Co., Inc. UNITORS Belling & Lee, Ltd.
UNIVERSAL Mueller Electric Co. UNIVERSAL ANALYZER Brush Development Co.
UNIVERSAL BRIDGE SWITCH
Brush Development Co.
UNIVERSAL MASTER Hovis Screwlock Co.
UNIVIBES
National Union Radio Corp.
UNIVIS Esso Standard Oil Co. UNIVOLT Esso Standard Oil Co. UNLIMITET Northern-Zaleski, Ltd. UPSON Republic Steel Corp. American Cyanamid Co. URELITE U. S. Electronics Corp. 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.
USPREME
U. S. Rubber Co. U. S. Rubber Co. USRUB U. S. Rubber Co. U.S.S. U.S.S. AMERICAN American Steel & Wire Co. UTC UTC
United Transformer Corp.
UTILASTIC
Paisley Products, Inc.
UTILIPHONE
National Electronic Labs., Inc.
UTILISCOPE
Diamond Power Specialty Corp.
UYCOR
Corping Glass Works Corning Glass Works

V-HEAT
Electric Eye Equipment Co.
V-KING
Schott Co., Walter L.
VACOMBO
Vaco Products Co.
VALVRATORS
Fischer & Porter Co.
VALVSEAL
Richardson Co., The
VAN de GRAAFF
High Voltage Engineering Corp
VAPO
Post Co., Frederick
VAREC
Vapor Recovery Systems Ca

VARGLAS Varflex Corp. VARIAC
General Radio Co.
VARIATEN
Shallcross Mfg. Co.
VARICELL
Superior Electric Co., The
VARIORIVES U. S. Electrical Motors, Inc. Electron Enterprises
VARIFILE
Photographic Products, Inc.
VARI-LOOPSTICK Grayburne Corp. VARIMATCH United Transformer Corp.
VARIPLOTTER VARIPLOTTE
Electronic Associates, Inc.
VARIPOWER
United Transformer Corp.
VARITONE
Flader, Inc., Fredric
VARITAN
United Transformer Corp.
VARITRON
Determine Products Inc. Photographic Products, Inc.
VARITRONIC
Electrons Equipment Corp.
VARITYMER 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 VAW
Fluke Engineering Co., John
VECTORLYZER
Advance Electronics Co.
VEECO VEECO
Vacuum Electronic Engineering Co.
VEE-D-X
LaPointe-Plascomold Corp.
VEEROD
Belling & Lee, Ltd.
VEGETOL
Cornell-Dubilier Electric Corp.
VEGIMAL
Paisley Products, Inc.
VELOMETER
Illinols Testing Labs, Inc.
VELOUR-BLACK
Sheldon Electric Co. Div of VELOUR-BLACK
Sheldon Electric Co. Div of
Allied Electric Products, Inc.
VENDLITES
Drake Mfg. Co.
VENTURI-FLO
Barber-Colman Co.
VERICON
Reminents Pand Land Remington Rand, Inc.
VERITHIN
Eagle Pencil Co.
VERNIER-SET Automatic Temperature Control Co., Inc. VERSACONE Radio Merchandise Safes VERSA-LINER Peck & Harvey
VERSALITE
U. S. Rubber Co.
VERSATEX Shure Brothers VIBESTON U. S. Rubber Co.
VIBRALOC
Topping Mfg. Co.
VIBRALYZER Kay Electric Co. Topping Mfg. Co. Mallory & Co., Inc., P. R. VIBRASENDER Motorola Inc.
VIBRASHOCK
Robinson Aviation, Inc.
VIBRASPONDER Motorola Inc. VIBRATAB Telecomputing Corp.
VIBROGROUND Associated Research Inc. VIBROMETER Televiso Products, Inc. VIBROMIKE VIBROMIKE
Brush Development Co.
VIBROTEST
Associated Research, Inc.
VICALLOY
Arnold Engineering Co.
VICTOR
Radio Corp. of America
VICTROLA
Paulo Corp. of America Radio Corp. of America VICTRON
Victor Electric Products, Inc. VIDEO BEAM Camburn, Inc. VIDEOCOUPLER Mallory & Co., Inc., P. R. VIDEOFILM

TURBO Brand & Co., William

General Precision Laboratory, Icc.

VIDEOGAM
General Precision Laboratory, Inc.
VIDEOLA
Tech-Master Products Co.
VIDEOLUX Video Corp. of America
VideoMETER
Hickok Electrical Instrument Co.
VIDEON Tele-Video Corp.
VIDEOSET Video Corp. of America
VIDEOTRON National Union Radio Corp.
VIDI MASTER
Communication Measurements Lab., Inc.
VIEWLITE Viewlex Inc. Belling & Lee, Ltd.
VIEWMATIC
Viewlex Inc.
VIEWTALK Viewlex Inc. Cornell-Dubilier Electric Corp. Jensen Mfg. Co.
VIKING
Johnson Co., E. F.
VIMLITE Celanese Corp. of America Alpha Wire Corp.
VINYLITE
Bakelite Corp.
VINYLSEAL Bakelite Corp. VINYON

Bakelite Corp.

VIPOWER Cornell-Dubilier Electric Corp.
VIPOWER Radiart Corp.
VISABLE PROOF
Electric Heat Control Co., The
VISAFLAME Mercoid Corp.
VISCONOL-CATHODRAY
Telegraph Condenser Co., Ltd.
VISCOR Weston Electrical Instruments Co. Westinghouse Electric Corp. VISITRON Rauland Corp. VISO-CARDIETTE Sanborn Co. VISCOL Enthoven & Sons Ltd., H. J. VITAMIN Q Sprague Electric Co. VITATRON

Sheldon Electric Co. Div. of Allied Electric Products, Inc.

Radionic Transformer Co.

X0VATIV

VITROHM Ward Leonard Electric Co. VITROLAIN Star Porcelain Co. VIZ Molded Insulation Co. Molded Insulation Co VOCAL-AIRE Dilks Co., The VOICE OF THEATRE Altec Lansing Corp. VOICEWRITER Edison Inc., Thomas A. VOLOCITROL Barber-Colman Co. VOLTSTAT Industrial Transformer Corp.
VOLTALAC
Standard-Toch Chemicals, Inc.
VOLT-AMP 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.
VOMAX
McMurdo Silver Co., Inc.
VORCO Vorac Co., The Vorac Co., The VUELITE Monsanto Chemical Co. Monsanto Chemical Co. VULCATEX Horn Co., Inc., A. C. VULCOID Continental-Diamond Fibre Co. Corning Glass Works WALCO
Electrovox Co., Inc.
WALDES TRUARC
Waldes Kohinoor, Inc.
WALKIE-RECORDALL Miles Reproducer Co., Inc. WALSCO Schott Co., Walter L. WATCH MASTER
American Time Products, Inc. WATERWITE Bache & Co., Semon WATTERSON

Davis & Co., J. W.
WAVEFLEX
Titeflex, Inc. WAX S 1167 Glyco Products Co., Inc. W. D. C.

Paisley Products Inc.

WEBCOR Webster-Chicago Corp.
WEDGE-GRIP WEDGE-GRIP
Sherman Mfg. Co., H. B.
WEDGIE
Insulation Manufacturers Corp.
WEIGER-WEED
Fansteel Metallurgical Corp.
WELDRAWN Superior Tube Co.
WELDOMATIC
Westinghouse Electric Corp.
WELD-0-TIMER Westinghouse Electric Corp.
WELD-0-TROL
Westinghouse Electric Corp.
WELDPOWER Raytheon Mfg. Co. WEMCALLOY Westinghouse Electric Corp.
WESGO Western Gold & Platinum Works
WESTLINE WESTLINE
Western Lithograph Co.
WETOIL
Farrelloy Co.
WHARFEDALE WHARFEDALE
British Industries Corp.
WHC
Waltham Horological Corp.
WHEELOCK
Signal Engineering & Mfg. Co.
WHIPPET
JFD Mfg. Co., Inc.
WHITE FLASH
Enthoven & Sons, Ltd., H. J.
WINCHESTER
Olia Industries Inc. Olin Industries, Inc. Wilson Co., The, H. A.
WILCOLEC
WILCOX Electric Co.
WILLIAMSON British Radio Electronics Ltd. Hudson Wire Co. WINCO Wincharger Corp. WINROD Belling & Lee, Ltd.
WIPERMALLOY
United Transformer Corp.
WIRE-NUT Ideal Industries, Inc.
WIRE-OHM
Phaostron Co.
WIREPHONE Molded Insulation Co. WIRETONE Molded Insulation Co.
WIREWATT
Ohmite Mfg. Co. WIRTCO Wirt Co.

WONDERFLUX

American Silver Co., Inc.

WOOD GLU Paisley Products Inc.

WOODITE Syracuse Ornamental Co., Inc. Woodwelding, Inc. WOODWELDER Short Wave Plastic Forming Co.
WOODWELDER
Woodwelding, Inc.
WYD-ANGLE Ess Specialty Corp. XACTEMP Gordon Co., Claud S. XACTLINE Gordon Co., Claud S. XENOFLASH Triumph Mfg. Co. XEROX Haloid Co., The Cook Electric Co. X-Ray Dept. of General Electric Co. Irvington Varnish & Insulator Co.
X-THERMOTROL Gasket Engineering Co.
X-VAR
Fidelity Chemical Products Corp.
X-WASHERS Standard Locknut & Lockwashers, Inc. YANKEE Stanley Tools Div., Stanley Works
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 ZENU-KUIE
Zenlth Optical Lab.
ZERO READER
Sperry Gyroscope Co. Div.
of The Sperry Corp.
ZIPCORD U. S. Rubber Co. Set Screw & Mfg. Co. ZIP-IN American Phenolic Corp.
ZIPOHMS Muter Co.
ZIRMET
Foote Mineral Co.
ZOOMAR
Television Zoomar Corp.
ZOOM-UP JFD Mfg. Co., Inc. ZYGLO Magnaflux Corp.

Halowax Products Division, Union Carbide & Carbon Corp.

# 1952-1953 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., 21 Prospect St., Newark, N. J. A'G'A' Div. of Elastic Stop Nut Corp. of America, 1029 Newark Ave., Elizabeth 3, N. J.
A. P. W. Co., 72 W. Main St., Rockaway, N. J.
ARF Products, Inc., 7627 Lake St., River Forest, Ill. Abalon Precision Mfg. Corp., 540 Casanova St., Bronx

59, N. Y. Accurate Insulated Wire Corp., 25 Fox St., New Haven,

Accurate Mfg. Co., 44 Hepworth Place, Garfield, N. J. Accurate Paper Tube Co., 801 N. Peoria St., Chicago 22,

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, III.

Ace Coil & Electronics Co., 912 Middlesex Ave., Metuchen, N. J.

Ace Engineering & Machine Co., 3642 N. Lawrence St., Philadelphia 40, Pa.

Ace Mfg. Corp., Chalfont, Pa.

Ace Spring Mfg. Co., 77 W. Houston St., New York 12, N. Y.

Achason Colloids Co., 1850 Washington Ave. Park Hymne.

Acheson Colloids Co., 1950 Washington Ave., Port Huron,

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago 6, Acklin Stamping Co., 1923 Nebraska Ave., Toledo 7,

Acklin Stamping Co., 1923 Nebrusha V.C.,
Ohio.

Acme Battery Co., 59 Pearl St., Brooklyn 1, N. Y.
Acme Electric Corp., 31 Water St., Cuba, N. Y.
Acme Eiectric Heating Co., 1217 Washington St., Boston, Mass.
Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4,
Calif

Calif.
Acme Telectronix 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 Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
Acro Switch Co., Columbus, Ohio.
Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.

N. Y.
Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Acton Co., H. W., 370 7th Ave., New York 1, 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, III. Advance Electric & Relay Co., 2435 Naomi St., Bur-

bank, Calif. Advance Electronics Co., 451 Highland Ave., Passaic,

Advance Insulated Wire & Cable Co., Inc., 72 Woolsey St., Irvington, N. J.

Advance Recording Products Co., 36-12 34th St., Long Island City, N. Y.

Aermotive Equipment Corp., 1632-8 Central St., Kansas

City 10, Mo.

Aero Coil Co., 507-26th St., Union City, N. J.

Aerolite Electronics Corp., 507-26th St., Union City,

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.
Ainsie Electronic Products, Inc., 312 Quincy Ave., Quincy
69, Mass Mass

Air Associates, Inc., Teterboro, N. J. Air Control Installations, Ltd., Ruislip, Middlesex, Eng-

Air-Marine Motors, Inc., 2183 Jackson Ave., Seaford,

Airborne Accessories, Inc., 25 Hillside St., Hillside 5,

N. J.
Airborne Electronics Co., Metropolitan Airport Hangar
No. 3, Van Nuys, Calif.
Airborne Instruments Lab., Inc., 160 Old Country Rd.,
Mineola, N. Y.
Aircraft Electronics Associates, Inc., 94 Silas Deane
Highway Rocky Hill Conn

Highway, Rocky Hill, Conn.

Alrcraft Marine Products, Inc., 2100 Paxton St., Harris-

Alrcraft Marine Products, Inc., 2100 r account burg 10, Pa.
Alrcraft 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 Laboratories, Ltd., High Wycombe, Buckinghamshire. England.

shire, England. rpax Products Co., Middle River, Baltimore 20,

Airplane & Marine Instruments, Inc., Clearfield, Pa.
Airplane & Marine Instruments, Inc., Clearfield, Pa.
Airtron, Inc., 25 E. Elizabeth Ave., Linden, N. J.
Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los
Angeles 39, Calif.

Akron Porcelain Co., Akron 14, Ohio. Alamo Electronic Corp., 105 Romana St., San Antonio 1,

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

Mass.

Alfax Paper & Engineering Co., Washington St., P. O.
Box 125, Westboro, Mass.

All American Tool & Mfg. Co., 1014 W. Fullerton St.,
Chicago 14, Ill.

All Metal Products, 206 McWhorter St., Newark 5, N. J.
All Weather Springs, 140 Cedar St., New York, N. Y.
Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pitts-burgh 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-Braule, Co., Hartford 2, Conn.
Allen Mfg. Co., Lake Park Blvd., Alliance, Ohio.
Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio.
Allied Control Co., Inc., 2 East End Ave., New York 21,
N. Y.

Allied Industries, Inc., 1023 S. 21st St., Louisville 10,

Ky.

Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, Ill.
Allied Recording Products Co., 21-09 43rd Ave., Long
Island City 1, N. Y.

Allis-Chalmers Mfg. Co., 935 South 70th St., Milwaukee

1, Wis.
Allis Co., Louis, 427 E. Stewart St., Milwaukee 7, Wis.
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 York 13, N. Y.
Alloy Metal Wire Co., 13th & Penna. Ave., Prospect

Park, Pa.
pha Electronics, Inc., 53-57 Bergen Turnpike, Little Alpha Electronics, Inc., 53-57 Bergen Turnpike, Little Ferry, N. J. Alpha Metals, Inc., P. O. Box 34, 56 Water St., Jersey

City, N. J.

Alpha Wire Corp., 50 Howard St., New York, N. Y.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly

Hills, Calif. Aluminum Co. of America, Gulf Bldg., Pittsburgh 30,

Pa.

Amalgamated Electronics, Electronics Road, Clinton Corners, N. Y.

Ambroid Co., 305 Franklin St., Boston 10, Mass.

American Brass Co., 25 Broadway, New York 4, N. Y.

American Chemical Paint Co., Ambler, Pa.

American Chronoscope Corp., 316 W. First St., Mount Vernon, N. Y.

American Cladmetals Co. P. C. Bry 144 Co.

American Cladmetals Co., P. O. Box 544, Carnegle, Pa. American Condenser Co., 4410 Ravenswood Ave., Chicago 40, III.

American Cyanamid Co., 38 Rockefeller Plaza, New

American Oyanamu Vov. 20, N.Y.
American Diathermy Products, Inc., 11858 Mississippl Ave., Los Angeles 25, Calif.
American Electric Cable Co., 181 Appleton St., Holyoke,

Mass.
American Electric Motors, Inc., 4811 Telegraph Rd.,
Los Angeles, Calif.

American Electrical Heater Co., 6110 Cass Ave., Detroit

2, Mich.
American Electroneering Co., 5025-29 W. Jefferson Blvd.,

Los Angeles 16, Calif. merican Electronics Corp., 157 Marion Blvd., Colum-

American General Thermostat Corp., 2060 Bronx St., New York 60, N. Y. American Hard Rubber Co., 11 Mercer St., New York 13,

N. American Hinge Corp., 206 Wallabout St., Brooklyn 6,

N. Y. American Instrument Co., 8030 Georgia Ave., Silver

American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y.
American Lava Corp., Chattanooga 5, Tennessee.
American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
American Molded Products Co., 1644 N. Honore St., Chicago 22 III

Chicago 22, III. American Molding Powder & Chemical Corp., 703 Bed-ford 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, III. American Photocopy Equipment Co., 2849 N. Clark St.,

American Platinum Works, N.J.R.R. Ave. at Oliver St., New American Products Mfg. Co., 8127-33 Oleander St., New

Orleans 18, La.
nerican Radionic Co., Inc., 33 & 55 Flatbush Ave.,

Orleans 10, Co., Inc., 33 & S. MacQuesten 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.

Chicago 44, Ill.
Chemical Co., 103 Foster St., Pea-

American Resinous Chemical Co., 103 Fusier 3..., Cabody, Mass.

American Scientific Co., P. O. Box 11, High Bridge Station, New York 52, N. Y.

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 Soider & Flux Gui, 2332 C. Marcican Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.

American Television, Inc., 523 S. Plymouth St., Chicago

American Television & Radio Co., 300 E. 4th St., St. Paul 1, Minn.
American Thermo Electric Co., 67 E. 8th St., New York

3, N. Y.

American Time Products, Inc., 580 Fifth Ave., New York
19, N. Y.

Amersil Co., Inc., Hillside, N. J. Ames Co., W. R., 150 Hooper St., San Francisco **7**,

Calif.

Amglo Corp., 2037 W. Division St., Chicago 22, III.

Amperex Electronic Corp., Duffy Ave., Hicksville, N. Y.

Amperite Co., 561 Broadway, New York 12, N. Y.

Ampex Electric Corp., 934 Charter St., Redwood City,

Amplifier Corp. of America, 398 Broadway, New York 13,

N. Y.
Ampro Corp., 2835 North Western Ave., Chicago 18, III.
Amy, Aceves & King Inc., 11 W. 42nd St., New York
18, N. Y.
Anaconda Wire & Cable Co., 25 Broadway, New York 4,

Anchor Industrial Co., 533 Canal St., New York 13, N. Y. N. Y. Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y. Anchor Plastics Co., Inc., 533-541 Canal St., New York

Anco Wood Specialties, Inc., 71-08 80th St., Brooklyn 27, N. Y. Andersen Laboratories, Inc., 39 Talcott Rd., West Hart-

ford, Conn.

Anderson, Arthur R., 517 North I St., Tacoma 3, Wash.

Anderson & Sons, Inc., N. Elm & Notre Dame Sts., West-

Anderson & Sons, Inc., N. Elm & Notre Dame Sts., West-field, Mass.
Andrea Radio Corp., 27-01 Bridge Plaza North, Long Island City 1, N. Y.
Andrew Corp., 363 E. 75th St., Chicago 19, III.
Anelex Corporation, Concord, N. H.
Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.
Ansley Mfg. Co., Arthur, Doylestown, Pa.
Ansonia Electrical Co., 63 Main St., Ansonia, Conn.
Antara Chemicals Division, General Dyestuff Corp., 435
Hudson St., New York 14, N. Y.
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.

Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Callf.

Applied Physics Corp., 362 W. Colorado St., Pasadena

Calif. 1, Calif.
Applied 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.

Arcturus Electronics, Inc., 54 Clark St., Newark, N. J. Arenberg Ultrasonic Laboratory, 94 Green St., Jamaica

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.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
Armstrong Cork Co., Lancaster, Pa.
Arnhold Ceramics, Inc., 1 E. 57th St., New York 22,
N. Y. N. Arnold Engineering Co., Marengo, III.
Arro Expansion Bolt Co., Boone Ave., Marion, Ohio.
Arrow-Hart & Hegeman Electric Co., 100 Hawthorn St., Arton Hart & Regeman Electric Co., 100 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,
Wie Arvin Industries Inc., Radio & Television Div., Columbus, Arwood Precision Casting Corp., 70 Washington St., Arwood Freelision Brooklyn, N. Y.
Asheville-Schoonmaker Mica Co., 900 Jefferson Ave.,
Newport News, Va. Newport News, Va.

Askania Regulator Co., 240 E. Ontario St., Chicago 11, III.
Assembly Products, Inc., Chagrin Falls 6, Ohio.
Associated Engineering Corp. of Boston, 38 Euston Road,
Brighton 35, Mass.
Associated Production Co., 162 N. Clinton St., Chicago 6, III. Associated Research, Inc., 3788 W. Belmont, Chicago 18, Astatic Corp., The, Conneaut, Ohio.
Astatic Corp., 255 Grant Ave., East Newark, N. J.
Atlantic India Rubber Works, Inc., Dept. EL, 571 Polk
St., Chicago 7, III.
Atlas Coil Winders, Inc., Stamford, Conn.
Atlas Electronics Mfg. Co., 312 Stuart St., Boston 16,
Mass. Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Atlas Satta Scorp., Pleasant St., Fairhaven, Mass.
Atomic Instrument Co., 84 Massachusetts Ave., Camhridge 39 Mass. Atomic Instrument 60, or history of the bridge 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, Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.

Audio Equipment Sales, 153 W. 33rd St., New York 1, Audio Industries, Michigan City, Ind. Audio Instrument Co., Inc., 133 W. 14th St., New York Audio-Master Corp., 341 Madison Ave., New York 17, Audio Products Corp., 2265 Westwood Blvd., Los Angeles Audio Products Corp., 2265 Westwood Bivd., Los Angeles
64, Calif.
Audio & Video Products Co., 730 Fifth Ave., New York
19, N. Y.
Augat Bros., Inc., 33 Perry Ave., Attleboro, Mass,
Aurex Ccrp., 1117 N. Franklin St., Chicago 10, III.
Austin Co., 0., 335 Throop Ave., Brooklyn 21, N. Y.
Autel Electronics Co., 1946 Farmingdale Rd., Westfield,
N. J. N. J. Auto Engraver Co., Ridgefield, Conn. Autocrat Radio Co., 5024 Elm St., Skokie 8, III, Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III Chicago 7, III.

