# electronics

# Annual BUYERS' GUIDE ISSUE and

MATERIALS SECTION

#### MID-MONTH JUNE 1949

PRICE . TWO DOLLARS

A McGRAW-HILL PUBLICATION • 330 WEST 42nd ST. • NEW YORK 18, N.Y.

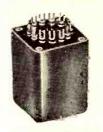
# **COMPONENTS FOR EVERY APPLICATION**



LINEAR STANDARD High Fidelity Ideal



HIPERM ALLOY



**ULTRA COMPACT** High Fidelity . . . Compact Portable . . . High Fidelity



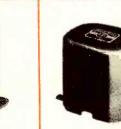
OUNCER Wide Range . . . 1 ounce



SUB OUNCER Weight 1/3 ounce



COMMERCIAL GRADE Industrial Dependability



SPECIAL SERIES Quality for the "Ham"



**POWER COMPONENTS** Rugged . . . Dependable

**TOROID FILTERS** 

Any type to 300KC



VARITRAN Voltage Adjustors

**MU-CORE FILTERS** 

Any type 1/2 - 10,000 cyc.





**MODULATION UNITS** 

One watt to 100KW

EQUALIZERS Broadcost & Sound



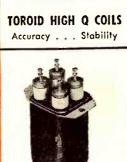
VARIABLE INDUCTOR Adjust like a Trimmer



PULSE TRANSFORMERS For all Services



VERTICAL SHELLS Husky . . . Inexpensive



HERMETIC COMPONENTS Ceramic Terminals



REPLACEMENT Universal Mounting



PLUG IN ADAPTER

Impedance Matching

**STEP-DOWN** Up to 2500W . . . Stock



FOSTERITE

Grade 3 JAN Components

LINE ADJUSTORS Match any line voltage



CABLE TYPE

CHANNEL FRAME Simple . . . Low cost



# electronics BUYERS' GUIDE

# JUNE MID-MONTH • 1949

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# FOREWORD

This is *your* Buyers' Guide—its contents and format determined by extensive survey among the subscribers to ELECTRONICS.

It is an *extra*—a bonus edition designed for service at your elbow throughout the next twelve months.

In it we are publishing the most complete directory, as to diversity of products, which has yet been presented.

In addition we have done an earnest job of preparing editorial reference material designed to help you repeatedly in your work.

Many advertisers have seen fit to utilize these pages to describe and catalog their products. It is our hope that this combination of buying-source listings, product advertising and reference material constitutes a service which will further strengthen our position with you, the subscriber.

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and a second and a second a se Server Server **NOW** is the time . . . . TO INCLUDE THE 1950-51 **ELECTRONICS BUYERS' GUIDE** IN NEXT YEARS' ADVERTISING BUDGET and a second AMARIA

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Union Carbide & Carbon Corporation....

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# GENERAL SE ELECTRIC

# ELECTRONIC RESEARCH, ENGINEERING & 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.



**TYPE YPD-2** 

#### **REGULATED POWER SUPPLY**

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

SPECIFICATIONS	OTHER UNITS AVAILABLE
DC Voltage Output   • YPD-	
250-450 v • PS-4 DC Current Output	Dual power supply, each unit supplying 250- 400 v. Current: 0-400 ma max
0-300 ma • 45T1	A1: 180-300 v. Current: 0-60 ma.



#### SQUARE WAVE GENERATOR TYPE YGL-1

- Wide frequency range: 5 to 125,000 cycles.
- Output voltage 0-75 volts.
- Low output impedance.

Rise time .3 microsecond.



#### CAPACITOMETER TYPE YCL-1

G-E r-f capacitometer is a convenient, self-contained unit for rapid and extremely accurate measurement of

- Capacity: 0-20,000 micromicrofarads. Inductance: 0-10,000 microhenries.

### **G-E INDUSTRIAL TEST EQUIPMENT**

#### 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.

Continuous counting rate up

Direct reading with decimal

• Two scales of ten for sepa-

rate or cascade operation.

ond.

indication.

to 5 million counts per sec-

#### INDUSTRIAL TUBE ANALYZER This portable equipment is designed so that non-technical personnel can quickly and efficiently determine the performance of YTW.

mercury vapor and gas rectifier 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.



bers.