Automatic Mfg. Corp., 65 Gouverneur St., Newark 4,

Automatic Metal Products Co., 315 Barry St., Brooklyn 11, N. Y Automatic

Radio Mfg. Co., Inc., 122 Brookline Ave.,

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.

N. Y. Autotron Co., The, Danville, III. Avon Tube Div., Higbie Mfg. Co., Rochester, Mich. Avery Adhesive Label Corp., Monrovia, Calif. Avion Instrument Corp., Paramus, N. J.

B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
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., 1044 Ivanhoe Road, Cleveland 10, 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.
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,

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, Barres Development Co., Lansdowne, Pa.
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,

Barrett Co., Leon J., P. O. Box 378, Worcester 1, Mass. Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill. Barry Corp., The, 700 Pleasant St., Watertown, 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, 307-11 N. W. 1st Ave., Fort Lauderdale, Fla.
Bausch & Lomb Optical Co., 635 St. Paul St., Rochester

Bausch & Lonin Options 20, 2, N.Y.
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,

Beaver Gear Works, Inc., 1034 Parmele St., Rockford,

Beckman Instruments, Inc., 820 Mission St., South Pasadena, Calif.

Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.

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, III. Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Obio

Belling & Lee Ltd., 366 Madison Ave., New York 17,

Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, III.
Belock Instrument Corp., 13-11 111th St., College Point,

Hearing Aid Co., Beltone Bldg., 1450 W. 19th

St., Chicago 8, III.

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

Bendix Radio Division, Bendix Aviation Corp., Baltimore Md.

4, Md.
Bentley-Harris Mfg. Co., Conshohocken, Pa.
Berkeley Custom Electronics, 2302 Roosevelt Ave.,
Berkeley 3, Calif.
Berkeley Scientific Corp., Richmond, Calif.
Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln,

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 Beta Electric Corp., 333 E. 103rd St., New York 29,

Biddle Co., James G., 1316 Arch St., Philadelphia 7,

Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N. J. Biggs Co., Carl H., 11616 W. Pico Blvd., Los Angeles,

Bird Electronic Corp., 1800 E. 38th St., Cleveland 14,

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, III.
Blaco Mfg. Co., 6543 Euclid Ave., Cleveland 3, Ohio.
Blake Co., Whitney, Dept. E, New Haven 14, Conn.
Blake & Johnson Co., 1495 Thomaston Ave., Waterville
48. Conn.

48, Conn.
Blaw-Knox Div. of Blaw-Knox Co., Farmers Bank Bldg.,
Pittsburgh 22, Pa.
Bliley Electric Co., Union Station Bldg., Erie, Pa.

Pittsburgh 22, Pa.
Bliley Electric Co., Union Station Bldg., Erie, Pa.
Blonder-Tongue Laboratories, Inc., 38 N. Second Ave.,
Mt. Vernon, N. Y.
Bludworth Marine Div., National-Simplex-Bludworth, Inc.,
92 Gold St., New York 38, N. Y.
Board Products Co., 4206 W. Lake St., Chicago 24, III.
Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago
12, III.

III Bodnar Industries, Inc., 19 Railroad Ave., New Rochelle, N. Y.

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,

Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

Bomac Laboratories, Salem Rd., Beverly, Mass. Bond Electric Corp., Div. of Olin Industries Inc., New Haven 4, Conn.

Bond Electronics Corp., 60 Springfield Ave., Springfield, Bone Engineering Co., 701 W. Broadway, Glendale 4, Calif.

Bonney Forge & Tool Works, Allentown, Pa.

Booth Co., Arthur E., 4124 Beverly Blvd., Los Angeles 4, Calif. Boots Aircraft Nut Corp., 55 John St., Stamford, Conn. Borg Equipment Division, The George W. Borg Corp., Janesville, Wis.
orden Co., The Chemical Div., 350 Madison Ave., New
York 17, N. Y.

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.
Bowers Battery & Spark Plug Co., Reading, Pa.
Bowser Technical Refrigeration Div., Bowser, Inc., Terryville, Conn.

Bowmar Instrument Corp., 4214 Leo Rd., Fort Wayne,

Ind. Boyle Metalcraft Corp., 150 Sullivan St., Brooklyn 31,

Bozak Co., R. T., 90 Montrose Ave., Buffalo 14, N. Y. Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J. Bracke-Seib X-Ray Co., Inc., 293 3rd Ave., New York,

Bradley Labs., Inc., 82 Meadow St., New Haven 10, Conn

Brady Co., W. H., 1612 E. Spring St., Chippewa Falls, Wis. Brainin Co., C. S., 320 Washington St., Mt. Vernon, Bram Chemical Co., 820 65th Ave., Philadelphia 26,

Brand & Co., Inc., William, 104 Valley St., Willimantic,

Branson Instrument, Inc., 438 Fairfield Ave., Stamford, Conn.

Breeze Corps., Inc., 41 S. Sixth St., Newark 7, N. J. Brelco Electronics Corp., 55 Vandam St., New York 13, Breon Laboratories, 1520 Evergreen Rd., Williamsport,

Brew & Co., Inc., Richard D., 106 Concord Ave., Bel-

Brew & Co., Inc., Richard D., 106 Concord Ave., Belmont 78, Mass.
Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.
Bright Star Battery Co., 200 Crooks Ave., Clifton, N. J.
Brilhart Plastics Corp., Old County Rd., Mineola, N. Y.
Brilmayer Labs., Inc., E. W., 86 Fulton St., New York
38, N. Y.
Brinnell Company, The, Simsbury, Conn.
Bristol Co., The, Waterbury 20, Conn.
Bristol Engineering Corp., Lincoln Ave. & Pond St.,
Bristol Motor Co., Old Saybrook, Conn.
British Radio Electronics Ltd., 1 Thomas Circle, Washington 5, D. C.

ington 5

British Industries Corp., 164 Duane St., New York 13, 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,

Brooks & Perkins Co., 1950 W. Fort St., Detroit 16, Mich.

Brown Electro-Measurement Corp., 4637 SE Hawthorne Bivd., Portland 15, Ore.
Browning Laboratories, Inc., 750 Main St., Winchester, Mass.

Brubaker Mfg. Co., Inc., 1951 Exposition Drive, Los Angeles 34, Calif. Brujac Electronic Corp., 103 Lafayette St., New York,

13, N. Y.
Bruning Co., Inc., Charles, 125 North St., Teterboro, N. J. Brush Beryllium Co., The, 4301 Perkins Ave., Cleveland

3, Ohio Brush De Development Company, The, 3405 Perkins Ave., Cleveland 14. Ohio Buchanan Electrical Products Corp., 223 Route 29, Hill-side, N. J. Buck Engineering Co., 37-41 Marcy St., Freehold, N. J.

side, N. J.

Buck Engineering Co., 37-41 Marcy St., Freehold, N. J.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Buda Co., The, Harvey, III.
Bud5-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 12, Pa.
Burgess Battery Co., Battery Div., Freeport, III.
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.
Bussman Mfg. Co., St. Louis 7, Mo.
Butler Mfg. Co., Inc., B. B., 3150 Randolph St., Bellwood, III.

CBS-Columbia Inc., 170 53rd St., Brooklyn, N. Y. C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, C.G.S. Conn.

Conn.
C-O-Two Fire Equipment Co., P. O. Box 390, U. S. Highway 1, Newark 1, N. J.
Cable Electric Products Co., Providence, R. I.
Caddell-Burns Mfg. Co., 40 E. Second St., Mineola,

N. Y.
Calbest Engineering & Electronics Co., 628 N. Highland
Ave., Hollywood 38, Calif.
Calidyne Co., The, 751 Main St., Winchester, Mass.
Califone Corp., 1041 N. Sycamore Ave., Hollywood, 38,

Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif. Caltron Co., 1406 So. Hobart Blvd., Los Angeles 6, Calif.

Boonton Radio Corp., Boonton, N. J.

Barber Colman Co., Rockford, Ill.

Cambridge Instrument Co., Inc., 3031 Grand Central Terminal, New York 17, N. Y. Cambridge Thermionic Corp., 445 Concord Ave., Cam-Cambridge

bridge 38, Mass.
Camburn, Inc., 32-40 57th St., Woodside, N. Y.
Camera Equipment Co., 1600 Broadway, New York, Camera N. Y.

Camloc Fastener Corp., 420 Lexington Ave., New York 17, N. Y. Campbell Industries, Inc., 733 E. Main St., Chattanooga

8, Tenn.
Canadian Aviation Electronics, Ltd., 8280 St. Lawrence
Blvd., Montreal, P. Q.
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.

Capehart-Farnsworth Corp., 3700 E. Pontiac, Fort Wayne

Capehart-Farnsworth Corp.,

1, Ind.
Capps & Co., Inc., Frank L., 244 W. 49th St., New York 19, N. Y.
Carboloy Dept. of General Electric Co., 11139 E. Eight Mile Blvd., Detroit 32, Mich.
Carbonneau Industries, Inc., Grand Rapids, Mich.
Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plaintille Conn.

Cardwell Mrg. Corp., Allell C., Ville, Conn.
Carling Electric, Inc., 505 New Park Ave., West Hartford 10, Conn.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
Carpenter Steel Co., Union, N. J.
Carpenter Steel Co., The, 142 West Bern St., Reading,

Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III. Carter Motor Co., 2644 N. Maplewood Ave., Chicago 47,

Carter Parts Co., 213 Institute Place, Chicago 10, III. Cascade Television Co., 153 Chestnut Ave., Irvington,

Catalin Corp. of America, 1 Park Ave., New York 16, Celanese Corp. of America, 180 Madison Ave., New York

Celanese Corp. of America, 190 Mauson Ave., New 1918
16, N. Y.
Cellusuede Products, Inc., Rockford, Ill.
Central Research Laboratories, Inc., Red Wing, Mich.
Central Scientific Co., 1700 Irving Park Rd., Chicago 13,

Central Screw Co, 3501 Shields Ave., Chicago 9, III.
Central Stamping & Mfg. Co., Polo, III.
Centralab, Div. of Globe-Union Inc., 914 E. Keefe Ave.,
Milwaukee 1, Wis.
Centronics Co., 41-05 Lawrence St., Flushing, 55, N. Y.
Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
Century Geophysical Corp., 1333 North Utica, Tulsa,
Oklahoma.

Cerro de Pasco Copper Corp., 40 Wall St., New York 5, N. Y.

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., 475 Washington St., Newark

Chatham Electronics Corp., 475 Washington St., Newark 2, N. J.
Chatillon & Sons, John, 93 Cliff St., New York 38, N. Y.
Chatillon & Sons, John, 93 Cliff St., New York 38, N. Y.
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 Dia Co., 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.

cago 22, III.
Chicago Rivet & Machine Co., Bellwood, III

Chicago Trelephone Supply Corp., 1142 W. Beardsley
Ave., Elkhart, Ind.
Chicago Tool & Engineering Co., 8380 S. Chicago Ave.,

Chicago Tool & Engineering Co., 6360 S. Chicago 17, III.
Chicago 17, III.
Chicago Transformer Div., Essex Wire Corp., 3501 W.
Addison St., Chicago 18, III.
Churchill Corp., 7 North Ave., Wakefield, Mass.
Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.
Cima Corp., 119 Braintree St., Allston, Mass.
Cinaudagraph Speakers, 7334 N. Clark St., Chicago 26,

Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, III. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Citation Products Co., 233 E. 146th St., New York 51,

N. Y. Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, III. Clark Controller Co., 1146 E. 152nd St., Cleveland 10,

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. Clarkstan Corp., 11921 SW. Pico Blvd., Los Angeles 64,

Calif Clarostat Mfg. Co., Inc., Dover, N. H.
Clear Beam Television Antenna Co., 100 Prospect Ave.,
Burbank, Calif.
Cleveland Container Co., The, 6201 Barberton Ave.,

Cleveland 2. Ohio Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland,

Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St.,

Cleveland 5, Ohio.
Clippard Instrument Laboratory, Inc., 7390 Colerain Ave.,
Cincinnati 14, Ohio.
Clough Brengle Co., 6014 N. Broadway, Chicago, Illinois.

Codetyper Laboratories, 550 Fifth Ave., New York 19, N. Y.

Cohan-Epner Co., Inc., 142 W. 14th St., New York 11, Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon,

N. Y.
Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y.
Coil Winding Equipment Co., 109 Audrey Ave., Oyster
Bay, N. Y.

Bay, N. Y.
Coilcraft, Inc., 3716 N. Cicero Ave., Chicago 41, III.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles

15, Calif.
Cole Radio Works, 86 Westville Ave., Caldwell, N. J.
Cole Steel Equipment Co., 285 Madison Ave., New York

Coleman Instruments, Inc., 318 Madison St., Maywood,

Coles Corp., 3211 Woodland Ave., Philadelphia 3, Pa. Colgate Mfg. Corp., Lindenhurst, N. Y. 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.
Collyer Insulated Wire Co., 249 Roosevelt Ave., Paw-

tucket, R. I.
Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio. Columbia Metal Box Co., 260 E. 143rd St., New York,

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., Chi-

cago 18, III. Comar Electric Co., 3349 W. Addison St., Chicago 18, Combustion Control Corp., 720 Beacon St., Boston 15,

Mass.
Commercial Equipment Co., Inc., Box 168, Lawrence, Kansas. Commercial Research Laboratories, Inc., 20 Bartlett Ave.,

Commercial Research Laboratories, Inc., 20 partiet Comp., Detroit 3, Mich.
Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Mo.
Communication Measurements Lab. Inc., 120 Greenwich St., New York 6, N. Y.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34. Fla

34, Fla.

Communications Equipment Div., Robert Dollar Co., 50
Drumm St., San Francisco 12, Calif.
Computer Corp. of America, 149 Church St., New York,

Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
Computing Devices of Canada, Ltd., 338 Queen St.,
Ottawa 4, Ontario.

Conant Labs., 6500 0 St., Lincoln 5, Nebraska.
Condenser Products Co., 7517 N. Clark St., Chicago 26,

Condor Radio Mfg. Co., 116 N. Montezuma, Prescott, 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 Brittania St.,

Connecticut Telephone & Electric Gurp., 70 Electric

Chicago 10, III.

unsolidated Wire & Associated Companies, 1635 S. Clin-Consolidated ton St., Chicago 16, Illinois. Constantin & Co., L. L., Route No. 6 at Lodi Circle, Lodi, N. J.

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 Corp., 553 W. Randolph St., Chicago 6, Ill.
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 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 Engineering Corp., 863 Washington St., Canton,

Mass. Mass.
Control Instrument Co., Sub. of Burroughs Adding
Machine Co., 67-35th St., Brooklyn 32, N. Y.
Control Products, Inc., 306 Sussex St., Harrison, N. J.
Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1,

N. J.
Cook Electric Co., 2700 Southport Ave., Chicago 14, III.
Cook Laboratories, 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.
Coradlo, Inc., 212 Broadway, New York 7, N. Y.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astorla
Blvd., Long Island City 2, N. Y.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Carrier, Clark Works, Corning, N. Y. M .1.

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, Cortland Industries, Inc., 4545 Cortland St., Chicago 39,

Cosa Corp., 405 Lexington Ave., New York 17, N. Y.

Cosmic Radio Corp., 853 Whittier St., New York 59, N. Y. N. S., Canada. Ltd., 301-303 Windsor St., Galley, 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.
Cox & Co., Inc., 50 Broad St., New York 54, N. Y.
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.
Crescent Co., Inc., Front & Central Ave., Pawtucket, R. I.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago
41. Ill.
Crest Laboratories, Inc., Whitehall Bldg., Far Rockaway, Crest Laboratories, Inc., Whitehall Bldg., Far Rockaway,

Crest Transformer Corp., 1834-36 W. North Ave., Chlcago 22, III. Crestwood Recorder Corp., 221 N. LaSalle, Chicago 1,

III.
Croname, Inc., 3701 Ravenswood Ave., Chicago, III.
Crosby Labs., Inc., Robbins Lane, Hicksville, N. Y.
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.
Crowdel Laboratorica, Inc., 640 N. Main St., Wichita 5

Crystal Laboratories, Inc., 640 N. Main St., Wichita 5, Kans. Crystal Research Labs. Inc., 29 Allyn St., Hartford,

Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Curtis Development and Mfg. Co., 3226 N. 33rd St.,
Milwaukee 16, Wis.

Custom Electronics Corp., 738 Speedwell Ave., Morris Plains, N. J.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,

Cycle Electronics Laboratories, 356 Glenwood Ave., East Orange, N. J.
Cyclotron Specialties Co., Moraga &, Calif.

D & R, Ltd., 402 E. Guitierrez St., Santa Barbara, Calif. DX Radio Products Co. Inc., 2300 Armitage Ave., Chicago 47, III. cago 47, III. age Electric Co., Inc., 67 N. Second St., Beech Grove,

Dahlstrom Metallic Door Co., Jamestown, N. Y.
Dale Products, Inc., Box 1, Columbus, Neb.
Dallons Labs., 5066 Santa Monica Blvd., Los Angeles,
Calif.

Dalmotor Co., Santa Clara, Calif. Dane Electronic Labs., Inc., 316 Stuart St., Boston,

Mass.

Dano Electric Co., Main St., Winsted, Conn.

Dante Electric Mfg. Co., Bantam, Conn.

Daven Co., 191 Central Ave., Newark 4, N. J.

Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale Md.

dale, Md. Davies Molding Co., Harry, 1428 N. Wells St., Chicago

10, III.
Davis & Co., J. W., 9212 Denton Drive, Dallas, Texas.
Decade Instrument Co., Box 535, Caldwell, N. J.
Decca Records, Inc., 50 W. 57th St., New York 19, N. Y.

No. Yo.

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, III.

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.

DeJur-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.

DeLuxe Coils, Inc., Wabash, Ind.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank,

Calif.

Calif.
-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place,

De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Flace, Chicago 14, III. Deutschmann Corp., Tobe, 921 Providence Highway, Nor-Deutschmann Corp., 100e, 921 Providence Highway, Norwood, Mass.

Dial Light Co. of America, Inc., 900 Broadway, New York 3, N. Y.

Dial Screw Products Co., Inc., 32-21 58th St., Woodside, N. Y.

side, N. Y. Diamond Drill Carbon Co., 53-63 Park Row, New York

7, N. Y.
Diamond Mfg. Co., Wakefield, Mass.
Diamond Power Specialty Corp., Lancaster, Ohio.
Diamond Wire & Cable Co., Sycamore, III.
Dice Co., J. W., Englewood, N. J.
Dictaphone Corp., 420 Lexington Ave., New York 17,

N. Y. Diehl Manufacturing Co., 1129 Finderne Ave., Somerville,

N. J.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, III.
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, III.
Digital Products, Inc., 7852 Ivanhoe Ave., LaJolla, Calif.
Dilks Co., The, Seymour, Conn.
Dillon & Co., Inc., W. C., 1421 S. Circle Ave., Forest Park, III.

Park, III.

Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.

Distillation Products Div. of Eastman Kodak Co., 755
Ridge Rd. W., Rochester 3, N. Y.

Dit-Mco Inc., 729 Baltimore Ave., Kansas City 6, Mo.

Division Lead Co., 836 W. Kinzie St., Chicago 22, III.

Do All Co., 254 N. Laurel Ave., Des Plaines, III.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
Dolin Metal Products, Inc., 315 Lexington Ave., Brooklyn Electric Machinery Mfg. Co., 1331 N.E. Tyler St., Minneapolis 13, Minn. Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, 16, N. Y.
Dolinko & Wilkens, Inc., 89 Adams St., Hoboken, N. J.
Dollar Co., Robert, The, 947 Broadway, Redwood City, Electric Regulator Corp., 50 Day St., South Norwalk, Calif.
Donham Craft, Inc., Thomaston, Conn.
Donnelly Electric & Mfg. Co., 3050 Washington St., Electric Sodering Iron Co., W. Elm St., Deep River, Conn. Electric Specialty Co., 211 South St., Stamford, Conn. Electric Storage Battery Co., 42 S. 15th St., Philadelphia 2, Pa. Electrical Industries, Inc., 44 Summer Ave., Newark 4, Boston, Mass. primeyer Industries, 3418 N. Milwaukee Ave., Chicago Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, N. J. Electrical Refractories Co., 50 Clark St., East Palestine, Mass.

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, Ohio. Electrical Windings, Inc., 2015 N. Kolmar Ave., Chi-Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.
Electro Acoustic Industries Ltd., 366 Madison Ave.,
New York 17, N. Y.
Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
Electro Development Corp., 6014 W. Washington Blvd.,
Culver City, Calif.
Electro Engineering & Mfg. Co., 627 W. Alexandrine,
Detroit 1 Mich. Drake Mfg. Co., 1713 Hubbard St., Chicago, III.
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, Driver Co., Wilbur B., 150 Riverside Ave., Newal T., N. J.
Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, III.
Dukane Corp., 135th & Indiana Sts., St. Charles, III.
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., 1500 Main Ave., Clifton, N. J.
DuMont Laboratories, Inc., Allen B., Television Receiver
Div., Electronic Parts Dept., 35 Market St., East, Paterson, N. J.
DuMont Laboratories, Inc., Allen B., Television Trans-Electro Engineering & MIG. Co., 627 W. Alexandrine, Detroit 1, Mich.
Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
Electro Impulse Labs., 62 White St., Red Bank, N. J. Electro-Mechanical Research, Inc., Ridgefield, Conn.
Electro-Mechanical Specialties Co., 6819 Melrose St., Los Angeles 38, Calif.
Electro-Mec Laboratory, 19 Murray St., New York 7, N. Y. N. Y.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Electro Motive Mfg. Co., South Park & John St., Willimantic Conn DuMont Laboratoric Parts Parts 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, Inc., 785 Hertel Ave., Buffalo 7, N. Y.

Ann Co., M. W., 7 Goff St., Providence, R. I.

Vavoort, N. J.

Wilmington, Del. mantic, Conn.
Electro-Nite Carbon Co., delphia 25, Pa. Electro-Physical Laboratories, 65 Harvard Ave., Stamford, N. Y. 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, Del. Durakool, Inc., 1010 N. Main St., Elkhart, Ind. Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wife Conn. Electro Precision Products, Inc., 119-01 22nd Ave., Col-Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N.Y.
Electro Products Labs., 4501 N. Ravenswood Ave., Chicago 40, III.
Electro-Seal Corp., 946 Lee St., Des Plaines, III.
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. Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y. Duro Test Co., 2321 Hudson Blvd., North Bergen, N. J. Dyna Labs., Inc., 132 Lafayette St., New York 13, N. Y. Dynamic Air Engineering Inc., 7412 Maie Ave., Los Angeles 1, Calif.
Dynamic Resistor Corp., 42-27 Francis Lewis Blvd., Bayside, N. Y.
Dzus Fastener Co., Inc., Box 785, Babylon, N. Y. Electro-Tech Equipment Co., DD Lispenary Di., No. Y.
York 13, N. Y.
Electro-Technical Products Div. of Sun Chemical Corp.,
113 E. Centre St., Nutley 10, N. J.
Electro-Voice, Inc., Buchanan, Mich.
Electro-Wire Service, 5 Beekman St., New York 7, N. Y.
Electro-Chemical Industries, Inc., Jacques St., Worcester,
Mass. Electrodyne Company, 32 Oliver St., Boston, Mass. Electrofax Corp., 30 Burtis Ave., New Canaan, Conn. Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, 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, III. Eastern Air Devices Inc., 585 Dean St., Brooklyn 17, Electronic Apparatus Co., Elkhart, Ind.
Electronic Associates, Inc., Long Branch, N. J.
Electronic Batteries Inc., Bush Terminal Bldg. No. 4,
28-34 35th St., Brooklyn 32, N. Y.
Electronic Brazing Co., 140 Glenridge Ave., Montclair, Y. Y. ern Mike-Stand Co., 56 Christopher Ave., Brooklyn Eastern I 12, N. Y.

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.

Eastern Specialty Co., Philadelphia 40, Pa.

Eastman Kodak Co., Industrial Photographic Div., 343

State St., Rochester 4, N. Y.

Easy-Up Tower Co., 427 Romayne Ave., Racine, Wis.

Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y.

Ebert Electronics Co., 185-09 Jamaica Ave., Hollis 7,
N. Y.

Eby, Inc., Hugh H., 4700 Stenton Ave. Philadelphia 44 Electronic Coils, Inc., P. 0. Box 1641, 44 Taylor St., Springfield, Mass.

Electronic Computer Corp., 160 Avenue of the Americas, New York 13, N.Y.

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich. Electronic Development Laboratory, 43-07 23rd Ave., Long Island City 5, N. Y.
Electronic Devices, Inc., Precision Rectifier Div., 429
12th St., Brooklyn, N. Y.
Electronic Engineering Associates, Ltd., 1048 Brittan
Ave., San Carlos, Calif.
Electronic Enterprises, Inc., 65 7th Ave., Newark 4,
N. J. 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 Dlv., Bendix Aviation Corp., Teterboro, N. J. Electronic Instrument Co., Inc., 84 Withers St., Brook-lyn 11, N. Y. Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
Electronic Mfg. Co., 20 Orange St., Newark, N. J.
Electronic Measurements Company, Red Bank, N. J.
Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
Electronic Mechanics, Inc., 70 Clifton Blvd., Clifton, N. J. N. J.

Economy Fuse & Mfg. Co., 2717 Greenview Ave., Chicago 14, III.

Ectro, Inc., Delaware, Ohio.

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.

Edison Swan Electric Co., Ltd., (Clix Div.), 366 MadIson Ave., New York 16, N. Y.

Edo Corp., College Point, N. Y.

Edo Corp., 1501 W. Congress St., Chicago 7, III.

Eidson Electronic Co., 1802 N. Third St., Temple, Texas. Electronic Parts Mfg. Co., 508 25th St., Union City, Electronic Processes Corp., 328 N. Market St., San Jose Electronic Products Co., 111 E. Third St., Mt. Vernon, Electronic Research & Mfg. Co., 434 Midland Ave., Garfield, N. J.
Electronic Systems Co., 578 E. 161st St., New York Electronic Systems Co., 576 E. 1928 Ct., 56, N. Y.
Electronic Transformer Co., Inc., 215 W. 25th St., New York, N. Y.
Electronic Tube Corp., 1200 E. Mermaid Ave., Phila-Eidson Electronic Co., 1802 N. Third St., Temple, Texas. Eisler Engineering Co., Inc., 740 S. 13th St., Newark Eister Engineering, 3, N. J.
3, N. J.
Eitel-McCullough, Inc., San Bruno, Calif.
Eistic Stop Nut Corp., 2330 Vauxhall Rd., Union, N. J.
Elco Corporation, 190 W. Glenwood Ave., Philadelphia Electronic Tube Corp., 1200 E. Merman Ave., Final delphia 18, Pa.
Electrons, Inc., 127 Sussex Ave., Newark 4, N. J.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Callf.
Electrovox Co., Inc., 60 Franklin St., East Orange, N. J.
Electyme Motor Products Corp., 565 W. Washington Blvd., 40, Pa.
Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
Douglaston, N. Y.

Pacietor Div., 2537 Madison Ave., Chicago 6, III.

Elex Co., 69-19 215th St., Bayside, N. Y.

Ellis Associates, Box 77, Pelham 65, N. Y.

Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.

Eltran Corp., St. Anne, III.

El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa Electra Mfg. Co., Resistor Div., 2537 Madison Ave., Kansas City, Mo. Electralab Inc., 110 Broad St., Boston 10, Mass. Electran Mfg. Co., 1901 Clybourn, Chicago 3, Ill. Electric Design & Mfg. Corp., Burlington, Iowa.

Emerson & Cuming Co., 126 Massachusetts Ave., Boston 15, Mass.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Empire Coil Co., Inc., 85 Beachwood Ave., New Rochelle, N. Y.

Empire Devices, Inc., 38-25 Bell Blvd., Bayside 61, N. Y.

Empire State Laboratories, 2608 Merrick Rd., Bellmore,
N. Y. N. Y.
Engineering Co., 27 Wright St., Newark, N. J.
Engineering Lab., Inc., 602 E. 4th St., Tulsa 3, Okla.
Engineering Research Assoclates, Inc., 1902 W. Minnehaha
Ave., St. Paul 4, Minn.
Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.
Enthoven & Sons Ltd., H. J., 366 Madison Ave., New
York 17, N. Y.
Entwistle Co., James L., P. O. Box 176, Providence 7,
R. I. Chicago, III. Embassy Englneering Corp., 224 E. 204th St., New York 58, N. Y. Emeloid Co., Inc., The, 1239 Central Ave., Hillside 5, N. J.

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, Erco Radio Labs., Inc., East Stewart Ave., Garden City, Eroc Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
Eric Resistor Corp., 644 W. 12th St., Erle, Pa.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
Esquire Radio Corp., 26 Court St., Brooklyn 19, N. Y.
Esquire Radio Corp., 96 S. Washington Ave., Bergenfield, N. J. 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
N. Y. Esterline-Angus Co., P. O. Box 596, Indianapolis 6, Ind.
Etched Products Corp., 39-01 Queens Blvd., Long Island
City, N. Y.
Etraco Mfg. Co., Inc., Woods Church Rd., Flemington, Television & Tube Corp., 69 Fifth Ave., Hawthorne, N. J. Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y. Ewald Cabinet Co., 2559 W. 21st St., Chicago 8, III. Executone, Inc., 415 Lexington Ave., New York 17, N. Y. Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
Fafnir Bearing Co., Booth St., New Britain, Conn.
Fairchild Camera & Instrument Corp., 88-06 Van Wyck
Blvd., Jamaica 1, N. Y.
Fairchild Recording Equipment Corp., 154th St., & 7th
Ave., Whitestone, N. Y.
Falstrom Co., 44 Falstrom Court, Passaic, N. J.
Fansteel Metallurgical Corp., 2200 Sheridan Rd., North
Chicago. III. Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.
Farmers Engineering & Mfg. Co., 549 Brushton Ave.,
Pittsburgh 21, Pa.
Farrand Optical Co., Inc., 4401 Bronx Blvd., New York Farrand Optical Co., Inc., 4401 Bronx Blvd., New York 66, N. Y.
Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa.
Fasco Industries, Inc., Rochester 2, N. Y.
Fast & Co., John E., 3101 N. Pulaski Rd., Chicago 41, III. Federal Electric Products Co., 50 Paris St., Newark 5, Federal Engineering Co., 37 Murray St., New York 7, 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., Chi-Federal Screw Products Inc., 224 W. Huron St., Chicago 10, III.
Federal Shock Mount Corp., 1077 Intervale Ave., New York 59, N. Y. York 59, N. Y. Federal Telecommunication Labs., Inc., 500 Washington 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., 532 Mulberry St., Newark 5, 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 & Mfg. Co., Dept. EBG, 8026 Monticello Ave., Skokie, III.
Felker Mfg. Co., 128 Border Ave., Torrance, Calif.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III.
Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, III. Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, III.
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.
Ferrar Radio & Television Corp., 55 W. 26th St., New York 10, N. Y.
Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
Ferris Instrument Co., 110 Cornelia St., Boonton, N. J.
Ferroxcube Corp. of America, 50 E. 41st St., New York, N. Y. Fidelitone, Inc., 1616 Devon Ave., Chicago 26, III. 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. June, 1952 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

Electric Eye Equipment Co., 16 W. Fairchild St., Dan-ville, III.

Electric Indicator Co., Camp Ave., Springdale, Conn.

Electric Furnace Co., Salem, Ohio.

Fielden Instrument Corp., 2920 N. 4th St., Philadelphia 33, Pa. Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. Finch Telecommunications, Inc., Passaic, N. J. Finn & Co., Inc., T. R., 333 Jackson Ave., New York 54, N. Y. Fischer & Porter Co., 476 County Line Road, Hatboro, Pa. Fischer & Co., R. A., 517 Commercial St., Glendale 3, Calif. Fisher-Pierce Co., 170 Pearl St., S. Braintree (Boston 85), Mass. Fisher Radio Corp., 41 East 47th Street, New York, Fisher Research Lab., 1961 University Ave., Palo Alto, Call.
Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
Flader Inc., Fredric, 1330 Laskey Rd., Toledo 12, Ohio.
Flexible Shaft Div., Walker Turner Div., Kearney &
Trecker Corp., Plainfield, N. J.
Flexonics Corp., 1315 S. Third Ave., Maywood, III.
Flight Research Engineering Corp., P. O. Box 1-F, Richmond J. Va. Flight Research Engineering corp., F. O. Box 2., Mand 1, Va.
Flock Process Co., Inc., 26 Fahey St., Springdale, Conn. Fluke Engineering Co., John, Box 755, Springdale, Conn. Flush Wall Radio Co., 965 Broad St., Newark 2, N. J. Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, III.
Foote Mineral Co., 18 W. Chelten Ave., Philadelphia 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, Porman Co., B. G., 238 William St., New York 38, N. Y. Forman Insulating Screw Corp., 401 Broadway, New York 13, N. Y. Formatic Co., 178 Bridge St., Naugatuck, Conn. Formica Co., The, 4614 Spring Grove Ave., Cincinnati Forter-Teichmann Co., Clark Bldg., Pittsburgh, Pa. Forty Niner Co., 5245 Grand River, Detroit 8, Mich. Foster Transformer Co., Inc., 3820 Colerain Ave., Cin-Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio.
Fostoria Pressed Steel Corp., Fostoria, Ohio.
Fostoro Co., The, Foxboro, Mass.
Francon Mfg. & Sales Corp., 161 Washington St., New York, N. Y.
Frankel Connector Co., 27 Vestry St., New York, N. Y.
Franklin Airloop Corp., 43-20 34th St., Long Island City, N. Y.

Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
Freed Radio Corp., 200 Hudson St., New York, N. Y.
Freed Transformer Co., Inc., 1736 Weirfield St., Brooklyn

27, N. Y.
Frequency Standards, Box 66, Eatontown, N. J.
Friez Instrument Div., Bendix Aviation Corp., Baltimore

Fryling Mfg. Co., 639 W. 12th St., Erie, Pa. Fugle-Miller Laboratories, 398 Main St., Metuchen, N. Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.

Furst Electronics, 10 S. Jefferson St., Chicago 6, Ill.

Fusite Corp., 6000 Fernview Ave., CIncinnati 13, Ohio.

G-M Laboratories, Inc., 4336 N. Knox Ave., Chicago,

Gary Controls Inc., 28 Hollywood Plaza, East Orange, N. J. Gadgets Inc., 3629 N. Dixie Drive, Dayton 4, Ohio. Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, III.

Gale Dorothea Mechanisms, 81-01 Broadway, Elmhurst,

N. Y

Gamewell Co., The, Newton Upper Falls 64, Mass. Garde Mfg. Co., 588 Eddy St., Providence 3, R. I. Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8,

Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8, Calif.
Gardner Lab., Inc., Henry A., 4723 Elm St., Baltimore 14, Md.
Garlock Packing Co., Palmyra, 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,

Gates Radio Co., Quincy, III.
Gatti, Inc., Aurele M., 524 E. Washington St., Trenton,
N. J.
Gaveco Labs., Inc., Sub. of General Aviation Equip-

Gaveco Labs., Inc., Sub. of General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y. Gear Specialties, Inc., 2635 W. Medill Ave., Chicago 47, III.

General Cable Corp., 420 Lexington Ave., New York 17,

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., 530 Commonwealth Ave.,

Boston 15, Mass. General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.

General Controls Co., Glendale 1, Calif.

General Electric Co., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y.

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

General Electric Co., Lamp 12, Ohio.

12, Ohio.

General Electric Co., Tubes Dept., Electronics Div., 1
River Rd., Schenectady 5, N. Y.

General Electronics, Inc., 101 Hazel St., Paterson, N. J.

General Electrosonics, Inc., 32 W. 22nd St., New York
10, N. Y.

10, N. Y.

11, South River, N. J.

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.

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. neral Photo Products Co., Inc., 15 Summit Ave., General

Chatham, N. J.

General Plastics Corp., 611 Main Ave., Clifton, N. J.

General Plate Division, Metals & Controls Corp., Attle-

boro, Mass. General Precision Laboraory, Inc., 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, Silentbloc Division,

General Tire & Rubber Co., The, Silentbloc Division, Wabash, Ind.
General Transformer Co., 18240 Harwood Ave., Homewood, III.
General Vacuum Tube Corp., 45 Elm St., Ardsley, N. Y.
Georator Corp., 1820 N. Nash St., Arlington, Va.
George Co., P. D., 5200 N. Second St., St. Louis, Mo.
Geotronic Labs., Inc., Dallas 8, Texas.
Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee
5, Wis.

Gering Products Inc., N. Seventh at Monroe Ave., Kenil-

worth, N. J.
Germanium Products Corp., 26 Cornelison Ave., Jersey
City, N. J.
Gertsch Products, Inc., 11846 Mississippi Ave., Los

Angeles 25, Calif.
Giannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena 1, Calif. dena 1, Calif. Gibson Electric Co., 8361 Frankstown Ave., Pittsburgh

21, Pa.
Gilfilian Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif. Girdler Corp., Thermex Div., 224 E. Broadway, Louisville

1, Ky. Gisholt Machine Co., 1245 E. Washington Ave., Madison Gits Molding Corp., 4600 W. Huron St., Chicago 44,

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. Calif.

Class Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.

Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio.

Gleason-Avery Co., 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 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, 314 Dean St., Brooklyn, 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.

Conset Co., 801 S. Main St., Burbank, Calif. Good-All Electric Mfg. Co., 112 W. First St., Ogallala,

Med.

Goodmans Industries, Ltd., Axiom Works, Wembley,
Middlesex, England.
Goodrich Chemical Co., B. F., Rose Bldg., Cleveland 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,

Gordon Specialties Co., 59 E. Madison St., Chicago 3, III

Gorrell & Gorrell, Haworth, N. J. Gorson Electric Mfg. Corp., 540 39th St., Union City, Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank,

Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield,

Gould-National Batterles, Inc., 35 Neoga St., Depew, 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,

Gramer Transformer Co., 2734 N. Pulaski Rd., Chicago 39, III.

Grant Pulley & Hardware Co., 31-85 Whitestone Pkwy., Flushing, N. Y. Graphite Metallizing Corp., 1041 Nepperhan Ave., Yonkers

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass. Gray Radio Co., 501 Forest Hill Blvd., W. Palm Beach, Fla. Gray Research & Development Co., Inc., 16 Arbor St., Hartford 1, Conn.

Hartford 1, Conn.
Grayburne Corp., 103 Lafayette St., New York 13, N. Y.
Graybill, 4536 W. Madison St., Chicago 24, 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., 385 Putnam Ave., Cambridge,

Mass. Greenlee Tool Co., 2136 12th St., Rockford, III. Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y. Grieve-Hendry Co., 1101 N. Paulina St., Chicago 22,

Griffin Co., John, 2157 James Ave., St. Paul 5, Minn. Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, III. Groov-Pin Corp., 1125 Hendricks Causeway, Ridgefield,

Guardian Electric Mfg. Co., 1621 W. Walnut St., Chi-

cago 12, III. Gulton Mfg. Corp., Metuchen, N. J. Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, III.

H. M. R. Electronics Inc., Grove St., New Canaan, Conn. Hagen Mfg. Co., Inc., Baraboo, Wis. Haledy Electronics Co., 57 William St., New York 5, N. Y.

Halldorson Co., The, 4500 Ravenswood Ave., Chicago 40,

III.
Hallen Co., 416 Peninsular Ave., San Mateo, Calif.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.
Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, III.
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.
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. 7 th St., New York 21,

Y.

a Chemical & Mfg. Co., 233 N. J. R.R. Ave.,

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, Ind. Harder Co., Donald C., 2031 Chatsworth Blvd., San Diego 7, 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 Washing-

ton, N. Y.
Harper Co., The, H. M., 8200 Lehigh Ave., Morton Grove, III.
Harper Electric Furnace Corp., 39 E. River St., Buffalo 2,

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn. Hart Moisture Gauges, Inc., 126 Liberty St., New York 6,

Harrley Co., Ltd., H. A., 152 Hammersmith Rd., London W. 6, England. Harvey-Wells Electronics, Inc., North St., Southbridge,

Mass.
Hassall, Inc., John, Clay and Oakland Sts., Brooklyn 22,
N. Y.

Hassain, Inc., John, S.A., N. Y.
Hastings Instrument Co., Inc., Hampton 9, Va.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Hathaway Mfg. Co., 1500 Railroad Ave., Bridgeport,

Having Rothers Plainfeld N . I Bridgeport, Conn.

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.

Heiland Research Corp., 130 E. 5th Ave., Derwer 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 Meridan Ave., South Pasadena, Calif.

Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.

Heminway & Bartlett Mfg. Co., 500 Fifth Ave., New York 18, N. Y.

Heppner Mfg. Co., P. O. Box 612, Round Lake, III.

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.

Hermetic Seal Products Co., 29-37 South 6th St., Newark 7, N. J.

Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohlo.

Hertner Electric Co., 2011. Ohlo.

Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.

Hetherington, Inc., Sharon Hill, Pa.

100 205 Page Mill Rd., Palo Alto,

Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto,

Hexacon Electric Co., 130 W. Clay Ave., Roselle Park,

Heyman Mfg. Co., 300 Michigan Ave., Kenilworth, N. J. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

High Frequency Heating Co., 143 Glen Park Ave., Gary,

High Speed Hammer Co., Rochester, N. Y.
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
Highland Engineering Co., Maln St. & Urban Ave., Westbury, N. Y. Hillburn Electronic Products Co., 55 Nassau Ave., Brook-Hillburn Electronic Products Co., 55 Nassau Ave., Brook-lyn 22, N. Y. Hillyer Instrument Co., Inc., 54 Lafayette St., New York 13, N. Y. Hi-Q Division, Aerovox Corp., Seneca Ave., Olean, N. Y. Hitchiner Mfg. Co., Inc., P. O. Box 8451, Manchester, N. H. Hi-Test Chemical Corp., 722 64th St., Brooklyn 20, N. Y. N. Y.
Hivolt Ltd., 34A Pottery Lane, London W. 11, England.
Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.
Hobby & Brown Electronic Corp., 55 Front St., Rockville
Center, N. Y.
Hobson Brothers, 4049 W. Fullerton St., Chicago 39, III.
Hofer Metal Products Corp., J., 383 Kent Ave., Brooklyn
11, N. Y. 11, N. Y.
Hoffman Engineering Corp., Anoka, Minn.
Hoffman Radio Corp., 3716 S. Hill Street, Los Angeles Hofmann Corp., C. L., 643 Liberty Ave., Pittsburgh 22, Hogan Laboratories, Inc., 155 Perry St., New York 14, Holiday Specialties, Inc., 112 Bleecker St., New York 12, N. Y. 12, N. Y. I Audio Industries, 5014 N. Encinta Ave., Temple Holl Audio Industries, 5014 N. Encinta Ave., Temple City, Calif.
Holliston Mills, Inc., Norwood, Mass.
Holtzer-Cabot, Div. of National Pneumatic Co., Inc., 130 Amory St., Boston 19, Mass.
Holyoke Wire & Cable Co., Holyoke, Mass.
Home Recording Products Corp., Freeport, L. I., N. Y.
Homelite Corp., Port Chester, N. Y.
Hopwood Retinning Co., Inc., 190 Pacific Ave., Jersey City, N. J.
Hopwood Retinning Corp., 303 Commercial St., Malden, Mass. Mass.

Hopp Press, Inc., 460 W. 34th St., New York, N. Y.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island
City 1, N. Y.

Horton Machine Products Co., Horton & Rockaway Aves.,
Valley Stream, 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, Illinois.

Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke,

Hovis Screwlock Co., 8100 E. Nille Mide Roy, Jan 2006, Mich.
Howard Industries, Inc., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis.
Hubbell, Inc., Harvey, Bridgeport 2, Conn.
Hudson Lamp Co., 528 Elm St., Arlington, N. J.
Hudson Tool & Die Co., Inc., 118 S. 14th St., Newark,

Hudson Wire Co., Ossining, N. Y. Hufco Industries, 2815 W. Olive, Burbank, Calif. Huggins Laboratories, 734 Hamilton Ave., Menlo Park,

Hunt Corp., The, 453 Lincoln St., Carlisle, Pa.
Hunter Photo Copyist Co., 566 Spencer St., Syracuse,
N. Y.
Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.
Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago
37. III.

37, III.

Huse Liberty Mica Co., 171 Camden St., Boston, Mass.

Hycon Mfg. Co., 2961 E. Colorado St., Pasadena, Calif.

Hycor Company, Inc., 11423 Vanowen St., North Holly
wood, Calif.

Wood, Calif.

Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.

Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51,

Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.

I. D. E. A., 7900 Pendleton Pike, Indianapolis 26, Ind. I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa. Ideal Industries, Inc., Park & Borden Avenues, Sycamore, 111

Ilig Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, III. Illinois Condenser Co., 1616 N. Throop St., Chicago 22,

III.
Illinois Electric Percelain Co., Macomb, III.
Illinois Testing Labs., Inc., 420 N. La Salle Street,
Chicago 10, III.
Illinois Wood Products Corp., 1656 N. Besly Court,
Chicago 22, III.
Ilsco Copper Tube & Products, Inc., Mariemont Ave.,
Mariemont, Cincinnati 27, Ohio.
Improved Seamless Wire Co., 775 Eddy St., Providence,
R. I.
Indiana Steel Products Company The Welson of the

Indiana Steel Products Company, The, Valparaiso, Indiana. Indiana Steel & Wire Co., 700 S. Council St., Muncie,

Induction Heating Corp., 181 Wythe Ave., Brooklyn 11,

Induction Motors Corp., 55-15 37th Ave., Woodside 77,

Induction Motors Corp., 50-15 27th Corp., N. Y.
N. Y.
Inductograph Laboratory, Box 76, Brookfield, Conn.
Inductograph Products, Inc., 83-56 Vietor Ave., Elmhurst 73, N. Y.
Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, III.
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, Inc., Bob Wheeler St., Detroit

Industrial Hardware Mfg. Co., Inc., 109 Prince St., New York, N. Y. Industrial Instruments Inc., 17 Pollack Ave., Jersey City

5, N. J. Industrial Mica Corp., 947 61st St., Brooklyn, N. Y. Industrial Precision Products Co., 315-325 N. Hoyne Ave.,

Industrial Precision Concentration Chicago 12, III.
Industrial Products Co., Danbury, Conn.
Industrial Rectifier Co., 120 Cedar St., New York, N. Y.
Industrial Research Products, Inc., 9400 Belmont Ave.,
Franklin Park, III.
Franklin Park, III. Franklin Park, III.
Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount
Vernon, N. Y.
Industrial Specialties Corp., 323 Atlantic Ave., Brook-

lyn 2, N. Y.
Industrial Synthetics Corp., 225 North Ave., Garwood,

Industrial Tape Corp., U. S. Highway No. 1, New Brunswick, N. J. Brunswick, N. J.
Industrial Television, Inc., 359 Lexington Ave., Clifton,

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.
Insl-X Co., Inc., The, 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. V. ington, N. Y. Instrument Laboratories, 315 W. Walton Place, Chicago

10, III.

Instrument Parts Corp., P. 0. Box 150, Ossining, N. Y.
Instrument Resistors Co., 1036 Commerce Ave., Union,

Instrument Resistors Co., 1036 Commerce Ave., Union, N. J.
Instrument Specialties Co., Inc., 254 Bergen Blvd.,
Little Falls, N. J.
Instruments Wire Co., Guilford, Conn.
Insulatine 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.

Insulation Mfg. Co., 11 New York Ave., Blooking, Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, III.
Insuline Corp. of America, 36-02 35th Avenue, Long Island City, N. Y.
International Business Machines Corp., Tube Analysis Laboratory, Poughkeepsie, N. Y.
International Instruments, Inc., P. O. Box 2954, New Haven 15, Conn.
International Machine Works, 6904 Madison St., Guttenberg N. I.

berg, N. J.
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 Rectifier Corp., 1521 E. Grand Ave., El Segundo, Calif.
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
Investment Casting Co., 319 Chestnut St., Newark 5, N. N.

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,

Conn. F D Mfg. Co., Inc., 6101-21 Sixteenth Ave., Brooklyn, J F

N. Y.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd.,
Dayton 1, Ohio.
Jackson Industries, Inc., 500 E. 40th St., Chicago, Ill.
Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda,

Md.
James Plating Works, Inc., 720 W. Schubert Ave., Chicago 14, Ill.
James Vibrapowr Co., 4036 Rockwell St., Chicago 18,

Janette Mfg. Co., Morton Grove, Illinois. Jarrel-Ash Co., 165 Newbury St., Boston 16, Mass. Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chi-

cago 39, III.

Javex, 921 State, Garland, Texas.
Jeffers Electronics, Inc., DuBois, Pa.
Jefferson Electric Co., Bellwood, III.
Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, L. I.,

N. Y. Jelliff Mfg. Corp., C. O., 200 Pequot Ave., Southport,

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., 1098 E. William St., San
Jose 12, 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.

Jerrold Electronics Corp., 20th & Dickinson Sts., Finia-delphia 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.

Johanson Mfg. Co., Boonton, N. J.

Johns-Manville, 22 E. 40th St., New York 16, N. Y.

Johnson & Hoffman Mfg. Co., 55-65 Ongley St., Rock-ville Centre, N. Y. Johnson Co., E. F., Waseca, Minn. 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,

Johnston Foll Mily, Co., M. C., Bristol, Conn.
Jones Electronics Co., M. C., Bristol, Conn.
Jones Div., Howard B., Cinch Mfg. Corp., 1026 S.
Homan Ave., Chicago 24, III.
Jowil Electronics Inc., 7945 Germantown Ave., Phila-

Joy Mfg. Corp., Oliver Bldg., Pittsburgh 22, Pa.
Judd Co., H. L., 87 Chambers St., New York 7, N. Y. K. F. Development Co., 867 Woodside Way, San Mateo,

K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
Kaar Engineering Co., 2995 Middlefield Road, P. O.
Box 1320, Palo Alto, Calif.
Kahle Engineering Co., 1307 Seventh St., North Bergen,

N. S. Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.

Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10,

Calif.
Kanthal Corp., Amelia Place, Stamford, Conn.
Karp Metal Products Co., Inc., 215 63rd St., Brooklyn
20, N. Y.
Kartron, Inc., Drawer 472, Huntington Beach, Calif.
Kato Engineering Co., 1415 First Ave., Mankato, Minn.
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.
Keeney & Co., Inc., J. H., 2600 W. 50th St., Chicago 32,
III.

Keithley Instruments, 3868 Carnegie Ave., Cleveland 15, Neitney instruments, 360 Gainsgir St., Manchester, N. H. 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, III.

Kelnor Mfg. Corp., 222 Kearney St., San Francisco 8, Calif

Kemet Division, Union-Carbide & Carbon Corp., Madison Ave. and 117th St., Cleveland 1, Ohio. Kemlite Labs., 1819 W. Grand Ave., Chicago 22, III. Kemtron Electron Products, Inc., 23 Brown St., Salem,

Kennedy & Co., D. S., Cohasset, Mass. Kent Co., F. C., 64 Howard St., Irvington, N. J. Kenyon Transformer Co., Inc., 840 Barry St., New Kenyon Transf York 59, N.

Kepco Labs. Inc., 131-38 Sanford Ave., Flushing 55, N. Y.
Kester Solder Co., 4212 Wrightwood Ave., Chicago 39,

Keuffel & Esser Co., Hoboken, N. J. Keystone Carbon Co., Inc., Saint Marys, Pa. Keystone Electronics Co., 114 Manhattan St., Stamford,

Keystone Electronics Corp., 423 Broome St., New York Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
Keystone Products Co., 904-6 23rd St., Union City, N. J.
Kidde & Co., Walter, 675 Main St., Belleville, 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, 40 Marbledale Rd., Tuckahoe, N. Y.
Kings Microwave Co., Inc., 719 Main St., New Rochelle,
N. Y.

Kings Microwave Co., Inc., 719 Main St., New Rousein, N. Y.
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.
Kling Metal Spinning Co., 174 Centre Street, New York 13, N. Y.
Klipsch & Associates, Hope, Ark.
Knights Co., James, 131 S. Wells St., Sandwich, III.
Kobzy Tool Co., 1535 N. Dayton Ave., Chicago 22, III.
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.
Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst, N. Y.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave.,

Newark 5, N. J.

Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa.

Kotron Rectifier Corp., 54 Clark St., Newark 4, N. J.

Krohn-Hite Instrument Co., 580 Massachusetts Ave.,

Cambridge 39, Mass.

Kuhn & Jacob Molding & Tool Co., 1200 Southard St.,

Tranton M. J.

Trenton, N. J. Kulka Electric Mfg. Co., Inc., 30 South St., Mount Ver-

non, 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,

Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4,

A. B. Corporation, 31 Union Place, Summit, N. J. Aboratoire Industriel de Physique Applique, 67 Rue M.A.-Colombier, Bagnolet (Seine), France.

Laboratory for Electronics, Inc., 43 Leon St., Boston 15, Mass.
Laconia Corp., 37 S. 6th St., Newark 7, N. J.
La Magna Mfg. Co., Inc., East Rutherford, N. J.
Lambda Electronics Corp., 103-02 Northern Blvd., Corona,

La Motte Chemical Products Co., Towson 4, Baltimore,

Lampkin Laboratories, Inc., Bradenton 1, Fla.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland,

Land-Air, Inc., 11 W. 42nd St., New York, N. Y. Landis & Gyr, Inc., 104 Fifth Ave., New York 36, N. Y. Langevin Mfg. Corp., 37 W. 65th St., New York 23,

N. Y.

Lansdale Tube Co., Church Rd., Lansdale, Pa.

Lansing Sound Inc., James B., 2439 Fletcher Drive, Los

Angeles 26, Calif.

Lansky Die Cutting Co., 1921/2 Greene St., New York
12, N. Y.

LaPointe-Plascomold Corp., Windsor Locks, Conn.

Lapp Insulator Co., Inc., Radio Specialties Div., 31

LaPo Insulator Co., Inc., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y.
La Rose & Associates, W. T., P. O. Box 55, Troy, 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, III.
Lavoie Laboratories, Morganville, N. J.
Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3,

Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich. Lectrohm, Inc., 5561 Northwest Highway, Chicago 30,

III. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia Lehigh Structural Steel Co., 17 Battery Pl., New York 4, N. Y.

4, N. Y.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
Lee Electric & Mfg. Co., 2806 Clearwater St., Los
Angeles 39, Calif.
Lee Mechanical Laboratories, 30 Main St., Brooklyn

1, N. Y. Lee Spring Co., 30 Main St., Brooklyn 1, N. Y. Leighton Labs., H. W., 26 Herman St., Glen Ridge,

N. J. Leiman Bros., Inc., P. O. Box 1339, Newark 5, N. J. Lektra Laboratories, 154-11th Ave., New York 3, N. Y. Leland, Inc., G. H., 123 Webster St., Dayton 2, Ohio. Leland Electric Co., 1501 Webster St., Dayton 1, Ohio. Lenk Mfg. Co., The, 30 Cummington St., Boston 15, Mass.

Lenkurt Electric Co., Inc., 1113 County Road, San Carlos,

Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, III.
Leonard Electric Products Co., Inc., 1562 61st St.,
Brooklyn, N. Y.

Leonard Electric Products Co., Inc., 1562 61st St., Brooklyn, N. Y.
Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
Lerner Instrument & Electronic Mfg. Corp., 47-49
Bergen St., Brooklyn 2, N. Y.
Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.

N. Y. Leru Laboratories, Inc., Black Oak Ridge Rd., Wayne,

N. J. Lewis Conn. Engineering Co., 52 Rubber Ave., Naugatuck,

Conn.
Lewis & Kaufman, Inc., 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., Tarentum, Pa.
Librascope, Inc., 1607 Flower St., Glendale, Calif.
Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37,
Ohio

Ohio.
Light Electric Corp., 214 Lackawanna Ave., Newark 4,

N. J.
Linde Alr Products Co., Division of Union Carbide and
Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Lindsay Structure, Inc., 5000 W. Dempster St., Skokie,

Linear Equipment Labs., Brightwater Place, Massapequa, N. Y. Lingo & Son, Inc., John E., 28th St. and Buren, Cam-

Lingo & Son, Inc., Sount E., den, N. J.
Linick Chemical Co., 59 E. Madison St., Chicago 2, Ill.
Link Radio Corp., 125 W. 17th St., New York, N. Y.
Lion Fastener, Inc., Honeoye Falls, N. Y.
Liston-Becker Instrument Co., Inc., 20 Beckley Ave.,

Stamford, Conn.

Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1,

N. J.
Litton Industries, 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.
Lolack Precision Corp., 32-60 62nd St., Woodside, N. Y.
Loral Electronics Corp., 794 E. 140 St., New York
54 N. Y. 54, N. Y. Lord Mfg. Co.,

54, N. Y.
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.
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 S. Dearborn St., Chicago 5,

Lundey Associates, 694 Main St., Waltham 54, Mass. Lust, Henry B., 310 W. 85th St., New York 24, N. Y. Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.

Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
Lynchia 23 Decr., 1432 N. Carlisle St., Philadel-

phia 21, Pa.

Lynn Electronic Research Co., 228 W. Palm Ave., Burbank, Calif.

McColpin-Christie Corp., 3410 W. 67th St., Los Angeles

MCCOlpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.
McElroy Mfg. Corp., Littleton, Mass.
McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.
McLean Engineering Laboratories, Princeton, N. J.
McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
MB Mfg. Co., 1060 State St., New Haven 11, Conn.
M. P. Concert Installations, Fairfield 10, Conn.
Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J.

Macdonald & Co., Inc., W. S., 33 University Rd., Cam-Macdonald & Co., Inc., W. S., 33 University Ru., Callebridge 38, Mass.
Machine-O-Matic, Inc., P. O. Box 238, Ashley, Ohio.
Machlett Laboratories, Springdale, Conn.
Mack Electrical Devices Inc., 43 Glenside Ave., Wyncote,

MacKay Laboratories, 1946 N. Kedzle, Chicago 47, III. MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
Magna Electronics Co., 9810 Anza Ave., P. 0. Box 338,

Inglewood, Calif.

Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, III. Magnatran, Inc., 248 Schuyler Ave., Kearny, N. J. Magnavox Co., The, Components Div., Fort Wayne 4, Ind. Magnecord, Inc., 360 N. Michigan Ave., Chicago 1, III. Magnetic Amplifiers, Inc., 632 Tinton Ave., New York 55,

Magnetic Analysis Corp., 42-44 Twelfth St., Long Island

Magnetic Analysis Corp., 42-44 (City 1, N. Y. 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. and 21st St., Camden,

Magnetic Recorders Co., 7120 Melrose St., Los Angeles, Calif.

Calif.
Magnetic Windings Div., Essex Wire Corp., Freemansburg
Ave. and Hobson Blvd., Easton, Pa.
Magnetics, Inc., Box 230-E, Butler, Pa.
Maico Co. Inc., 21 North 3rd St., Minneapolls, Minn.
Maida Development Co., 12 E. Howard St., Phoebus, Va.
Majestic Radio & Television Div. of the Wilcox-Gay Corp.,
385 Fourth Ave., New York 16, N. Y.
Makepeace Co., D. E., Attleboro, Mass.
Malco Tool & Mfg. Co., 4025 W. Lake St., Chicago 24,
III.

Mallinckrodt Chemical Works, Second and Mallinckrodt

Mallinckrodt Chemical Works, Second and Mallinckrode Sts., St. Louis 7, Mo. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. Manning, Maxwell & Moore, Inc., Stratford, Conn. Manson Laboratories, 76 Stage St., Stamford, Conn. Manufacturers Battery Co., Div. of Ray-O-Vac Co., Madison Wis

son, Wis.

Manufacturers Engineering & Equipment Corp., Willow Grove, Pa.

Marathon Battery Co., Wausau, Wls.
Marathon Electric Mfg. Corp., Randolph & Cherry Sts.,
Wasau, Wis.
Marblette Corp., 37-21 30th St., Long Island Clty,

N. Y.
Marbon Corp., Gary, Ind.
Marco Industries Co., 207 S. Helena St., Anahelm, Calif.
Marco Industries, Inc., 788 Terrace Blvd., Depew, N. Y.
Marconi Instruments, Ltd., 23 Beaver St., New York 4,

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Marion Electrical Instrument Co., 402 Canal St., Man-

chester, N. H.
Markem Machine Co., Keene, N. H.
Markem Electronic Co., 703 Willow St., Chicago 14, III.
Marsh Stencil Machine Co., 46 Marsh Bldg., Belleville,

III.
Martindale Electric Co., Edgewater Branch, Box 617,
Cleveland 7, Ohio.
Maryland Lava Co., Bel Air, Md.
Masonite Corp., 111 W. Washington St., Chicago 2, III.
Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
Mast Development Co., Davenport, Ohio.
Master Appliance Mfg. Co., Fourth & Ontario St., Racine,
Wis.

Matthews & Co., James H., 470 Atlantic Ave., Boston 10, Mass.
Mattison Television & Radio Corp., 393 Broadway, New

York 3, N. Y.

Maurer Inc., J. A., 37-01 31st St., Long Island City,
N. Y.

Mayfair Molded Products Corp., 4440 N. Elston Ave.,
Chicago 30, Ill.

Measurement Engineering, Ltd., Arnprior, Ontario, Can-

ada.

ada. Measurements Corp., Boonton, N. J. Meck Industries, John, Liberty at Pennsylvania, Ply-mouth, Ind. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,

Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25,

III

III.

Melpar, Inc., 452 Swann Ave., Alexandria, Va.

Mendelsohn Speedgun Co., Inc., 457 Bloomfield Ave.,
Bloomfield, N. J.

Menlo Research Laboratory, Menlo Park, Calif.

Mepco, Inc., 35-37 Abbett Ave., Morristown, N. J.

Mercoid Corp., The, 4201 Belmont Ave., Chicago 41, III.

Mercury Electronic Co., Box 450, Red Bank, N. J.

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, III.

Merit Plating Co., 218 E. 141st St., New York 51, N. Y. Metal Hyrides Inc., Beverly, Mass.
Metal Textile Corp., 547 E. First Ave., Roselle, N. J. Metalcraft, Inc., 86-08 130th St., Richmond Hill 18,

N.Y.
Metaplast Process Inc., 9-17 37th Ave., Long Island City 1, N.Y.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Methode Mfg. Corp., 2021 W. Churchill St., Chicago 47,

Metron Instrument Co., 432 Lincoln St., Denver 9, Colorado. Colorado.

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.

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,

Micarda Fabricators, Inc., 5324 Ravenswood Avenue, Chicago 40, Illinois.
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

Micro Balancing, Inc., 191 herricks No., Galdell St., Park, N. Y.
Micro-Circuits Co., New Buffalo, Mich.
Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
Micro Switch Division of Minneapolis-Honeywell Regulater
Co., 7 W. Spring St., Freeport, III.
Microtone Co., Ford Parkway on the Mississippi, St. Paul

Microwave Associates, Inc., 22 Cummington St., Boston,

Mass.
Midco Mfg. & Distributing Co., 607 N. 8th St., Sheboygan, Wis.
Midland Industrial Finishes Co., Waukegan, III.
Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland
5 Ohio.

5, Ohio.

Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, III.

Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, III.

Midwest Radio & Television Corp., 909 Broadway, Cincipati 2 Ohio. Chicago 39, III.
Midwest Radio & Television Corp., 909 Broadway, Cincinnati 2, Ohio.
Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, III.
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.

Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J. Miller Co., J. W., 5917 S. Main St., Los Angeles 3,

Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.
Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 15,

III.
Millers Falls Co., Greenfield, Mass.
Millivac Instrument Corp., 444 Second St., Box 997,
Schenectady, N. Y.
Milwaukee Resistor Co., Dept. 5, 700 W. Virginia Street,
Milwaukee 4, Wisconsin.
Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee,
Wis.

Miniature Precision Bearings, Inc., Keene, New Hamp-

shire.

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, Minn.

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 Electric Mfg. Co., Inc., 132-134 W. Colorado,
Pasadena 1, Calif.

Mitchell Industries, Inc., Camp Wolters, Mineral Wells, Texas.
Mitchell Rand Insulation Co., Inc., 51 Murray Street,

New York 7, N. Y. Model Englneering & Mfg. Inc., Huntington, Ind. Model Rectifier Corp., 557 Roggers Ave., Brooklyn 25, Modelectric Products Corp., 1500 Bangs Ave., Asbury

Modern Hearing Alds Laboratory, The, 6805 Fraser St., Vancouver, B. C., Canada.
Moded Insulation Co., 335 E. Price St., Philadelphia

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Molding Corp. of America, Inc., 58 Weybosset St., Providence, R. I.
Monarch Radio & Television Corp., 61 Crescent St., Brooklyn 8, N. Y.
Meither Dendert Co.

Monitor Products Co., 815 Fremont Ave., South Pasadena,

Calif. Monowatt Dept., General Electric Co., 66 Bissell St., Providence, R. I.

Providence, R. I.
Monroe Coil Co., 2839 N. Narragansett Ave., Chicago
34. Ill.

34, III.

Monsanto Chemical Co., Plastics Div., Springfield, Mass.

Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.

Moody Machine Products Co., Inc., 42-46 Dudley St.,

Box 205, Provldence 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 William St., New York, N. Y.