TYPE YKS-1 RADIO FREQUENCY RESISTANCE METER A direct-reading precision instrument for rapid, accurate measurement of RF resistance of radio components and circuits. Operates over exceptionally wide range of 50 kc to 80 mc, and from 0 to 200 ohms. Adaptable for measurement of such constants as RF resistance of ordinary coils, capacitors, transmission lines and antennas, or even complex combinations of such devices. F, C and R are read directly. Reactance and Q determined from simple nomograph.



#### DISTORTION AND NOISE ANALYZER TYPE YDA-1

A precision instrument designed especially for broadcast and laboratory use. Whenever information is required on distortion, audio noise, or hum, the YDA-1 will provide accurate measurement down to extremely low levels.

TYPE ST-2A



TYPE ST-2A - A new, general purpose oscilloscope. Wide frequency response-from DC to 500 kc, and with gradually reducing response to higher frequencies. High sensitivity. Sturdy construction. Voltage calibrator, Z-axis input, and DC input coupling to both amplifiers.

> Send for This FREE CATALOG!

Electronic TEST EQUIPMENT Doors and Game CRYSTALS -----

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



TYPE YNA-4



of two in selfcontained unit that cuts installation and maintenance to a minimum, Permits flexible in-

stallations for industrial counting, interval timing, repeat cycling, photographic printing.

- High Speed . Up to 200 KC
- Adequate Resolution . . . 5 microseconds

WRITE G-E SPECIALTY DIV., ELECTRONICS PARK, SYRACUSE N. Y., for Complete Details or Bulletins

An extremely high-quality, self-balancing electrostatic potentiometer. A standard 3inch meter provides direct measurement in two ranges — 50 and 250 mr for rapid, accurate reading of "pencil" type pocket ionization cham-

# GENERAL (SE) ELECTRIC

### G-E WELDED GERMANIUM DIODES

ACI

FOUR TYPES of electronic rectifiers of interest to initial equipment manufacturers, servicemen, experimenters, hams. The G-E Welded Germanium Diode replaces such elements as 6H6, 6AL5 tubes, copper oxide, selenium, and silicon rectifiers.

### WELDED CONTACT LOW SHUNT CAPACITY INSULATING CASE

- 1. WELDED CONTACT provides greater shock resistance, improved electrical stability.
- 2. LOW SHUNT CAPACITY: .8 mmfd. max. for all types.
- 3. INSULATING CASE simplifies mounting. Mechanically sturdy.
- 4. SMALL SIZE for "close fits." Needs no more space than a 1/4 watt resistor.
- 5. LONG LIFE: an estimated minimum average life of 10,000 hours.
- 6. NO HUM no heater connections no heating power - no heat.
- 7. IMPROVED RECTIFICATION CHARACTERISTICS Has much sharper bend in current/voltage curve than Thermionic Tube.

DESIGN	ATION	MAX. INVERSE CURRENT (M.A.)	MIN. FORWARD CURRENT (M.A.)	MAX. SHUNT
RMA	G.E.	AT -50V	AT +1V	(MMFD)
IN51	G5C	1.667	2.5	0.8
IN48	G5	.833	4.0	0.8
IN 5 2	G5D	.15	• 4.0	0.8
IN63	G5E	.05	4.0	0.8

#### MAXIMUM RATINGS-(at 25° C.)

DESIGN	ATION	PEAK INVERSE	AV. RECTIFIED CURRENT	PEAK RECTIFIED CURRENT	MAX. SURGE CURRENT FOR 1 SEC.	AMBIENT
RMA	G.E.	VOLTAGE	(M.A.)	(M.A.)	(M.A.)	RANGE
IN51	GSC	50	25	100	300	-50 to +80° C
IN48	G5	85	50	150	400	$-50 \text{ to } + 80^{\circ} \text{ C}$
IN52	G5D	85	50	150	400	$-50$ to $+80^{\circ}$ C
IN63	65E	125	50	150	400	$-50$ to $+80^{\circ}$ C

For complete information, see your local G-E representative, or write: General Electric Company, Specialty Division, Electronics Park, Syracuse, N.Y.

### **G-E QUARTZ CRYSTAL UNITS**

G-E METAL SHELL (Hermetically Sealed) SERIES: For use where long life, under severe atmospheric conditions, is essential. Four shell sizes are used: 6J5, 6N7, 6L6, 6L6 (cut off). Wherever space conditions permit, the metal tube type of crystal is recommended.

G-E PLASTIC CASES — To withstand atmospheric conditions less severe than those encountered by metal tube types. Space requirements are less, and, wherever practical, pin diameters correspond to octal bases.

METHOD OF MOUNTING CRYSTAL PLATE -Quartz crystals are usually mounted in one of four ways: pressure mounting, free air gap mounting, edge spring mounting, wire mounting. General Electric is prepared to supply the type of mounting best suited to your requirements. Complete details available in the G-E Quartz Crystals Catalog, available on request.

### LARGE CONTRACT USERS OF CRYSTALS **GOVERNMENT AGENCIES** MANUFACTURERS OF ELECTRONIC EQUIPMENT

The Specialty Division, General Electric Company, devotes the majority of its crystal manufacturing facilities to large production runs of crystals. We will appreciate an opportunity to quote on your requirements.

#### **G-E THERMOCELL CRYSTAL UNITS** FOR PRECISE FREQUENCY CONTROL

Exclusively G-E, Thermocell units are of metal vacuum-tube type construction and therefore truly hermetically sealed. Four types are available:



G308 - for standard AM broadcast use G31 - for shart-wave broadcast use G63 — for FM station transmitters G66 - for FM car transmitters



- Low heat loss Hermetically sealed
- Short warm-up time Standard octal base
- Ruilt to last no ornanic materials
- Sturdy bi-metallic strip for less chatter Extremely high temperature stability
- Heaters wound for 6.3 volt operation
   Neat appearance



3

#### CAT. 32C401-G64A



This is one of a variety of **G-E Quartz Crystals and** is designed for operation on fundamental, third, and fifth overtones.

#### FREQ. TOL. AT REF. TEMP.

5-12 M.C.	±.002 %
2-50 M.C.	±.003 %
50-75 M.C.	±.005 %

#### TEMP. COEFF. PER °C.

.00005 % per °C. or less 5-12 M.C. .0001 % per °C. or less 12-50 M.C. .0002 % per °C. or less 50-75 M.C.

WRITE G-E SPECIALTY DIV., ELECTRONICS PARK, SYRACUSE, N. Y., For Complete Details or Bulletins

# GENERAL (96) ELECTRIC

### DEFLECTION YOKE 77J2 and 77J6

\*Provides efficient magnetic deflection of direct-view picture tubes of all sizes from Type 8AP4 to Type 16AP4.

#### \*Electrical Ratings: Inductance (1000 Cycles, app.) 8.6 Mh (horizontal), 46 Mh (vertical). Resistance (app.) 18 Ohms (horizontal), 60 Ohms (vertical).

WIDTH/LINEARITY

**CONTROL 77J4** 

\*Same coil may be used as

either o horizontal size or

linearity control.

\*Electrical Ratings:

#### **COMPONENT PARTS Electronics Park, Syracuse, New York**

#### **G-E TELEVISION COMPONENTS**

**G-E Television Components feature Focus-Deflection** Assembly, Horizontal Output Transformer and Ion Trap. These G-E Television Components, the result of eleven years of research and experimentation, play a vitally important part in providing clearly-focused, precise television reception.

### FOCUS COIL 77J3

\*Combines effects of an Alnico 6 permanent magnet and an electromagnet to provide focus with a minimum of circuit energy. TYPICAL OPERATION CONDITIONS

Focus Coil Part No.	Tube Type	<mark>Anode</mark> Voltage	Position	Focus Current	Res.
77J3-1	10FP4	1169		30 Ma.	1300
77J3-2	12KP4	1169	Center of Axial Slot on Deflection	30 Ma.	1300
77J3-2	16AP4	13KV		40 Ma.	1300
77J3-3	16AP4	13KV	Yoke Bracket	180 Ma.	55
77,17	10FP4	8KV		30 Ma.	960

### ION TRAP

\*Two Types: Single Magnet, Double Magnet.