Moore Inc., George W., 100 Beaver St., Waltham, Mass. Morgan Instruments Co., 21240 Valerio St., Canoga Park,

Morse Co., 35, Mass. , Frank W., 1300 Soldiers Field Rd., Boston

35, Mass.
Mosinee Paper Mills Co., Mosinee, Wisconsin.
Mostoresearch Co., 1600 Junction Ave., Racine, Wis.
Motorola Inc., 4545 Augusta Blvd., Chicago 51, Ill.
Moulic Specialties Co., 1005-1007 W. Washington St.,
Bloomington, Ill.
Mt. Vernon Die Casting Corp., 118 Pearl St., Mt.
Vernon, N. Y.
Moyen, C. P., 908 Chicago Ave., Chicago, 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.

Ohio.

Muirhead & Co., Ltd., Beckenham, Kent, England.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London W. C. 2, England.
Multicore, Sales Communication of the Name of Multicore Sales Corp., 164 Duane St., New York 13,

Multicore Solders Ltd., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England. Multi Metal Co., 1350 Garrison Ave., New York 59,

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. III.

5, III. u Switch Div., Acro Switch Co., 38 Pequit St., Can-

Muter Co., 1255 S. Michigan Ave., Chicago, III.
Mycalex Corporation of America, Clifton Blvd., Clifton,
N. J. Mycalex Tube Socket Corporation, Clifton Bldv., Clifton,

N. J. yers & Sons, Inc., E. A., 306 Beverly Road, Radioear Building, Pittsburgh 16, Pa. ykroy, Inc., Arlington Heights Airport, Arlington Heights, III.

N. R. K. Mfg. & Engineering Co., 4601 W. Addison St., Chicago 41, III. Naer Corp., 631 S. Sepulveda Blvd., West Los Angeles 49, Calif.

National Aeronautical Corp., 180 S. Main St., Ambler, National Capacitor Co., 1828 Westminster St., Provi-

dence 8, R. I.

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.

Mass.
National Electric Coil Co., Columbus 16, Ohio.
National Electric Controller Co., 5307 Ravenswood Ave., Chicago, III.
National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City, N. Y.
National Electronics, Inc., Geneva, III.
National Electronics Labs., Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
National Intercommunicating Systems, 1130 N. Milwaukee Ave., Chicago 26, III.

Ave., Chicago 26, III.
National Lead Co., 111 Broadway, New York 6, N. Y.
National Lock Washer Co., 40 Hermon St., Newark 5,

National Moldite Co., 1410 Chestnut Ave., Hillside 5,

National Research Corp., 70 Memorial Drive, Cambridge

42, Mass.
National Screw & Mfg. Co., The, Cleveland 4, Ohio.
National Spectographic Laboratories, Inc., 6300 Euclid
Ave., Cleveland 3, Ohio.
National Tel-Tronics Corp., 35 St. Casmirs Ave., Yonkers,

National Union Radio Corp., 350 Scotland Rd., Orange, N. .I. N. J. National Video Corp., 3019 W. 47th St., Chicago, III. 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,

Netson Vacuum Pump Co., George F., 2133 Fourth Street, Berkeley 10, Calif.

Neomatic Inc., 879 Wellesley Ave., Los Angeles 49, Calif.
Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
New England Electrical Works Inc., Lisbon, N. H.
New England Etching & Plating Co., 25 Spring St.,
Holyve Mass

Holyoke, Mass New Hampshire Ball Bearings, Inc., Peterborough, N. H. New Hermes, Inc., 13-19 University Place, New York 3,

New Jersey Wood Finishing Co., Amboy Ave., Wood-bridge, N. J. New Jersey Zinc Co., 160 Front St., New York 7, N. Y. New London Instrument Co., Box 189, New London,

ew York Solder Co., 684 E. 133rd St., New York 54, N. Y. 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 of Conn., Inc., 227 Cherry St., Bridgeport 5, Conn. Newcomb Spring Corp., 3907 7th Ave., Brooklyn 32,

Ney Co., J. M., 179 Elm St., Hartford, Conn.

Niagara Electron Laboratories, Andover, N. Y.
Nickel Cadmium Battery Corp., Easthampton, Mass.
Noble & Westbrook Mfg. Co., 27 Westbrook St., East
Hartford 8, Conn.

Hartford 8, Conn. Nonotuck Mfg. Co., Holyoke, Mass. Norrman Laboratories, Ernst, Williams Bay, Wis. 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., P. O. Box 427, Great Neck,

N. Y.
Northeastern Engineering, Inc., Manchester, N. H.
Northern Industrial Chemical Co., 7-11 Elkins St.,
South Boston 27, Mass.
Northern Mfg. Co., 38 Spring St., Newark, N. J.
Northern Radio Co., Inc., 143-145 W. 22nd St., New
York 11, N. Y.
Northern-Zaleski, Ltd., Pratt Oval, Glen Cove, N. Y.
Norton Co., 1 New Bond St., Worcester 6, Mass.
Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3,
N. J.

N. J. Nuclear Development Lab., P. O. Box 7034, Kansas City, Nuclear Instrument & Chemical Corp., 223 W. Erie St.,

Chicago 10, III. 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.,

Nucleonic Corp. of America, The, 497 Union St., Brooklyn 31, N. Y. Numberall Stamp & Tool Co., Huguenot Park, Staten Island 12, N. Y. Nylok Corp., Box 341, Elmira, N. Y.

Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, Ill.
Oak Ridge Products Mfg. Div. of Video Television, Inc.,
37-01 Vernon Blvd., Long Island City 1, N. Y.
Offner Electronics Inc., 5320 N. Kedzie Ave., Chicago

Offiner Clearbon 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., Canal Street, Passaic, N. J. Olesen Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif. Olin Industries Inc., Electrical Division, New Haven 4, Conn.

Conn.

Conn.
Olympic Metal Products Co., Inc., Phillipsburg, N. J.
Olympic Radio & Television Co., 34-01 38th Ave., Long
Island City, N. Y.
Onan & Sons Inc., D. W., University Ave. at 25th St.,
S. E., Minneapolis 14, Minn.
O'Neil-Irwin Mfg. Co., 321 Eighth Ave., Lake City, Minn.
Opad-Green Co., 71-5 Warren St., New York 7, N. Y.
Ostical Ellip Engineering Co., 2731 27 N. 6th St. Philas.

O'Neil-Irwin Miry. Co., 221 C., New York 7, N. Y. 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.,

Oregon Electronic Mfg. Co., 2232 E. Burnique Co., Portland 15, Ore.
Orradio Industries, Inc., Opelika, Ala.
Orthon Corp., The, 196 Albion Ave., Paterson 2, N. J.
Osborn Products, Glen Ellyn, III.
Oster Mfg. Co., John, Racine, Wis.
Owen Laboratories, 412 Woodward Blvd., Pasadena 10,

Calif.
Owens-Corning Fiberglas 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, Iil.
Ozalid Div. of General Aniline & Film Corp., 770 Ansco Rd., Johnson City, N. Y.

PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif.

PCA, Inc., 6368 DeLongpre Ave., Hollywood 28, Calif. P. M. Industries Inc., Stamford, Conn.
Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
Pacific Electronics, Saticoy, Calif.
Pacific Mercury Television Mfg. Corp., 14500 Aetna St., Van Nuys, Calif.
Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.
Packard-Rell Co., 12333 W. Olympic Blyd. Los Angeles

Angeles 23, Cailf.
Packard-Bell Co., 12333 W. Olympic Blvd., Los Angeles 64, Calif.

Painton & Co., Ltd., 366 Madison Ave., New York 17, N. Y. Paisley Products Inc., 1770 Canalport Ave., Chicago 16, III.

16, III.
Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
Pan American Trade Development Corp., 2 Park Ave.,
New York 16, N. Y.
Panelyte Div., St. Regls Sales Co., 230 Park Ave.,
New York 17, N. Y.
Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles
39. Calif.

39. Calif.

Panoramic Radio Products, Inc., 10 South Second Ave., Mt. Vernon, N. Y. Pantek Co., Box 16945, West Branch, Los Angeles 46, Calif.

Cair.
Paper Machinery & Research, Inc., 1014 Oak St.,
Roselle, N. J.
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.

Paravox, Inc., 2056 E. 4th St., Cleveland 15, Ohio.
Parisian Novelty Co., 3510 South Western Ave., Chicago 9, III. Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.

Parkwood Laminates, Inc., Wakefield, Mass.

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-MacGuyer Co., 17 Virginia Avenue, Providence 5, R. I.

R. I. Patwin Instruments a Div. of The Patent Button Co., Waterbury 88, Conn.

waterbury 88, Conn.
Paul & Beekman, Inc., 1801 Cortland St., Philadelphia
40, Pa.
Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, III.
Peck & Harvey, 5736-38 N. Western Ave., Chicago 45,

Pedersen Electronics Co., Mount Diablo Blvd., Lafayette,

Pedersen Electronal Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. Peerless Photo Products, Shoreham, N. Y. Peirce Wire Recorder Corp., 1328 Sherman Avenue,

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 34, Pa. Penn-Union Electric Corp., 315 State St., Erie, Pa. Pennsylvania Testing Laboratory, Doylestown, Pa. Penta Laboratories, Inc., 216 N. Milpas St., Santa

Barbara, Calif. Pentron Corp., The, 221 E. Cullerton St., Chicago 16,

Perfection Electric Co., 2635 S. Wabash Ave., Chicago

16, III.

Perkin-Elmer Corp., Main Ave., Norwalk, Conn.

Permo Inc., 6415 Ravenswood Ave., Chicago 26, III.

Permoflux Corp., 4900 W. Grand Ave., Chicago 39, III.

Peschel Electronics, Inc., 13 Garden St., New Rochelle,

Peschel Electronics, Inc., 13 Garden St.,
N. Y.
Pfanstiehl Chemical Co., Metallurgical Div., 104 Lake
View Ave., Waukegan, III.
Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass.
Phaostron Co., 151 Pasadena Ave., South Pasadena, Calif.
Phelps Dodge Copper Products Corp., 40 Wall St., New
York, N. Y.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, III.
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,

Philadelphia Steel & Wire Corp., Penn St. & Belfield Ave., Philadelphia, Pa. Philamon Laboratories, 5717 Third Ave., Brooklyn 20,

N. Y.
Philbrick Researches, Inc., George A., 230 Congress
St., Boston 10, Mass.
Philco Corp., Tioga & C Streets, Philadelphia 34, Pa.
Phillips Laboratories, Inc., Irvington, N. Y.
Phillips Control Corp., 84 W. Jefferson St., Joliet,
Illinois

Phillips Petroleum Co., Instruments Div., Bartlesville,

Philmore Mfg. Co., Inc., 113 University Place, New York

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.
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.

Photographic Products, Alley, O. A. Cambridge 42, Mass. Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass. Photovolt Corp., 95 Madison Ave., New York 16, N. Y. Photron Instrument Co., 6516 Detroit Ave., Cleveland 2,

Photron Instrument Co., Ohio.
Pickard & Burns, Inc., Needham, Mass.
Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
Pickering & Co., 309 Woods Ave., Oceanside, New York.
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., 7212 Circle Ave.,
Forest Park, III.
Piqua Machine & Mfg. Co., Young & College Sts., Piqua,

Ohio.

Ohio.

Pittsburgh Plate Glass Co., 200 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 Metals Division, The National Radiator Co., 169 Bridge Street, Johnstown, Pa.

Plastic Process Co., Inc., 366 Madison Ave., New York

17, N. Y.

17, N. Y.

Plastic Wire & Cable Corp., Jewett City, Conn.

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.
Platco Radio, Inc., 489 Broome St., New York, N. Y.
Plax Corp., P. O. Box 1019, Hartford 5, Conn.
Plume & Atwood Mfg. Co., 220 Broadway, New York,
N. Y.

N. Y. Poinsettia Co., Inc., 112 Cedar Ave., Pitman, N. J. 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,

Polytechnic Research & Development Co., Inc., 55 Johnson St., Brooklyn 1, N. Y.
Polytron Corp., 47 Martine Ave., White Plains, N. Y.
Polytron Engineering, 6659 Belair Rd., Baltimore 6, Md.
Popper & Sons, Inc., 300 Fourth Ave., New York 10,

Popper, Inc., J. S., 216 19th St., Union City, N. J. Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 2, Calif. Positive Lock Washer Co., 181 Miller St., Newark 5,

N. J. Post Co.,

N. J.
Post Co., Frederick, 3650 N. Avondale Ave., P. O. Box 803, Chicago 90. III.
Potter & Brumfield. Princeton, Indiana.
Potter Co., 1850 Sheridan Rd., North Chicago, III.
Potter Instrument Co., 115 Cutter Mill Rd., Great Neck, N. Y.

Powdered Metal Products Corp., Franklin Park, III. Power Conversions, 2635 W. Grand Ave., Chicago 12, TIL

Equipment Co., 55 Antoinette St., Detroit 2, Pratt & Whitney Div., Niles-Bement-Pond Co., West

Hartford 1. Conn

Hartford 1, Conn.

Precise Measurements Co., 942 Kings Highway, Brooklyn 23, N. Y.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Precision Castings Co., Matawan, N. J.

Precision Devices, Inc., 147-149 Cedar St., New York 6, N. Y.

Precision Electronic Components Ltd., 560 Wing St. W., Taconto, Ont

Toronto, Ont. Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, III. Precision

Electronics Laboratory, Box 5416, Seat Pleasant, Md

ant, Md.
Precision Metal Products Co. of Malden, 41 Elm St.,
Stoneham 80, Mass.
Precision Paper Tube Co.,
cago 47, III.
Precision Piezo Service, 427 Mayflower St., Baton Rouge,

Precision Plastic Products Inc., 628-30 W. Lake St.,

Precision Plastic Today Chicago 6, III.
Precision Radiation Instruments, Inc., 4113 EL W. Jefferson Blvd., Los Angeles 16, Calif.
Precision Resistor Co., 334 Badger Avenue, Newark 8,

Precision Scientific Co., 3737 W. Cortland St., Chicago

47, III.
Precision Tube Co., Inc., North Wales, Pa.
Preis Engraving Machine Co., 649 Highway No. 29,
Hillside. N. J.
Chicholm-Ryder Co., Inc., Niagara Premax Products Div., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. Premier Metal Etching Co., 21-03 Fourth Ave., Long

Island City, 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., Ellzabeth, N. J.
Presto Recording Corp., Paramus, N. J.
Preston-Eidson Electronics Co., 2760 Whittier Blvd., Los
Angles 23, Calif.
Price Electric Corp., Frederick, Md.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,

Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, octor Soundex Corp., 133 N. 6th Ave., Mt. Vernon,

Product Development Co., Inc., 307 Bergen Ave., Kearny,

Production Engineering Co., 173 Sargent Ave., Clifton, Production Instrument Co., 710 W. Jackson Blvd.,

Chicago 6, III.

Production Tool & Fixture Co., 37 W. Main St., Oyster Bay, N. Y.

Progressive Mfg. Co., 50 Norwood St., Torrington, Conn.

Progressive Mfg. Co., 50 Norwood St., Torrington, Conn. Pyle-National Co., 1334 N. Kostner Ave., Chicago 51,

Pyramid Electric Co., 1445 Hudson Blvd., North Ber-Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook,

Pyroferric Co., 621 E. 216th St., New York 67, N. Y.

QRK Electronic Products 445 N. Circle Drive, Fresno 4, Calif.

Q.V.S. INC., 15 S. Essex St., Orange, N. J. Quadriga Mfg. Co., 213 W Grand Ave., Chicago 11, III. Quaker City Gear Works, Red Lion & Philmont Rd., Beth-

Quality Components, Inc. St. Marys. Pa.
Quam Nichols Co., 526 E. 33rd Pl., Chicago 16, Ill.
Queens Tool Engineering & Mfg. Co., 15 Front St., Rockville Centre, N. Y.

B. M. Division, Essex Wire Corp., Logansport, Ind. C Scientific Instrument Co., 335 Culver Blvd., Playa Del Rey, Calif.

F Manufacturing Corp., Jericho Turnpike, Mineola, N. Y.

Racon Electric Co., 52 E. 19th St., New York 3, N. Y. Radar Engineers, 110 University St., Seattle 1, Wash. Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25,

Radell Corp., 7900 Pendieton Pike, Indianapolis 16, Ind. Radex Corp., 2006 N. Elston Avenue, Chicago 14, III.
Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
Radiation Counter Laboratories, Inc., 5122 W. Grove St.,
Skokie, III.
Radiation, Inc., Melbourne, Fla.

Radio Apparatus Corp., 55 N. New Jersey St., Indian-apolis 3, Ind. Radio City Products, 152 W. 25th St., New York 1, N. Y.

N. Y.
Radio Condenser Co., Camden, N. J.
Radio Cores, Inc., 9540 Tulley Ave., Oak Lawn, III.
Radio Corporation of America, RCA Victor Div., Engineering Products Dept., Home Instrument Dept., Record Dept., Camden, N. J.
Radio Corporation of America, RCA Victor Div.: Tube Dept.: Tubes, Test and Measuring Equipment, Batterles and Components, Harrison, N. J.
Radiocrafters Div. of Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
Radio Craftsman, Inc., 1341 S. Michlgan Ave., Chicago 5, III.

Radio Engineering Labs, Inc., 36-40 37th St., Long Island City 1, N. Y.
Radio Frequency Labs., Inc., Boonton 2, N. J.
Radio Mfg. Engineers Inc., 300-302 First Ave., Peoria

6, III. Radio Materials Corp., 1708 Belmont Ave., Chicago 13,

Radio Merchandise Sales, Inc., 1165 Southern Blvd., New York 59, 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.

N. Y.
Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
Radio Specialty Mfg. Co., 2028 SE. Sixth Ave., Portland 14, Ore.
Radio Transceiver Laboratories, 116-23 Jamaica Ave.,

Radio Transceiver Laboratories, 110-22 Richmond Hill 18, N. Y. Radioactive Products Inc., 443 W. Congress St., Detroit 26, Mich.

Radion Corp., 1130 Wisconsin Ave., Chicago 14, III. Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, III. Rae Motor Corp.

Rae Motor Corp., P. O. Box 291, Racine, Wls.
Rahm Instruments, Inc., 12 West Broadway, New York

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.
Randall, Inc., Douglas, 102 High St., Westerly, R. I.
Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.
Raoid Electric Co., 2881 Middletown Rd., New York 61, N. Y.

Rapid Specialties Co., 325 W. Huron Street, Chicago 10,

Rattray & Co., Jamaica 5, N. Inc., George, 92-32 Union Hall St.,

Rauland Corp., 4545 N. Knox Ave., Chicago 41, III. Rauland-Borg Corp., 3515 W. Addison St., Chicago 18,

Rawson Electrical Instrument Co., 111 Potter St., Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.
Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry. Pa.
Ray-0-Vac Co., Madison, Wisconsin.
Raypar, Inc., 7800 W. Addison St., Chicago, III.
Raytheon Mfg. Co., Equipment Sales Div., Waltham 54, Mass

Mass. Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass. Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.

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., 251 Fourth Ave., New York 10, N. Y.
Rectifier Engineering Co., Inc., 1803 E. Seventh St.,
Los Angeles 21, Calif.
Red Bank Division, Bendix Aviation Corp., Red Bank,

N. J. Redman Electronics Corp., P. O. Box 72, ThompsonvIIIe,

Redmond Co., Inc., Owosso, Mich.
Reeder & Co., Charles M., 171 Victor Ave., Detroit 3.

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. Chicago 6, III.

Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y

Refrigeration Systems, Inc., 646 W. Washington Blvd., Chicago 6, III. Reichhold Chemicals Inc., 630 Flfth Ave., New York 20,

N. Y.
Reilly Tar and Chemical Corp., 1615 Merchants Bank
Bldg., 11 S. Meridlan St., Indianapolls, Ind.
Reiner Electronics Co., 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, Ohlo.
Reliance Automatic Lighting Co., 1919 Mead St., Racine,

Reliance Instrument Co., 3027 W. Van Buren St., Chi-

cago 12, III Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif

Repath 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, Ohlo.
Resdel Engineering, 2309 Riverside Drive, Los Angeles
39, Calif.
Research Electronics Lab., 2459 Susquehanna Rd., Roslyn,

Pa. Resistance Products Co., 714 Race St., Harrisburg, Pa. Resistoflex Corp., 39 Plansoen St., Belleville 9, N. J. Resistor Sales of Nevada, P. O. Box 2502, Reno, Nev.

Resistors, Inc., 5226 W. 26th St., Chicago 50, III. Revere Camera Co., 320 E. 21st St., Chicago 16, III. Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.

Rex Corp., 51 Rex Rheostat Rex Corp., 51 Lansdowne St., Cambridge 39, Mass.
Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.
Reynolds Electric Co., 3000 River Rd., River Grove, III.
Rhode Island Insulated Wire Co., Inc., Cranston, R. I.
Rhodes Inc., M. H., 30 Bartholomew Ave., Hartford,

Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass. Richardson Company, The, 2767 Lake St., Meirose Park,

Illinois.

Rich-Roth Laboratorles, East Hartford, Conn.
Rlester & Thesmacher Co., Cleveland 13, Ohlo.
Rlpley Co., Inc., Middletown, Conn.
Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.
RlyersIde Electrical Mfg. Co., 10221 Michigan Ave.,
Dearborn Mich.

Dearborn, Mich. Riverside Metal Co., Riverside, N. J. Rixtron Co., 1501 County Rd., Box 262, Belmont, Calif. 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 Pasa-

99, Ohlo Robinette,

dena, Calif. Robinson Avia dena, Calif.
Robinson Aviation, Inc., Teterboro Air Terminal, Teterboro, N. J.
Robinson Inc., Edward E., 95 Park Ave., Nutley 10, N. J.
Robotron Corp., 21300 W. Eight Mile Rd., P. O.
Box 4885, Detroit 19, Mich.
Rochester Acoustical Labs., Inc., Rochester, Minn.
Rockbestos Products Corp., 285 Nicoll St., New Haven

Conn.

Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.

Z, N. J.
Roflan Co., Everett, Mass.
Rogan Bros., 2500 W. Irving Park, Chicago 18, IJi.
Rogers Corp., Manchester, Conn.
Rohden Manufacturing Company, 4739 Montrose Ave.,

Chicago 41, III. Rola Co., Inc., The, 2530 Superior Ave., Cleveland 14,

Ohio.
Rollan Electric Co., 8020 S. South Park Ave., Chi-

Rollar-Smith Corporation, Bethlehem, Pa.
Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Callf.
Rollins Corp. P. O. Box 213, Lewes, Del.
Romac Products Co., 112 Bleecker St., New York 12,
N. Y.