\*Outstanding Feature: Can be clamped over tube neck. No need to slide over tube base.

### HORIZONTAL SWEEP TRANSFORMER 77,11

\*Operates efficiently with direct view picture tubes of all sizes from the Type 8AP4 to Type 16AP4.

\*Performance makes possible 60° deflection with 13 KV useable high voltage output when driven by a single 6BG6-G (350 V.B+) in recommended circuits.



#### **G-E VARIABLE RELUCTANCE PICKUP**

Available in leading makes of record changers. Carefully designed to provide the highest quality reproduction. The various features include

NEGLIGIBLE NEEDLE TALK . LOW NEEDLE SCRATCH LOW DISTORTION . LOW RECORD WEAR LOW MECHANICAL IMPEDANCE UNAFFECTED BY CLIMATIC CHANGES IN TEMPERATURE OR HUMIDITY HIGH COMPLIANCE OF THE STYLUS ASSEMBLY

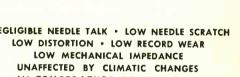
G-E SPEAKERS With aluminum foil base voice coils and Alnico 5 SPEAKER CHARACTERISTICS

6	Catalog. No.	Cone Size {Inches}	Alnice V Mag. Wt. (Ovacas)	VC Imp. (Okms)	VC Dia. (Inches)	Max. Power (Watts
	\$-400D	4	1.3	3.2	9/16	4
	S-401D	4	1.92	3.2	9/16	4
	S-402D	4	1.0	3.2	9/16	4
	S-403D	4	.68	3.2	9/16	4
	\$-500D	5	1.3	3.2	9/16	4
	S-503D	5	.68	3.2	9/16	4
	S-525D	51/4	1.3	3.2	9/16	4
	S-526D	51/4	1.0	3.2	9/16	4
1980 - COR	S-527D	51/4	.68	3.2	9/16	4
A DECK STORE	\$-535D	51/4	2.98	3.2	3/4	
9780483	S-545D	51/4	1.92	3.2	9/16	4
	S-625D	6½	1.3	3.2	9/16	4
	S-626D	61/2	1.0	3.2	9/16	4
	S-627D	61/2	.68	3.2	9/16	4
	\$-650D	61/2	2.98	3.2	3/4	
VI COMPANY	5- <mark>6510</mark>	6 ¥2	2.15	3.2	3/4	
	5- <mark>652D</mark>	61/2	1.47	3.2	3/4	
	S-7000	6x9	2.98	3.2	3/4	
	S-702D	6x9	2.15	3.2	3/4	8
	S-703D	6x9	1.47	3.2	3/4	8

Catalog No.	Cone Size (Inches)	Alnico V Mag. Wt. (Ounces)	VC 1mp. (Ohms)	VC Dia. {Inches}	Max. Power (Watts)
S-800D		2.98	3.2	3/4	8
S-802D		2.15	3.2	3/4	8
S-803D	8	1.47	3.2	3/4	8
S-810D		6.8	3.2	1	12
S-811D		4.64	3.2	1	12
S-812D		3.16	3.2	1	12
S-818D		6.8		1	12
S-1000D	10	6.8	3.2	1	12
S-1001D	10	14.5	8	11/4	25
\$-1003D	10	9.0	8	11/4	25
S-1011D	10	4.64	3.2	1	12
\$-1012D	10	3.16	3.2	1	12
S-1018D	10	6.8	8	1	12
S-1200D	12	6.8	3.2	1	12
S-1201D	12	14.5		11/4	25
S-1203D	12	9.0	8	11/4	25
S-1211D	12	4.64	3.2	1	12
S-1212D	12	3.16	3.2	1	12
S-1218D	12	6.8	8	1	12

Induction Range (app.)-4-27 Mh

Resistance (app.)-30 Ohms



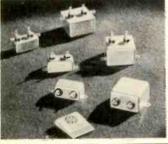




#### A-C CAPACITORS

Small a-c Pyranol capacitors are recommended for use with motors, industrial control, specialty transformers, and other equipment, Use of Pyranol as a treating material, because of its high dielectric strength, high permittivility, and exceptional stability, has made possible a marked reduction in physical size, as well as a far superior capacitor. Three styles of mounting brackets are available and supplied separate from the units. Units may be operated in any position. Write for Bulletin GEA-2027.

	5	TANDARD RATIN	GS	
Rated	CASE 5	TYLES		
Voltoge 60 cycle	Fabricated rectangular	Drawn rectangular	Drown cylindrical	Drown oval
236	1-20 muf	14.5		2-15
275		14.5, 17.5		
330	1-50 muf		1.25-12 muf	2-4.5
440	1-28 muf	10 muf		2-4
660	1-15 muf		1.75, 1.85	1.75



#### **D-C CAPACITORS**

These Pyranol capacitors are designed for commercial electronic applications, ranging from the small units for blocking and by-pass service to largecapacitance units for power supply filters, and high-voltage units for use in heavy duty X-ray equipment. Write for Bulletin GEA-2621.

JAN-C-25

**SPECIFICATIONS** 

Intended primarily

for filter, by-pass and blocking pur-

poses, these capa-

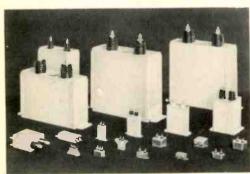
citors are for use

in equipment required by the armed forces. The specification qual-

ifies these units for applications

where the a-c com-

	STANDARD RATINGS	
Case style	Voltage	Capacitance
50, 51, 52	100-1000	0 <mark>.5</mark> -4 muf
60, 62, 64	400-1000	1.0-2 muf
66, 68	600-1000	0.1-1 muf
70	400-100,000	0,1-75 muf



ponent of the impressed voltage is small with respect to the d-c rating. Write for Bulletin GEA-4357.

	STANDARD RATINGS	
Case styles	Voltage	Capacitance
(P53, -54, -55	100-1000	_05-4 muf
CP61, -63, -65	400-1500	.01-1 muf
CP-70	600-12500	0,1-15 muf

### HIGH FREQ. CAPACITORS

High frequency paper-dielectric capacitors are designed for grid and plate blocking service in the electronic oscillator circuits of highfrequency induction heating equipments. They may also be used advantageously in other high-frequency oscillator circuits of a similar nature. Write for Bulletin GEA-4388.

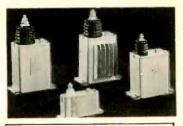
#### **HFP CAPACITORS**

These high-frequency, liquid-filled, parallel-plate capacitors have been 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.

STA	NDARD RATI	NGS
Max. permissable RMS working volts	Microfarad rating	Max. permissable RMS working current in amp. at S40·kc
2000	.025	170
	.030	204
	.034	230
2500	.020	170
3000	.0165	168
5300	.010	180
5900	.0085	170
6000	.0067	137
	.010	204
6600	.0085	190
7800	.0050	133
	.0056	149
8300	.0045	127
9000	.00\$0	153
	.0056	171
	.0035	107
10000	.0045	153

# PULSE-FORMING

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

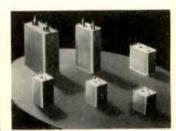


STANDARD RATINGS

D-C voltage
rating
\$000
15,000
20,000

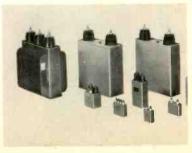


3



# ENERGY STORAGE

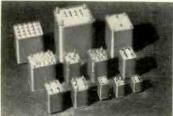
These d-c Pyranol capacitors for phototube and similar light-duty energy storage applications are the result of years of experience in the design and manufacture of capacitors for this type of service. They are relatively light weight, small, stable capacitor having a life consistent with the application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



WRITE G-E APPARATUS DEPT., SCHENECTADY, N. Y. for complete details or Bulletins

# GENERAL ELECTRIC

## **G-E SPECIALTY TRANSFORMERS FOR ELECTRONIC EQUIPMENT**



Hermetically sealed transformers



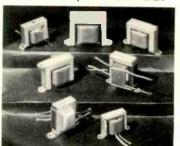
Compound-filled units



Loose core-and-ceil type units



Radio receiver power transformers



Output transformers and filter chokes



Core-and-coil control transformer



Automatic voltage stabilizer

**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 speechinput equipment. An especially useful feature is the universal mounting — the units can be top or bottom mounted for open or underdeck wiring.