N. Y.
Rome Cable Corp., 330 Ridge St., Rome, N. Y.
Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Philadelphia 4, Pa.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
Rostan Corp., 383 Kent Ave., Brooklyn 11, N. Y.
Rotron Mfg. Co., Inc., 7-9 Schoonmaker Lane, Woodstock, N. Y.

stock, N. Y.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Royal Diamond Tool Co., 403 Statler Bidg., B 16, Mass. Ruberoid Co., 500 Fifth Ave., New York 18, N. Y. Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Mass

Ruby Chemical Co., 68 McDowell St., Columbus, Ohio. Ruge-de Forest, Inc., 84 Massachusets Ave., Cambridge 39, Mass.

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, III. Chicago 41, III.

Rush Wire Stripper Division, The Eraser Co., Inc., 104

S. State St., Syracuse 2, N. Y.

S. State St., Syracuse 2, N. Y.
Russell, Burdsall & Ward Bolt & Nut Co., Port Chester,
N. Y. Rusself & Stoll Co., Inc., 125-6 Barclay St., New York 7, N. Y.

7, N. Y.
Rutherford Electronics Corp., 3707 S. Robertson Blvd.,
Culver City, Calif.
Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, III.

"S" Corrugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J. S. N. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis. 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. Samuel & Co., Inc., J. A., 220 Broadway, New York 7, N. Y.

N. Y.
Sanborn Co., 39 Osborn St., Cambridge 39, Mass.
Sandsteel Spring Div., Sandvik Steel, Inc., 145 Hudson
St., New York 13, N. Y.
Sangamo Electric Co., Capacitor Div., Marion, Illinois.
Sargent & Co., New Haven, Conn.
Sargent-Rayment Co., 212 Ninth St., Oakland. Calif.
Sarkes Tarzian Inc., 539 S. Walnut, Bloomington, Ind.
Saureelsen Cements Co., Sauereisen Bidg., Pittsburgh 15,
Pa.

Pa.
Saxi Instrument Co., Harvard, Mass.
Scala Radio Co., 2814 19th St., San Francisco 10, Calif.

Carlin.

Schaevitz Engineering, Crescent Blvd. at Drexel Ave.,
Pennsauken Township, Camden 11, N. J.

Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohlo.

Schenectady Varnish Co., Schenectady, N. Y. Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.

hott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Callf.

geles 18, Callf.
Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.
Schuttig & Co., Inc., 9th & Kearney Sts. N. E., Washington 17, D. C.
Schweltzer Inc., Peter J., 405 Lexington Ave., New York 17, N. Y. 405 M

Schweltzer Inc., Peter J., 405 Lexington Ave., New York 17, N. Y. Sciaky Bros., Inc., 4915 W. 67th St., Chicago 30, III. 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 Wood Cabinet Co., 88 Holmes St., Belleville, Scintilla Magneto Div., Bendix Aviation Corp., Sidney, Scintilla Magneto Div., Bendix Aviation Corp., Sidney, N. Y.
Scott Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chicago 40, Ill.
Scovill Manufacturing Co., Waterbury 20, Conn.
Scully Machine Co., 62 Walter St., Bridgeport, Conn.
Seager Carbon Co., 289 Church St., New York 13, N. Y.
Sealectro 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.
Secon Metals Corp., 228 E. 45th St., New York 17, N. Y. Segal, Edward, 72 Spring St., New York 12, N. Y. Seifert, Inc., E. R., 202-204 S. Beech St., Syracuse Segai, Seifert, I Self-Lock Fastener Corp., 259 Stephens St., Belleville 9, N. J.
Senn Corp., New Augusta, Ind.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Sensitive Research Instrument Corp., 7 Emil Cre., New Vernon, N. Y.
Sentinel Radio Corp., 2100 Dempster St., Evanston, Ill. Sequoia Process Corp., Redwood City, Calif. Serdex, Inc., 91 Cambridge St., Boston, Mass. Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. J.
Servo-Tab Products Co.. 4 Godwin Ave., Paterson, N. J. Servo-Tek Products Co., 4 Godwin Ave., Paterson, N. J. Servomechanisms, Inc., Post & Stewart Aves., Westbury, N. Y. N. Y. Sessions Clock Co., Forestville, Conn. Set Screw & Mfg. Co., 470 Main St., Bartlett, III. Setchell Carlson, Inc., 330 Fifth Ave., New Brighton, Minn.
Shakeproof Inc., 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 Coit 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. Sherman Industrial Electronics Co., Inc., 505 Washing-ton Ave., Belleville 9, N. J. ton 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. City, Kan.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y N. Y.
Shevers Inc., Harold, 123 W. 64th St., New York 23,
N. Y.
Shoe Form Co., Inc., Auburn, N. Y.
Shopsin Paper Co., 112 Charlton St., New York 14,
N. Y. Short Wave Plastic Forming Co., 2921 W. Alameda St., Short Wave Plastic Forming Co., 2721 W. Glambark, Calif.
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.
Sigma Instruments, Inc., 180 Pearl St., South Braintee 85. Mass. Signal Engineering & Mfg. Co., 154-6 W. 14th St., New York, N. Y. Sillcocks-Miller Co., 10 Parker Ave., West, South Orange, N. J. Orange, N. J. Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, 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., 40 Belden Ave., Norwalk, Conn.
Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn. Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y. N. Y.
Snyder Mfg. Co., Philadelphia 40, Pa.
Sola Electric Co., 4633 W. 16th St., Chicago 50, Ill.
Soldering Specialties Co., 19 Chatham Rd., Summit, N. J.
Sommer & Maca Glass Machine Co., 3600 Oakley Ave.,
Chicago 9, Ill.
Sonar Radio Corp., 59 Myrtle Ave., Brooklyn 1, N. Y.
Sonic Industries Inc., 221 W. 17th St., New York 11,
N. Y. N. Y.
Sonic Recording Products, Inc., 58 Mill Rd., Freeport,
N. Y. N. Y.
Sonotone Corp., P. O. Box 200, Saw MIII River Road,
Elmsford, N. Y.
Soreng Mfg. Corp., 9555 Eden Ave., Schiller Park, III.
Sorensen & Co., Inc., 375 Fairfield Ave., Stamford, Conn.

Conn.

Grant Conn.

Regel Electric Co., 838 W. National Ave., Milwaukee Sorgel Electric Co., See Manager 19, Wis.
SOS Cinema Supply Corp., 602 W. 52nd St., New York
19, N. Y.
Sound Apparatus Co., Stirling, N. J.
Soundscriber Corp., 146 Munson St., New Haven 4,

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Speak-O-Phone Recording & Equipment Co., 23 W. 60th 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.
Spectrum Mfg. Co., P. O. Box 189, New London, Conn.
Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.
Speer Carbon Co., Lincoln Ave., 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.
Spincraft, Inc., 4143 W. State St., Milwaukee 8, Wis. Sperty Farragay, 1967, Ohio.

Spincraft, Inc., 4143 W. State St., Milwaukee 8, Wis.

Sponge Rubber Products Co., The, 469 Derby Place, Shelton, Conn.

Sprague Electric Co., 125 Marshall St., North Adams, Mass.

Sauara Root Mfg. Corp., 391 Saw Mill River Rd., Mass.
Square Root Mfg. Corp., 391 Saw Mill River Rd.,
Yonkers, N. Y.
Sta-Warm Electric Co., Ravenna, Ohio.
Stackpole Carbon Co., St. Mary's, Pa.
Staedtler Inc., J. St., 55 Worth St., New York, N. Y.
Stahl, Inc., Michael, 215 Fulton St., New York, N. Y.
Stahl, Inc., Third St., North Wales, Pa.
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. Pulaski Rd., Chicago 39, Ill. Standard Crystal Co., 400 Armstrong Ave., Kansas City 1, Kans.
Standard Electric Mfg. Co., West Berlin, N. J.
Standard Electric Time Co., The, 89 Logan St., Springfield, Mass.
Standard Electronics Corp., 285 Emmet St., Newark, N. J. Standard Electronics Research Corp., 2 East End Ave., 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. Mass. Standard Piezo Co., 127 Cedar St., Carlisle, Pa. Standard Pressed Steel Co., Box 775, Jenkintown 10, 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., Elston, Kedzle & Addison, Chicago 18, Ill.

Standard Winding Corp., 44-62 Johnes St., Newburgh, Stanley Tools Div., Stanley Works, Elm St., New Brit-ain, Conn. Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. 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 N. Y.
Star-Kimble Motor Div. of Miehle Printing Press & Mfg.
Co., 200 Bloomfield Ave., Bloomfield, N. J.
Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J. Starrett Television Mfg. Corp., 601 W. 26th St., New Starrett leievision Mig. Corp., 601 W. 26th St., New York, N. Y.
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.
Steel Co., Herman D., Lafayette Bldg., Philadelphia 6,
Pa. Steger Furniture Mfg. Co., Steger, III.
Steinen Mfg. Co., Wm., 43 Bruen St., Newark 5, N. J.
Steiner-Ives Co., 16 Avenue L, Newark 5, N. J.
Stelma, Inc., 389 Ludlow St., Stamford, Conn.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, III.
Sterling Engineering Co., Inc., 90 Mill St., Laconla, Sterling Sterling M. H. Sterling Ir Instruments Co., 13331 Linwood Ave., Detroit 6, Mich.
Sterling Mfg. Co., 9205 Detroit Ave., Cleveland 2, Ohio.
Sterling Television Inc., 15 W. Lake St., Chicago 1, III.
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, III. Stevens Paper Mills, Inc., Windsor, Conn. Stevens Products Inc., 86-88 Mail St., East Orange, N. J. Chester Corp., Southco Dlv., 1409 Finance Bldg., Iadelphia 2, Pa. Stevens-Walden, Inc., 475 Shrewbury St., Worcester 4, South River Metal-Products Co., Inc., 377-379 Turnplke, Mass. Stevenson Bro. & Co., 110 Race St., Philadelphia 6, Pa. Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga, Tenn.

Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey 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. Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
Stoddard Aircraft Radio Co., 6644 Santa Monica Blyd., Hollywood 38, Calif.
Stokes Machine Co., F. J., 5850 Tabor Road, Olney Post Office, Philadelphia 20, Pa.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
Stow Manufacturing Co., 445 State St., Binghamton, N. Y. Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, III. Stromberg-Carlson Co., Rochester 3, N. Y. Stronghold Screw Products, Inc., 216-222 West Hubbard , Chicago 10, III. Struthers-Dunn, Inc., 150 N. 13th Street, Philadelphia 7, Pa.
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
Sturtevant Co., P. A., 333 W. 1st St., Elmhurst, Ill.
Summit Coil Co., 67 Union Pl., Summit, N. J.
Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
Super Electric Products Corp., 46 Oliver St., Newark, N. J.
Super Flow Solder Co., Inc., 90 State St., Albany, N. Y.
Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.
Superior Electric Co., The, 4000 Thure Ave., Bristol, Conn. Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13. Ohio. Superior Instruments 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, Supreme, Inc., Greenwood, Miss. Supreme Wire & Cable Inc., 1370 Ralph Ave., Brooklyn, Surprenant 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, Sylvan Electronic Labs., Inc., Broadalbin, N. Y.
Sylvania Electric Products, Inc., 1740 Broadway, New
York 19, N. Y.
Sylvania Electric Products, Inc., Radlo & Television Div.,
254 Rano St., Buffalo 7, N. Y.
Symphonic Radio & Electronic Corp., 160 Washington St.,
Botton 14 Mass Boston 14, Mass. Synchro Start Products, Inc., 1046 W. Fullerton Ave., Chicago 14, III.
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 cuse, 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. Pulaskl Rd., Chicago 23, Ill.
Talk-0 Products, Inc., 42 Allen St., Rochester 6, N. Y.
Tartak-Stolle Electronics, Inc., 3970 S. Grand Ave., Los Angeles 37, Calif.
Taylor Fibre Co., NorrIstown, Pa.
Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Pallsades Park, N. J. 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, 121
Spencer Place, Mamaroneck, N. Y.

Technical Operations, Inc., 16 Court St., Boston, Mass.

Technical Service Corp., 3116 Michigan Drive, Louisville 5, Ky.
Technicraft Laboratorles, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
Technitrol Engineering Co., 2751 N. 4th St., Philadelphia Technograph Printed Circuits, Inc., 191 Main St., Tarrytown, N. Y. Technology Instrument Corp., 531 Main St., Acton, Mass.
Tecnifax Corp., 276 High St., Holyoke, Mass. Teiner Co., Inc., Roland, 134 Tremont St., Everett 49, Tektronix, Inc., P. O. Box 831, Portland 7, Ore. TelAutograph Corp., 16 W. 61st St., New York 23, N. Y. Tele King Corp., 601 W. 26th St., New York 1, N. Y. Tele-Ray Tube Co., Inc., 984 Saw Mill River Rd., Yonkers, N. Y. Tele-Tone Radio Corp., 540 W. 58th St., New York 19, Telechrome, Inc., 88 Merrick Rd., Amityville, N. Y. Telechron Dept., General Electric Co., Ashland, Mass.

Stewart Mfg. Corp., F. W., 4311 Ravenswood Ave., Chicago 13, III. Stewart Stamping Co., 630 Cetnral Park Ave., Yonkers

Phlladelphia 2,

South River, N. J.

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

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.

Telemark, Inc., 100 Greyrock Place, Stamford, Conn.

Telemetering Associates, P. 0. Box 6, Silver Spring, Md.

Telephonics Corp., Park Ave., Huntington, N. Y.

Telequip Radio Co., 2559 W. 21st St., Chicago 8, III.

Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

Teletran Corp., Franklin Turnpike, Route 17, Ramsey, Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave.,

Gardena, Calif.

Teletronics Laboratory, Inc., 352 Maple Ave., Westbury,

Television Equipment Corp., 238 William St., New York 38, N. Y.

Television Utilities Corp., 1315 Jericho Turnpike, New

Hyde Park, N. Y. Television Zoomar Corp., Room 2223, 500 Fifth Avenue, New York, N. Y.
Televiso Corp., 7466 W. Irving Park Road, Chicago 34,

TIII. Telewave Laboratories, Inc., 100 Metropolitan Ave.,

Brooklyn 11, N. Y.

Brooklyn 11, N. Y.

Telex Inc., Telex Park, St. Paul 1, Minn.

Tel-Instrument Co., 50 Paterson Ave., East Rutherford,

V. J. -O-Tube Corp. of America, 180 Van Riper Ave., East Paterson, N. J. Paterson Tel-Rad Mfg. Co., Inc., 7th & Madison St., Fennimore,

Wis.
Telrex, Inc., Rutherford & Neptune Highway, Asbury Park, N. J. Telvision Laboratories, Inc., 5045 W. Lake St., Chicago

44, III.
Tempel Mfg. Co., 1939 Bryn Mawr Ave., Chicago 26, III.
Tennessee Eastman Co., Kingsport, Tenn.
Tenney Engineering Inc., 26 Avenue B., Newark 5, N. J.
Tensolite Insulated Wire Co., Inc., 198 Main St., Tarry-

town, N. Y.
chsor Electric Development Co., Inc., 343 Classon Ave., Brooklyn 5, N. Y.

Terpening Co., L. H., 16 W. 61st St., New York, N. Y.

Tetrad Co., 4921 Exposition Blvd., Los Angeles 16, Calif.

Tetrad Corp., 62 St. Mary St., Yonkers, N. Y.

Ther Electric & Machine Works, 15 South Jefferson St.,

Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. Thermad Syndicate Ltd., 12 E. 46th St., New York 17,

N. Y.
Thermo Instruments Co., Box 336, Belmont, Calif.
Thomas & Skinner Steel Products Co., 1122 E. 23rd St.,

Indianapolis, Ind.
Thomas Electronics, Inc., 118 NInth St., Passaic, N. J.
Thomas Electronics, Inc., 1640 W. Hubbard St., Chicago, Thompson Co., H. I., 1733 Cordova St., Los Angeles 7,

Calif.

Calif.
Thompson Corp., The, George S., South Pasadena, Calif.
Thompson & Associates, John E., 7210 S. Yates Ave.,
Chicago 49, III.
Thompson Products, Inc., Electronics Div., 2196 Clarkwood Rd., Cleveland 3, Ohio.
Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield,
N. J.
Therdyson Meisener Mfs. Division. Ms. Course, III.

Thordarson-Meissner Mfg. Divisions, 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,

Timken Roller Bearing Co., Canton, Ohio.
Tinnerman Products Inc., P. O. Box 6688, Dept. No. 16,

Innerman Products Inc., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio.

Titan Metal Mfg. Co., Bellefonte, Pa.

Titanium Alloy Mfg. Co., 111 Broadway, New York 6, N. Y.

Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.

Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.

Toman & Co., E., 2621 W. 21st Place, Chicago 8, Ill.

Ton-Tex Corp., 247 Pearl St. N. W., Grand Rapids 2, Mich.

Mich 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. Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,

Mass.
Torocoil Co., 1374 Mobile Court, St. Louis, Mo.
Tracerlab Inc., 130 High St., Boston 10, Mass.
Trad Television Corp., 1001 First Ave., Asbury Park,

Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif. Transformer Engineers 389 South Arroyo Parkway, Pasa-

dena, Calif.

Transformer Specialty Co., Bala Cynwyd, Pa. Transformers, Inc., 532 North St., Endicott, N. Y.
Trans-Gel Products, Inc., 212-40 Jamaica Ave., Queens
Village, N. Y.
Translcoil Corp., 107 Grand St., New York 13, N. Y.
Transistor Products, Inc., 970 New Brunswick Ave.,
Pableson N. M.

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, III.
Triad Portable Case Corp., 310-314 W. Lincoln Ave.,
Mount Vernon, N. Y. Transformer Mfg. Co., 4055 Redwood Ave., Los

Triad Transformer Mig. Co., 2008 No. 1008 No. 2016.
Angeles, Calif.
Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.
Tricon Mfg. Co., 8008-12 Wallace St., Chicago 20, Ill.
Tricraft Products Co., 1535 N. Ashland Ave., Chicago

22, III.

Tri-Dex Co., P. O. Box 643, Lindsay, Calif.

Trimm Inc., 400 W. Lake St., Libertyville, III.

Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.

Triplett & Barton Inc., 831 N. Lake St., Burbank, Calif.

Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio. Triumph Mfg. Co., 913 W. Van Buren St., Chicago 7,

Trumbull Electric Dept. of General Electric Co., Plain-

ville, Conn. Tru-Ohm Proc

ville, Conn.
Tru-Ohm Products Div., Model Engineering & Mfg. Co., 2800 Milwaukee Ave., Chicago 18, III.
Truscon Steel Co., Youngstown, Ohio.
Tubular Rivet & Stud Co., Linden St., Quincy, Mass.
Tudor Products Co., 57 E. Alpine St., Newark 5, N. J.
Tung-Sol Electric Inc., 95 Eighth Ave., Newark 4, N. J.
Turner Co., The, 909 17th St., N. E., Cedar Rapids, Iowa. Iowa.

lowa.
Tuttle & Kift, 1823 N. Monitor St., Chicago 39, III.
Twentieth Century Electronics Ltd., Dunbar Works, Dunbar St., West Norwood, London, S. E. 27, England.
Tyniswitch Division, Sessions Clock Co., Forestville,

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.
Ultradyne Electronics, Oswego, Oregon.
Ultrasonic Engineering Co., P. O. Box 46, Maywood, III.
Ultra-Violet Products, Inc., 145 Pasadena Ave., South
Pasadena, Calif.
Ungar Electric Tools Inc., 615 Ducommun St., Los
Angeles 54, Calif.
Uniform Tubes, Level Rd., Collegeville 2, Pa.
Unimax Switch Div. of W. L. Maxon Corp., 460 W.
34th St., New York 1, N. Y.
Union Bay State Chemical Co., Cambridge, Mass.
Union Electric Products Co., 24 Edison Place, Newark 2, N. J.

United Condenser Corp., Cambridge 42, Mass. United Condenser Corp., 337 E. 139th St., New York 54,

United Electric Controls Co., 85 School St., Watertown 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, III.
United Shoe Machinery Corp., 140 Federal St., Boston, Mass.

Specialties Co., 9765 S. Cottage Grove Ave., Chicago 28, III. U. S. Electrical Motors, Inc., 200 E. Slauson Ave., Los

Angeles, S. Ele Calif U. Electronic Co., 262 Canner St., New Haven 11, Conn. u. Electronics Corp., 276 Warren St., Lyndhurst,

Calif.

Gasket Co., Fluorocarbon Products Div., P. O. Box, Camden, N. J. U. 93, Camden, N. J. S. Gauge Div., American Machine & Metals, Inc., U.

U.

Sellersville, Pa.

S. Graphite Co. Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.

S. Instrument Corp., 409 Broad St., Summit, N. J.

S. Radium Corp., 535 Pearl St., New York 7, N. Y.

S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

S. Steel Co. (U. S. Steel Corp. Sub.), 525 Wm. Penn Place Pittsburgh 20, Dec.

York 20, N. Y.
U. S. Steel Co. (U. S. Steel Corp. Sub.), 525 Wm. Penn Place, Pittsburgh 30, Pa.
U. S. Stoneware Co., The, Akron 9, Ohio.
U. S. Television Mfg. Corp., 3 W. 61st St., New York

, N. Y. d Technical Laboratories, Box 425-V, Morristown, United

United Transformer Co., 150 Varick St., New York 13, N. Y. United Wood Specialty Mfg. Co., 951 Broadway, Fall

River, Mass. 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,

Universal Motor Co., 456 Universal Drive, Oshkosh, Wis. Universal Winding Co., P. O. Box 1605, Providence 1,

Plains, N. Y.
Utah Radio Products Co., Inc., 1123 E. Franklin St.,
Huntington, Ind.
Utility Electronics Corp., 231 Grant St., East Newark,
N. J. University Loudspeakers, Inc., 80 S. Kensico Ave., White

V-M Corp., Benton Harbor, Mich.
Vaco Products Co., 317 E. Ontario St., Chicago 11, III.
Vacuum Electronic Engineering Co., 756 Third Ave.,
Brooklyn 32, N. Y.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge
42, Mass.