CORE AND COIL Usually applied where moisture resistance is not an important factor, and where size and weight must be kept to a minimum. Composed of automatically wound coils imposed on finest-grade silicon steel core laminations, they are 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 ta meet special requirements. HERMETICALLY SEALED Protected, internally, from the effects of changing atmospheric pressure, and insulation breakdown due to humidity, and, externally, from corrosion caused by salt-water vapor. Withstands successfully the rigorous salt-water immersion and saltwater spray tests as specified by the Signal Corps, the Air Forces and the Navy. The hermetically-sealed units are specified as standard iron-core components for such apparatus as aircraft receivers and transmitters, UHF equipments, and landing-boat receivers. Furnished with terminals and mounting studs located either on the top or bottom.

**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 moisture-proof. Particularly adaptable to aircraft use where size and weight requirements are extremely critical.

#### PLATE TRANSFORMERS (Single Phase-Three Phase)

Single-phase plate transformers are available in 4 different types of construction to meet virtually any application, commercial or military. Available in the popular, compact core-and-coil and Permafil units. The latter have size and weight advantages of the core-and-coil units and, in addition, they are moisture resistant to a degree second only to the hermetically-sealed transformers. Many of the Permafil units are equipped with electrostatic shields. Variations of these transformers in electrical characteristics can be furnished to meet special applications. Three-phase plate transformers designed for use in applications which require large amounts of power with a relatively small filter section from a high-voltage source. They are of core-and-coil construction, solidly and compactly built for years of reliable service. Terminal boards are mounted on top of the units.

#### FILAMENT TRANSFORMERS

These transformers are generally used as companents of transmitters and carrier-current equipment, especially in applications which require a high degree of resistance to moisture or humidity. They were widely used throughout the armed forces. The hermetically-sealed transformers (they are designed in two types) are moisture-proof and immersion-proof, while the compoundfilled units are highly resistant to moisture but not immersion-proof.

#### PLATE AND FILAMENT TRANSFORMERS

In 3 types of construction—Permafil Units, Compound-filled Units, Hermetically Sealed Units—are typical of transformers which G-E is currently designing and building. A fourth type, conventional core-and-coil transformers, have been designed for highly specialized applications. However, units of this type can be designed for virtually any standard application. Compound-filled transformers are highly resistant to moisture and humidity but are not immersionproof; the Permafil units offer the size and weight advantages of the core-andcoil units and, in addition, are moisture-resistant to a degree second only to the hermetically-sealed transformers; the latter are moisture-proof and immersion-proof.

#### FILTER REACTORS

Compound-filled filter reactors designed for first-stage choke input filter systems. Their rated inductance is correct at approximately 120 v, 60 cycles at the rated d-c amp. All others are designed for second-stage filter systems. Their rated inductance is correct at approx. 10 v, 60 cycles at the rated d-c amp. Generally used in applications where a high degree of resistance to moisture is required. They are not immersion-proof.

#### RADIO AND TV TRANSFORMERS

G-E receiver, power and TV transformers are available in a variety of construction types to fit individual requirements. The photograph-illustrates several modifications of the conventional core-and-coil transformer with end caps. The unit shown in the lower left-hand corner is equipped with a primary tap switch for export use, that in the lower right-hand corner and top left are for subpanel mounting, the one in the center is designed for above panel mounting, while the unit in the upper right-hand corner is equipped with a built-in socket for a rectifier tube. The various types include the following: audio output transformers. (for single and push-pull output tubes). Radio power transformers. D-c Filter reactors (smoothing chokes). Vertical output television transformers.

#### FILAMENT TRANSFORMERS High-Reactance Unit

High-reactance type designed to protect filaments of tubes used in transmitters, induction heaters and allied equipment during the critical warming-up period. Units rated 50/60 cycles, when operated on 50 cycles, will limit cold-filament starting current to 150% of rated, and somewhat less than 150% when operated on 60 cycles. Those rated 60 cycles only limit cold-filament starting current to 150% of rated. When filaments reach normal operating temperature, current is automatically limited to rated value of transformer.