Vacuum Tube Products, 506 S. Cleveland St., Ocean-Vacuum Tube Products, 506 S. Citeronic S., S. Vacuum St., Calif. Valco Mfg. Co., 4700 W. Walton St., Chicago 51, III. Valite Corp., Whitney Bldg., New Orleans 12, La. Vallorbs Jewel Co., Lancaster, Pa. Valpey Crystals, Highland St., Holliston, Mass. Vapor Recovery Systems Co., P. O. Box 231, 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. Varo Mfg. Co., Inc., Box 638, Garland, Texas. Vector Electronic Co., 3352 San Fernando Rd., Los Angeles 65, Calif.

Angeles 65, Calif.

Vectron, Inc., 235 High St., Waltham, Mass.

Veeder-Root, Inc., 20 Sargeant St., Hartford 2, Conn.

Vendo Co., 7400 E. 12th St., Kansas City 8, Mo.

Vibraloc Corporation, 425 Bush St., San Francisco 8,

Calif.

Calif.
Vibroplex Co., Inc., 833 Broadway, New York, N. Y.
Vibrascope Co., 6 E. 39th St., New York 16, N. Y.
Vickers, Inc., 1815 Locust St., St. Louis 3, Mo.
Victor Electric Products, Inc., 2950 Robertson Ave.,
Cincinnati 9, Ohio.
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. Vidaire Television 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.
Video Electronic Corp., 312 E. Washington St., In-Ind. dianapolis 4, Inc., 35-01 Queens Blvd., Long Island City 1,

Viewlex Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
Vincent Co., A. W., 39 State St., Rochester 14, N. Y.
Vitamite Company, The, 227 W. 64th St., New York 23,

N. T. Vitramon, Inc., Stepney, Conn. Vitroseal Corp., 6325 Guilford Ave., Box 6408, In-

Vitramon, Inc., Stepney, Comm.
Vitroseal Corp., 6325 Guilford Ave., Box 6408, and dianapolis 20, Ind.
Vocaline Co. of America, Inc., Old Saybrook, Conn.
Vokar Corp., 7300 Huron River Drive, Dex.er, Mich.
Volkert Metal Stampings, Inc., John, 222-34 96th Ave.,
Oneens Village 8, N. Y.
Rd., Rutherford, N. J.

Queens Village 8, N. Y. Vorac Co., The, 147 Meadow Rd., Rutherford, N. 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, Wagner Electric Corp., 6400 Plymouth Ave., St. Louis,

Waldes Kohinoor Inc., 47-16 Austel Place, Long Island

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.
Wallace & Tiernan Products, Inc., Belleville 9, N. J.
Walser Automatic Timer Corp., Graybar Bldg., New York, N. Y.
Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
Waltham Harological Corp., 200 Main Co.

Waltham Horological Corp., 899 Main St., Waltham,

Mass. Waltham Screw Co., 77 Rumford Ave., Waltham, Mass. Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

Mass.
Wappler, Inc., 27 W. 24th St., New York 10, N. Y.
Ward Leonard Electric Co., 31 South St., Mt. Vernon,
N. Y.
Ward Products Corp., Div. of the Gabriel Co., 1523 E.
45th St., Cleveland 3, Ohio.
Warren Mfg. Co., Inc., 250 East St., New Have., Conn.
Warren Wire Co., Pownal, Vt.
Warrick Co., Charles F., Rt. 1, W. Long Lake Rd.,
Bloomfield Hills, Mich.
Warrick, Frederick P., 1960 Graefield Rd., Birmingham,
Mich.

Mich. Waterman Products Co., Inc., 2445-63 Emerald St.,

Waters Conley Co., 501 First St. N. W., Rochester, Minn. Waters, Inc., Robert A., 4 Gordon St., Waltham 54,

Mass.
Waters Mfg. Co., Waltham, Mass.
Waveline, Inc., North Caldwell, N.
Weathers Industries, 510 Richey Ave., West Collingswood, N. J. Weber Co., F., 1220 Buttonwood St., Philadelphia 23,

Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago

39, III.
Webster Electric Co., 1900 Clark St., Racine, Wis.
Webster Spring Corp., 176-182 Johnson St., Brooklyn 1,

Weingarten Electronic Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.

Weinschel Engineering Co., 919 Jesup Blair Drive, Silver Spring, Md. Welch Scientific Co., W. M., 1515 Sedgwick St., Chl-

cago 10, III.

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.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,

Mich. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

West Virginia Pulp & Paper Co., 230 Park Ave., New York 17, N. Y.

Western Electro-Acoustic Labs., 204 S. Beverly Drive, Beverly Hills, Calif.

Western Gold & Piatinum Works, 589 Bryant St., San Francisco, Calif. Western Insulated Wire Co., 2425 E. 30th St., Los

Angeles 58, Callf.
Western Lithograph Co., 600 East Second St., Los Angeles 54, Callf.
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 5578, Pittsburgh

Westinghouse Electric Corp., Electronic Tube Div., P. O. Box 284, Elmira, N. Y.
Westinghouse Electric Corp., Electronic Tube & Lamp Parts Dept., Bloomfield, N. J.
Westline Electronics Co., 11656 Olympic Bivd., Los Angeles 25, Calif.
Weston Electrical Instruments Corp., 614 Frelinghuysen

Ave., Newark 5, N. J.
Weston Laboratorles, Weston 93, Mass.
Weymouth Instrument Co., 1440 Commercial St., East

Weymouth 89, Mass.
Wheaton Co., T. C., Electronic Dlv., Millville, N. J.
Wheelco Instruments Div., Barber-Colman Co., Rockford, Hit.

Wheeler Insulated Wire Co., Inc., 150 E. Aurora St.,

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 17, N. Y.
Whitaker Cable Corp., Kansas City 16, Mo.
White Dental Mfg. Co., S. S., Industrial Div., 10 E.
40th St., New York, N. Y.

Whitehead Stamping Co., 1691 W. Lafayette Bird., De troit 16, Mich.

White Rock Mfg. Corp., White Rock, S. C.

White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.

White Tuning Corp., 421 W. 54th St., New York, N. Y. Whitso, Inc., 2037 Churchill St., Chicago 47, III. Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind. Wiedemann Machine Co., 4272 Wissahickon Ave., Phlladelphla 32, Pa. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo. Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif. Wilder Mfg. Co., Inc., Mechanic St. & Erie R. R., Port Jervis, N. Y. Wilkor Division, Aerovox Corp., 2882 Detroit Ave., Cleveland 13, Ohlo. Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohlo.

land 15, Ohlo.

Willarns & Co., C. K., 640 N. 13th St., Easton, Pa.

Willson Camera Co., Inc., 1401 Lawrence Road, Haver-

Willison Camera Co., Inc., 1401 Lawrence Road, Havertown, Pa.
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.
Wilmotte Inc., Raymond M., 1469 Church St. N. W., Washington 5, D. C.
Wilson & Co., G. C., 2 N. Passalc Ave., Chatham, N. J.
Wilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

N. J. Wilton Tool Mfg. Co., 925 Wrlghtwood Ave., Chicago 14, III.

Wincharger Corp., E. 7th & Division Sts., Sloux City,

Iowa.
Winchester Electronics, Incorporated, Glenbrook, Conn.
Winchester Repeating Arms Co., Div. of Olin Industries,
Inc., New Haven, Conn.
Wind Turbine Co., Tower & Antenna Div., E. Market St.
& Penna. R. R., West Chester, Pa.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
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, III.

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.

Workshop Associates Div. of The Gabriel Co., 135 Crescent Rd., Needham Helghts, Mass.

Worner Electronic Devices, Rankin, Ill. Wrlght & Sons Co., William E., West Warren, Mass. Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

Wurlitzer Co., Rudolph, The, North Tonawanda, N. Y.

X-Ray Dept. of General Electric Co., 4855 Electric Ave., Mllwaukee 14, Wis.

Yardney Electric Corp., 105 Chambers St., New York 7,

N. Y.
Yates Engineering Services, Box 67, Cranford, N. J.
Yonkeers 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.

Norwalk, Conn.
Zenith Electric Co., 152 W. Walton St., Chicago 10, III.
Zenlth Optical Co., Div. of Polan Industries, Huntington
19, West Virginia.
Zénith Optical Laboratory, 1940 Great Neck Rd.,
Coplague, N. Y.
Zenith Radio Corp., 6001 Dickens Ave., Chicago 39, III.
Zephyr Products Co., 129 E. 124th St., New York 35,
N. Y.

Zetka Television Tubes Inc., 131-37 Getty Ave., Clifton, N. J. Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y. Zophar Mills Inc., 112-130 26th St., Brooklyn 32, N. Y.

# Distributors of

# **ELECTRONIC COMPONENTS AND EQUIPMENT**

The following is a list of distributors who are selling and stocking, for immediate delivery, electronic components, instruments, audio equipment, associated apparatus and allied products. These distributors perform a valuable service to manufacturers and users by providing quick delivery to meet the urgent requirements of designers and purchasing agents. This list is provided for the convenience of our subscribers and comprises the leading electronic distributors in the United States. Distributors who are advertisers in this issue have their names boldfaced and page number reference made to their advertisements. For further information regarding the services of these distributors, kindly refer to their advertisements.

#### 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. ham 5.

ham 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., Birming-

McGowin-Lyons Hardware & Supply Co., 113-125 N. Water St., P. O. Box 1209, Mobile. Nelson Radlo & Supply Co., 263 St. Louis St., Mobile

Nolin-McInnis, Inc., 205 Commerce St., Montgomery 3.
Radio Distributing Co., 1724-5th Ave., Birmingham 3.
Radio Distributing & Supply Co., 1029 Guinee St.

Radio Distributing & Supply Co., 1029 Guinee St. Anniston.
Reid Distributing Co., 1724 Fifth Ave., N., Birmingham.
Signal Radio Supply Co., 243 E. Troy St., Dotham.
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.

gomery. 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

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.,

# ARKANSAS

Blytheville Radio Supply, 112 S. First St., Blytheville. Carlton Wholesale Radio, Inc., 109 W. 9th St., Little

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, 1222
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.

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 Dlego 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.

Fresno.

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., 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 Bernadino.
Electronic Supply Co., 149-12th St., Oakland.
Electronic Supply Co., 2615 E. Foothill Blvd., Pasadena.
Empire Electronic Supply, Inc., 37 E. Union St., Pasa-

dena.

FEDERATED PURCHASER, INC., 911 South Grand Ave.,
Los Angeles 15. ADV. PG. 203.

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 Ber-

Electronic Supply, 843 Colton Ave., San Ber-Inland mardino.

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.

ington Park. artin Distributing Co., 2303 S. Union Ave., Los

ington 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 Lankershim 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.
Papel 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 Fran-

cisco. 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 An-

geles 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

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., Sacra-

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.
Radio Products Sales, Inc., 238 West 15th St., Los Angeles

Angeles. Angeles. Styles & Engelman, 2255 Bancroft Ave., San Leandro. Thompson & Holmes, Ltd., 650 Second St., San Fran-

cisco.
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 Bivd.,

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., Glen-

dale 1.
Wenger Co., E. C., 1450 Harrison St., Oakland.
Western Electromotive Co., 5544 W. Pico Bivd., Los Angeles.
estern Electronic Supply Corp., 7007 Melrose Ave.,

Western Electronic Supply Corp., 7007 Melrose Ave., Los Angeles 38. Western Radio & Television Supply Co., 1415 India St.,

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. 0. 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

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

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-Consecticut, 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 New Haven, Inc., 77 Broadway, New Haven.
Hatry of Waterbury, Inc., 89 Cherry St., Waterbury.
Hatiy & Young of New London, Inc., 428 Bank St.,
New London.

New London.

New London.

Moses Radio Electronics Co., 54 Flower St., Hartford 5.

Regent Electronic Supply Corp., 1153 Boston Post Rd.,

Amiltord.

Sam Schwartz Co., The. 124 State Street, New Haven.
Sceli & Co., R. G., 1249 Main St., Hartford 3.
Stamford Radio Supplies, 562 Atlantic Ave., Stamford.
Universal Radio Supply, 47-53 E. Main St., New Britain.
Universal Radio Supply Co., Inc., 61 E. Main St., New

Walshaus, L. N., 1132 Norman St., Bridgeport

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.

Washington 9.

Mary Co., 705 Edgwood 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., Wash-

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., Jackson-

ville.

Cooper Radio Co., 648 Second Ave., S., St. Petersburg
East Coast Radio & Television Co., 1932 N. W. Miam
Court, Miami.

Court, Court, Co., 106 S. Franklin St., Tampa 1

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., Mlaml.
Goddard Distributing Co., 2113 S. Andrews, Fort Lauder-dala

Goddard Distributors, Inc., 1309 N. Dixie, W. Palm Grice Radio & Electronic Supplies, 358 E. Wright St.,

Pensacola. 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, Jack-

somville

sorville.

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 Distrs., Inc., 36 NE 21st St.,

Miami.

Southern Hardware & Bicycle Co., 11 S. Newman St.,

Thurow Distributors, Inc., 15-17 E. Church St., Jacksonville

Thurow Distributors, Inc., 2207 N.E. 2nd Ave., Miami. Thurow Distributors, Inc., 625 W. Central Ave., Orlando. Thurow Distributors, Inc., 739 N. Monroe St., Talla-

hassee.
Thurow Distributors, Inc., 134-136 S. Tampa St., Tampa.
Thurow Distributors, Inc., 308-10 S. Olive Ave., Box
3002, West Palm Beach.
Walder Radio & Appliance, 1809 N. E. Second Avenue,
Miaml 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. Atlanta

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.,

Electrical Wholesalers, Inc., 229
Atlanta.

Atlanta 5.

Garvin Electric Co., 69 Forsyth St., N. W., Atlanta 5.

Georgia Appliance Co., 1405 Spring St., N. W., Atlanta 5.

Georgia Appliance Co., 640 Mulberry St., Nacon.

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., 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., 1nc., 513 Arch St., P. O.

Specialty Dist. Co., 233 E. Broughton St., Savannah. Specialty Dist. Co., 233 E. Broughton St., Savannah. Yancey Co., Inc., 1500 Northside Dr., Sta D., P. O. Yancey Co., Inc., 1500 Northside Dr., Sta D., P. 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 St Idaho

#### ILLINOIS

Allen Electric Co., 18 E. North St., Danville.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7.

AULIEU NADAU OL.
ADV. PG. 507.
Alverson Sales Co., 208 E. Front St., Bloomingt
Arbuckle, J. W., 626 W. Oakland Ave., Blooming
Bowman & Co., J. G., 513 E. 75th Street, Chica
Broadwin Television & Radio, Inc., 5004-6 North Bloomington Chicago 19. North Broad-

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

ncey's Inc., 4737 W. Chlcago Avenue, Chicago 51. ago Apparatus Corp., 1735 N. Ashland Avenue, Chicago.

Chicago.
Clayton Radlo Co., 2749 N. Ashland Ave., Chicago.
Concord Radlo 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.,
Professor Rockford

Herberger Radio Supply, P. O. Box 1197, Peoria 1. Hyland Electrical Supply Co., 700 W. Jackson Blvd., Chicago

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.

Lampley 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.

ADV. PG 493.

LUKKO SALES CORP., 5024 Irving Park Rd., Chicago. ADV. PG. 493.

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 Aye., Chicago. Montgomery Ward & Co., W. Chicago Ave. & Larrabee St. 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. ADV. PG. 76.
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., Chica Radio Parts Outlet, Inc., 4305 Lincoln Avenue 18.

18.
Radolek 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.,

Star Electronic Distributors, Inc., Probabilities 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-Jimleson, Inc., 811 S. Western Avenue, Chicago

Wilkens-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.

Broadwin Television & Radio, Inc., 615 E. State St., Hammond.

Boerman & Co., J. G., 103 Lafayette Street, Valparaisa. Castrup's Radio Senice, 1014 W. Franklia, Evansvilla. Clingaman Radio Co., 814 W. Main, Peru. Commercial Sound & Radio Co., 528 E. Culfax Avenue,

South Bend.
Cosmopolitan Radio Co., 528 Washington Ave., Garg.
Fort Wayne Electronic Supply, 223 E. Main St., Fort

Wayne Co., Inc., Phillip E., 2606 W. Mushigan Street, Indianapolis 22. ranam Electronics Supply Co., 102 S. Penssyvania St., Indianapolis 4.

Hub Distributors, 106 N. Main Street, Crown Point, Lafayette Radio Supply, Inc., 408 E. North Stre Lafavette North Street Largeland Radio Supply Co., 525 Southwest St., Angola. Meunier Radio Supply Company, 524 N. Illinois Straet

hlyers Radio Supply, 115-17 W. 22nd St., Marion.
Ohio Valley Sound Co., 11 N. W. Riverside Drink.

Evansville Pembleton Laboratories, 236 E. Columbia St., Fort

Wayne 2 Distributing Co., 1013 N. Capitor Avenue, Radio

Indianapolis.
Radio Distributing Co., 432 S. Carroll Street, South Bond.
Radio Electronic Supply Co., 1419 Cameron Street, Lafayette.

Latayette.
Radio Supply of Muncie, 305 N. Madison, Muncie.
Radio & TV Dist. Co., 717 S. 5th St., Richmond.
Rinehart, Inc., 511-13 Main St., Richmond.
Rodefeld Co., 614 N. Capital Ave., Indianapolis.
Rodefeld Co., 96 W. Main St., Richmond Seybert's Radio Supply Co., 1331 Main Street, Ander-

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.,

Marren Radio Co., 1716 S. Harrison St., F Wesco Radio Parts, 428 Penn St., Evansville Williams Co., H. A., 334 5th St., Columbus. Fort Wayne.

#### 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 Rapid Gifford-Brown, Inc., 1216 Grand Avenue, Des Moines Iowa Radio Corporation, 1212 Grand Moines 9.

Ken-Els Radio Supply Co., 810 N. 9th, Fort Dodge. Midwest-Timmermann Co., 114 Western Avenue, Da

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 Trace Supply Corp., 115 W. Second, Ottumwa.
Ray-Mac Supply Co., 613 Water Street, Waterloo.
RCA Victor Distributing Corp., 1235 W. 5th Str 5th Street.

Davenport.
Sidles Co., 912 Locust Street, Des Moines.
Sioux City Radio & Appliance Co., 210 W. 7th Street,

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 Armateur Radio Supply, 916 quincy Street, Topeka.
Armateur 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

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, Wichlta.
Western Distributors, 227 N. Santa Fe, Salina.

# KENTUCKY

Paducah

LOUISIANA

Apex Distributing Co., 506 York St., Newport. Ashland Radio Supply Co., 2125 Winchester Ave.,

Ashiand.

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.

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

Louisville.
Radio Equipment Co., 480 Skain Avenue, Lexington 34.
Universal Radio Supply Co., 533 S. Seventh St., Louiswille 3.
West Kentucky Electronic Supply Co., 1205 Broadway,

Allen Supply Co., Wm. B., 1601 Orleans St., New Orleans 16.

Autiotronics Supply Co., 2100 Benefit St., New Orleans

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., 616 Spring St., Shreveport.

Koelemay Sales Co., 220 Crockett St., Shreveport.

Louisiana Radio & Television Dist., 1042 N. Boulevard, Baton Rouge.

Baton Rouge. Lynch & Co., Inc., S. H., 832 Baronne St., New Orleans. Ole 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.
Schneider & Sons, Inc., F. H. 215 Lake St., Lake Providence.

Southern Radio Supply, 1900 Tulane Ave., New Orleans.

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.

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, Baltimor Dealers Radio Supply Co., 219 Highland Ave., Salisbury.

Kann-Ellert Electronics Inc., 9 South Howard Street Baltimore.

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.
DeMAMBRO RADIO SUPPLY CO., INC., 1111 Commonwealth Ave., Boston 15. ADV. PG. 517.
DeMAMBRO RADIO SUPPLY CO., INC., 222 Summer St., Worcester. ADV. PG. 517.
Eastern Co., 620 Memorial Dr., Cambridge 39.
Electrical Supply Corp., 1739 Massachusetts Ave., Cambridge 40.

40. bridge

Flint Radio Co., 73 Troy St., Fall River. Gelotte Claus, Inc., 1290 Massachusetts Ave., Cambridge. Gerber Radio Supply Co., 1900 Columbus Ave., Rox-Gerber Ra bury 19.

& 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.

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

Radio Maintenance Supply Co., 80 Thomas S

Worcester.
RADIO SHACK CORP., 167 Washington St., Boston. ADV.

PG. 119.
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

field.

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.

Willett Radio Service Inc., 11 Court St., Natick. Pittsfield.

#### MICHIGAN

Brenklight Projection Co., 6545 St. Antione, Detroit.
Bursma Radio Co., 853 Grandview Ave., S. W., Grand

Bursma Radio Co., 033 Grand River Ave., Detroit 26.
Rapids.
Duffy & Co., M. N., 2040 Grand River Ave., Detroit 26.
Earle Appliance Distrs. Inc., 814 First Ave., North

Products Sales Co., 427 E. Michigan Ave.,

Lansing 29.
Electronic Supply Corp., 94 Hamblin St., Battle Creek.
Electronic Supply Corp., 906 E. Michigan Ave., Kalama-

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.,
Muskagon

Ferguson Radio Supply Co., 022 W. Battlinder, Deboth St., 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, 525 Ottawa Ave., W. Grand Rapids.
Morley Brothers, 115-129 N. Washington Ave., Saginaw.
Northwest Radio of Michigan, 435 Tamarack St., Laurlum.
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.,

Radio Electronic Supply Co., 503 Control of Control of

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.
Wedemeyer Electronics Supply Co., 213-217 N. Fourth
Ave., Ann Arbor.

Ave., And Wedemeyer Ann Arbor. ver 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

Elliott & Hanson Radio & TV Supply, 13 SW. 4th St., Rochester.

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.

apolis. Maintenance Co., 30161/2 27th St., S., Minne-

Radio Maintenance Co., 301642 27th St., S., Millineapolis 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, Jack-

Son.
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. Louls.
Brotherson M., 515 N. Beyers St., Joplin.
Brown Radio Co., Tom, 3924 Washington Ave., St. Louls.
Burstein-Applebee, 1012 McGee St., Kansas City.
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 & Wainut 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, 3117 Washington Blvd., St.
Louis.

Louis.

Potter Radio Co., 1312 McGee St., Kansas City 6.
Radiolab, 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., Spring-

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

Van Sickle Radio Co., 1113 Pine St., St. Louis 1.

#### MONTANA

Electronic Supply Co., 214 Eleventh St., Billings. Lindgren Co., 109 Central Ave., Great Falls. Northwest Dsitributors, S., 509 Higgins Ave., Missoula. Northwestern Auto Supply Co., 420 N. Broadway, Bill-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

# NEBRASKA

Hicks Radio Co., 1422 "0" 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 Appllance Co., 17 St. Mary's St., Omaha.

Radio Equipment Co., 282-22 Farnam St., Omaha.

Sidles Co., 508 S. 19th St., Omaha.

# NEVADA

Metcalf'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.
DeMAMBRO RADIO SUPPLY CO., INC., 1308 Elm St.,
Manchester. ADV. PG. 517.
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.
ADV. PG. 203.
General Radio Co., 207 N. Broadway, Camden.
General Radio Supply Co., 600 Penn St., Camden.
Hallmark Electronic Corp., 592 Communipaw Ave.,
Jersey City. Bergen. Apollo Di

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 East Orange.

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.

Bank. Mytelka & Rose, Inc., 1020 Broad St., Newark. Nidisco-Cliffside, Inc., 658 Anderson Ave., Cliffside. Nidisco-Jersey City, Inc., 713 Newark Ave., Jersey City

Nidisco Passaic, Inc., 294 Passaic St., Passaic. Nidisco-Trenton, Inc., 126 S. Warren St., Trenton. O'Loughlin & Co., Inc., T. A., 90 Washington St.,

Radio Electric Service Co. of Pa., Inc., 452 N. Albany Ave., Atlantic City. Radio Elect. Serv. Co. of Pa., 513-515 Cooper St., Camden.

Camden. Radio Wire Telev. Inc., 24 Central Ave., Newark. Teldisco, Inc., 444 William St., E. Orange. William Radio Supply Co., 1861 Woodbridge Ave., New

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,

#### NEW YORK

Adirondack Radio Supply, 54 Market St., Amsterdam. Admiral Corp. of New York, 621 W. 54th St., New

Arace Electronic Distributors, 25-27 Henry St., Kings-

ARCO ELECTRONICS, INC., 103 Lafayette St., New York.

ADV. PG. 396.

ARROW ELECTRONICS, INC., 82 Cortlandt St., New York I. ADV. PG. 176.

Baldwin-Hall, Inc., 475 Oswego Blvd., Syracuse.

Barclay-New York, Inc., 139 Cedar St., New York.

Barker Roses & Kimball, Inc., 511 Baldwin St.,

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.,
Lew York.

Rew 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.
CHANROSF RADIO DISTRIBUTORS INC. 170.16

Middletown.

CHANROSE RADIO DISTRIBUTORS, INC., 170-16
Jamaica Ave., Jamaica 3. ADV. PG. 386.

Chief Electronics, Inc., 248 Washington St., Newburgh.

Chief Electronics, 104 Main St., Poughkeepsie.

Commercial-Radio-Sound Corp., 570 Lexington Ave.,

New York 25.

Continental Theatre Accessories Inc., 325 W. 44th St.,

New York.
Crosley Distributing Corp., 559 West 35th St., New York.

York.

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.
Dymac, 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.

Electronic Laboratories & Supply Co., 1413 Oriokali, Co., West, Utica 4.

ELECTRO-TECH EQUIPMENT CO., INC., 55 Lispenard St., New York 13. ADV. PG. 354.

Electronic Supply, 40-14 Greenpoint, Long Island City. Electronic Wholesalers, 5047 Broadway, New York. Erskine-Healy, Inc., 420 St. Paul St., Rochester. Federal Radio Sales Supply Co., 188 State St., Binghamton. hamton.

FEDERATED PURCHASER, INC., 66 Dey St., New York

FEDERALED PURCHASER, 1800, 06 Dey St., Rev. 1918.
7. ADV. PG. 203.
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.

Albany,
Fulton County Distr. Co., 14 Bleeker St., Gloversville.
Gem Electronics Distributors, Inc., 236 Broadway,

Gem Electronics Distributors, Inc., 230 bloaunay, 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.

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,

HARRISON RADIO CORP., 225 Greenwich St., New York

7. ADV. PG. 85.
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.

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. 412.
Hunter Electronics, 233 East Ave., Rochester.
Interstate Appliance Co., Inc., 600 Broadway, New York
12.

Island Radio Distributors, 412 Fulton Ave., He Jacobs, Rene M., 601 W. 26th St., New York. Hempstead.

Johnson Radio & Elect. Equip. Co., 119 Hunt Rd., Johnson Radio & Elect. Equip. Co., 119 hunt Ru.,
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. ADV.
PG. 529.
Machlett & Son, E., 220 E. 23rd St., New York 10.
Masline Radio & Electronics, 192-196 Clinton Ave.,
Rochester 4.

Masine Madio & 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. Prris Distributing Co., Inc., 1153 W. Fayette St., Morris

Morris Distributing Co., Alley, Binghamton, Birghamton, Morris Distributing Co., 412 S. Clinton St., Syracuse. National Radio Distributors, 1348 Southern Blvd., Bronx. National Radio Parts Dist. Co., 611 New York Ave., Brooklyn 3.

National Radio Parts Dist. O., S. 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 Radio & Parts Co., 1518 Main St., Niagara

Niagara Radio Supply Corp., 160 Greenwich St., New York. Norman Radio Distributors, Inc., 94-29 Merrick Rd.,

Jamaica 5. 0 & W Radio Co., 141 Cedar St., New York. Peerless Electronic Distributors Corp., 76 Willoughby St.,

Brooklyn.
Perless Radio Distributors, Inc., 92-32 Merrick Rd.,

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.

Buffalo 3.
Radio Equipment Corp., 1363 Pierce Ave., Niagara Falls.
Radio Supply Co., 200 Walton St., Syracuse.
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.

cuse. Roberts & O'Brien, 714-716 Park Ave., Syracuse 4. Rochester Radio Supply Co., 114 St. Paul St., Roches-

ROTARY ELECTRONIC SALES, 10 Grace Ave., Great Neck. ADV. PG. 523.
Sanford Electronics Corp., 157 Chambers St., New

Neck. AUV. 16.
Sanford Electronics Corp., 157 Chambers St., New York 7.
Schwartz & Son, Morris, 710 Broadway, Schenectady. Slate & Co., 2755 Webster Ave., New York. Stage, Roy C., 265 Erie Blwd., 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. 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. Strong Television Corp., 286 Main St., Farmingdale. Stun Radio & Electronics Co., Inc., 122-124 Duane St., New York 7.

Standard Parts Corp., 277 N. Frankin St., Termingdale.
Strong Television Corp., 286 Main St., Farmingdale.
Sun Radio & Electronics Co., Inc., 122-124 Duane
St., New York 7.
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.

ADV. PG. 321.
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.

Yaeth Electric Co., 35 Genesee St., Utica.

Vermont Hardware Co., Inc., 40 E. Main St., Malone.

Vim 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. ADV. PG. 491.

WESTERN INTERNALITIONAL CO., 55 Vesey St., New York 7. ADV. PG. 491.
Wilco Radio Distributors, 383 E. 138th St., New York.
Winchell, C. A., 37 Central Ave., Cortland.
Yonkers Electronic Supply, 541 Nepperhan Ave., Yon-

# NORTH CAROLINA

Carolina Radio Equipment Co., Inc., 105-107 E. Martin Carolina Radio Cyclinicia St., Raleigh.
Dalton-Hege Radio Supply Co., 340 Bookstrown Ave., Winston-Salem.
Dixie Radio Supply Co., 715 W. Moorehead St., Char-

lotte.
Eastern Radio Supply Co., 532 Hay St., Fayetteville.
Freck Radio & Supply Co., Inc., 38 Biltmore Ave.,

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 Distrubuting Co., 419 NP 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.
Quanrud, Brink & Riebold, 122 First St., Bismarck.
Radio Equipment Co., 624 Second Ave., N., Fargo.

Akron Radio & TV Parts, 75 N. Case, Akron 5.
Armstrong Radio Supply, 1261 Cleveland Ave. N.,
Canton 3.

Bell Radio Supply, 527 N. Main St., Marion.
Bletzacker Electronics, Inc., 135 W. Chestnut St., Lan-

caster.

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.
Chillicothe Hdwe. & Supplies, 21 E. 2nd St., Chillicothe.
Chambers Electronic Supply Co., Inc., 1667-71 Central
Parkway, Cincinnati. Parkway, Cincinnati.

D & R Radio Supply Co., Inc., 156 S. 3rd St., Steuben-

Parkway, Uniciliate.

D & R Radio Supply Co., Inc., 156 S. 3rd St., Steubenville.

Eberle's Radio Supply, 522 W. Main St., Springfield.

El-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.

Howard's Electronic Supply, 135 17th St., Toledo 2.

Hughes-Peters, Inc., 1128 Sycamore St., Cincinnati.

Hughes-Peters, Inc., 3100 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.

Toledo 2. arietta Radio & Elect. Supply, 211 Second St., Marietta.

Marietta.
Martin Co., M. H., 1118 Lincoln Way, Massillon.
Mytronic Co., The, 121 W. Central Pkwy., Cincinnati.
Morrison's Radio Supply, 331 Center St., Astabula.
Northern Ohio Laboratories, 2073 W. 85th St., Cleve-

Northwestern Radio Co., 116 W. Spring St., Lima.
Ohio Appliance Inc., Daylight Bldg., 804-808 Sycamore
St., Cincinnati 2.

Onto 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., Cleve-

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.

mouth.
Srepco, Inc., 135 E. 2nd St., Dayton 2.
Standard Radio Springfield, Inc., 119 W. Main St.,

Standard Radio Springfield, Inc., 119 W. Main St., Springfield.
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

Muskogee Electronic Supply Company, 231 Court St., Muskogee. Clahoma Theatre Supply Co., 628 W. Grand Ave.,

Oklahoma City.
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. Bargelt 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

land 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., 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.,

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. Stubbs Electric Co., 33 NW Park Ave., Portland 9
Tracey & Co., Inc., 937 NW Gilsan, Portland 9.
United Radio Supply Inc., 179 W. 8th St., Eugene
United Radio Supply, Inc., 22 NW 9th Ave., Portlar
Walker Co., Verl G., P. O. Box 1586, Medford.

#### PENNSYLVANIA

A. C. Radio Supply Co., 1539 W. Passyunk Ave., Phila-

delphia 45.
G. Radio Parts Co., 3515 N. 17th St., Philadelphia 40.

phia 40.

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., 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.

Barror's Radio Supplies, 116 East Jefferson St., Butler.

Bearer Electric Supply Co., 1017 Fifth St., New Kensington.

ton.
Big Boys Auto Parts Co., 123-129 S. Second, Sunbury.
Buss Radio Electric Supply, 61-63 E. Broad St., Beth-

Buss Radio Electric Supply, 61-63 E. Broad St., Beth-lehem.
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., 251 S. Main St., Wilkes-Barre.
Duncombe Co., J. V., 1011 W. 8th St., Erie.
Elliott & Waddington, 116-118 N. Mercer St., New Castle. Castle

Emerson Radio of Pa., Inc., 223-225 N. Broad St., Phila-

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. ADV. PG. 203.
FEDERATED PURCHASER, INC., 925 Northampton St.,
Easton. ADV. PG. 203.
Fisher Scientific Co., 711-723 Forbes St., Pittsburgh 19.
Fox, John, 2121 Market St., Philadelphia 4.
General Electronics Distributors, Inc., 120 E. Ottermans St., Greenburg.
General Radio & Electronics, 287 S. Main St., Wilkes-Barre.

General Radio & Electronics, 207 S. Manuscon, 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.

delphia 4. ctronic Research Labs., 715-19 Arch St., Phila-

Luckenback & Johnson, Inc., 1034 Chestnut St., Allentown.
& H Sporting Goods Co., 722 Market St., Phila-

delphia 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 Cortic

Motorola-Philadelphia Co., 120 S. 30th St., Phila-Electronic Supply Co., 758 N. Locust St.,

Moyer Electronic Supply Co., 758 N. Locust St., Hazelton. Moyer Electronic Supply Co., Inc., 330 E. Norwegian St.,

Pottsville. Electronics Parts Co., 5303 Frankford Ave., Phila-

delphia. Pep Boys, 32nd & Allegheny Ave., Philadelphia 32. Phipps Auto Stores, Dean, Harrison & Valley S

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 German-town 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. Relating Mosen & Co., Raymond, 32nd & Walley Rosen & Co., Raymond, 32nd & Walley Rosen & Co., 1007 Arch St., Philadelphia. Rumsey Electric Co., 1007 Arch St., Philadelphia. Scranton Radio & Television Supply Co., 519-521 Mul-

berry St., Scranton 2.
cott Co., Charles B., 119 Franklin Ave., Scranton.
laron 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.

Distributing Co., 5124 Liberty Ave., Pitts-

Equipment Sales Co., Inc., 1505 Race St., Philadelphia

delphia.
Tvdings Co., 5800 Baum Blvd., Pittsburgh 6.
Tvdings Company, Inc., 305 Morgantown St., Uniontown.
Wall, R. B., 58 East St. Wilkes-Barre.
Warren Radio, Inc., 1125 State St., Erie.
Wille, Eugene G., 218 S. 11th St., Philadelphia.
Williamsport Radio Supply, 518 W. Third St., Williamsport 23

port 23 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., Erle. Zimmerman Wholesalers, 55 Morgantown St., Uniontown.

#### RHODE ISLAND

Dandreta Co., Wm., 129 Regent St., Providence. DeMambro 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.,

Carolina Radio Supply Co., 1715 Main St., Columbia.
Dixie Radio Supply Co., 22 Richardson St., Greenville.
Dixie Radio Supply Co., 22 Richardson St., Greenville.
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., Charles-

# SOUTH DAKOTA

Burghardt Radio Supply, 602 S. Main St., Aberdeen. Burghardt Radio Supply, 12 N. Broadway, NW, Water-

town.

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,

Chemcity Radio & Electric Co., 12 Emory Park, Knox-ville 17. Kingsport.

ville 17.
Curle Radio Supply, 825 Cherry St., Chattanooga.
Currey's 109-16th Ave., Nashville.
Electra Distributing Co., 1914 West End Ave., Nashville 4. Electronic Supply Corp., 350 East Scott St., Hahn

Knoxville Interstate Hardware Co., Inc., Bristol.
Keith-Simmons Co., Inc., Cummins Station, Nashville.
Lavender Radio Supply Co., Inc., 1012 Union Ave.,

Memphis. Inch & Co., Inc., S. H., 1049 Union, Memphis. oclung & Co., Inc., C. M., 501 W. Jackson St., Knoxville 7.

McGregor's Inc., 1071 Union Ave., Memphls 3.
Mills-Morris Co., 171-175 S. Ludley St., Memphls 1.
Orgill Brothers & Co., 10-56 West Calhoun Ave., Mem-

& Appliance Corp., 4 Cummins Station, Nash-Radio & Appliance Corp., 4 Cummins Statlon, Nasilville 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., Knox-Chattanooga.

Rush Co., L. K., 103 Highland Ave., Jackson.
Shobe, Inc., 1195 Union Ave., Memphls.
Specialty Distributing Co., Inc., 709 Chestnut St.,

W & W Distributing Co., 677 Madison Ave., Memphis. Woodson & Bozeman, Inc., 482 Union Ave., Memphis. Chattanooga.

#### TEXAS

Adleta Co., 1914 Cedar Springs at Akard, Dallas, All-State Distributing Co., 2407 Ross Ave., Dallas 1. Amateur Headquarters & Supply Co., 828 Brooklyn Ave.,

San Antonio.

Amateur Radio Supply Co., 510 Broadway, 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.

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., 1350 E. Medi

Electronic Equipment & Engineering Co., 1152 E. Madi-

son Sts., Brownsville.
Electronic Equipment & Eng. Co., 805 S. Staples St.,
Corpus Christi.

Corpus Christi.
Fort Worth Radio Supply Co., 1201 Commerce St., Fort Worth.

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.

Houston.

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., 2101-3 Pacific Ave., Dallas.
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.
Montaque Radio Distributing Co., 760 Laurel St.,

Montague Radio Distributing Co.,
Beaumont.
Mooney Radio Supply Co., 1635 Huff, Wichita Falls.
R & R Electronic Co., 107 N. First St., N. Walnut.

R & R Electronic Co., 416-18 W. Tenth, Amarillo 1.
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

Radio & Television (a.c. 50, Antonio 2.
Reeves Radio Supply, 720 N. Stanton St., El Paso.
Rio Supply Co., PO Box 168, McAllen.
"Scooter's" Radio Supply, 509-11 Commerce St., Fort

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

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.

Wolf Company W. G., 500 San Francisco St., El Pare.

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 So. 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

Radio Supply Co., 157 Motor Ave., Salt Lake City.

#### VERMONT

Hagar Hardware & Paint, 164-170 St. Paul, Burlington. @akman Electric Supply, Inc., 12 Wales St., Lawrence. 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, Win-

Chester.

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. etersburg.

Winfree Supply Co., 800 W. Cary St., Richmond 21.
Womack Radio Supply Co., 502-504 Craghead St.,

Wyatt-Cornick Distributors, Inc., 951 W. 21st St., Norfolk Wyatt-Cornick Inc., 14th & Grace Sts., Richmond 19.

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.,

Columbia Electric & Mfg. Co., South 123 Wall St., Spokane 8.
C & G Radio Supply, 2502 Jefferson Ave., Tacoma 2. Garrerson 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.

Spokane.

Pringle Radio Wholesale Co., Rte 5, Box 750B, Everett.

Pringle Radio Wholesale, 417 Klng St., Wenatchee.

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

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 8. 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. 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.,

General Electronics Distributors, Inc., 26 Jenth St., Wheeling.
Hicks Radio Supply Co., 10 Virginia St., E., Charleston. King & Irwin, Inc., 314 Eleventh St., Huntington. Meyers Electrs., Inc., 813 Bluefield Ave., Bluefield. Mountain Electr. 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., MIIwaukee 3.
Appleton Radio Supply Co., 1217 N. Richmond St., Appleton.

Central Radio Parts Co., 1723 W. Fond du Lac Ave., Milwaukee 5. Electro-Pliance 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., Mil-

Neslo Electronic Distributors, 308 N. Chestnut St., Green Northern

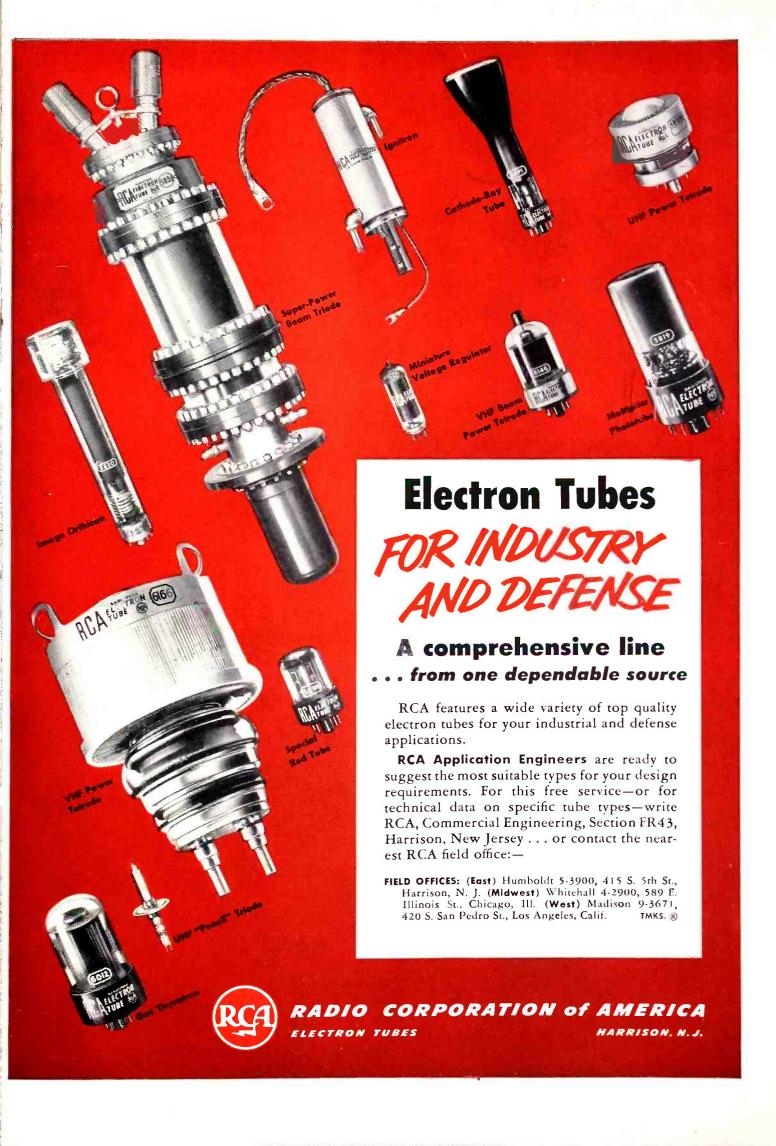
Electrical Distributors, 708 S. Broadway, Green Radio & Telev. Co., 708 So. Broadway, Green

Northern Radio & Telev. So.,
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., Wassau.
S. M. Supply Co., 409-11 S. Barstow St., Eau Claire.
Satterfield Radio Supply Co., 326 W. Gorham St.,
Madison.

Satterfield Radio Supply Co., 326 W. Gorham St., Madison.
Seemuth Distributing Div., Electro-Pliance 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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