#### **ARC-BACK INDICATORS**

Designed for use with tube rectifiers to indicate a reversal of direct current. Has a highpotential value of 31,000 v, requires 21 to 29 amp d-c to trip indicator, and operates on 75 amp d-c continuous.

#### CONTROL AND SIGNAL TRANSFORMERS

Designed to supply low-voltage circuits for economical operation of many types of electronic equipment, Bulletin GEA-1397.

#### AUTOMATIC VOLTAGE STABILIZERS

The necessity of maintaining a constant-voltage supply is highly important in the operation of electronic equipment. For this purpose, General Electric builds an extensive line of automatic voltage stabilizers ranging in size from 15 va to 5000 va. Bulletin GEA-3634.

### WRITE G-E APPARATUS DEPT., SCHENECTADY, N. Y. for complete details or Bulletins

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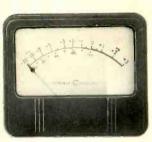
#### **G-E ELECTRICAL INSTRUMENTS**

SMALL PANEL - 21/2 inch ... General-purpose, small panel instruments for use in radia and communications equipment where compactness (particularly minimum depth behind the panel) is essential. Available in a variety of ratings: Type DW-51 voltmeters, ammeters, milliam-

meters, and microammeters for measuring of d-c voltage and current \* Type DW-52 ammeters and milliammeters for measuring radio-frequency current (a-c) • Type DW-54 voltmeters, milliammeters and microammeters for measuring audio-frequency current (a-c).

DIRECT-CUI	RRENT, TYP	E DW-S1	THERMOCOUPLE, TYPE DW-52		A-C RECTIFIER, TYPE DW-54	
TYPE	RATING	APPROX. RESIST RANGE OHMS	RATING RANGE	APPROX, RESISTANCE RANGE OHMS	RATING RANGE	APPROX. RESISTANCE RANGE OHMS
ANMETER	1 to 300 amps.	.00167 to .05	1 te 20 amps.	.012 te .29	1 te 15 ma.	100 te 660
MILLIAMMETER	1 to 500 ma.	.100 to 25	100 to 800 ma.	.48 to 6.8	1 to 15 ma.	100 to 660
MICROAMMETER	50 to 7750 uo.	\$1.5 to 2030			200 to 750 ua.	900 to 3700
VOLTMETER	l to 200 v.	100 te 40000			1 to 500 v.	2000 to \$00000
VOLTMETER 1000 Ohms per V	1 to 800 v.	1000 te 800000			For testing equipment on elect circuits, volume-level indic	
KILOVOLTMETER	1 to 5 kv.	1000000 to 5000000				ications equipment,

VU **VOLUME-**LEVEL INDICATOR Type DO-61



A Standardized Volume-level Indicator for Radio Broadcasting, Sound Recording, and Communication Systems. In addition to possessing highly desirable characteristics for broadcast monitoring, and db measurements of loss or gain in transmission circuits and amplifiers, the instruments are recommended for use in sound recording, and for harbor craft communications and other applications where signal-level measurements are to be made.

ADVANTAGES - Standardizes measuring - makes possible better correlation between results of different observers \* In many instances it permits more efficient use of facilities . Allows more effective monitoring . Motion of pointer easier to follow • Peaks easier to obtain + Reduced eyestrain as a result of long scale, simplified scale plate and contrast between colors employed, pointer construction and optimum dynamic characteristics . Accurate over wide range of frequency.

3% inch instrument to match and harmonize with other instruments mounted on the panel or switchboard. 2 styles available; round and square. Leads provided for easy wiring. Smaller size for panel mounting. Requires same space for mounting as small panel instruments. For permanent installation, time meter is furnished in a drawn steel case, designed for ease in mounting in any convenient conduit or junction box. For portable use, a pedestal mounting is supplied. Write for Bulletin GEA-3299.



TIME METERS - Type KT For use on machine tools, radio transmitters, welding machines, etc., where it is desirable to have a record of utilization. Used on radio transmitters to indicate tube life, it matches that of other panel instruments. Available in 3 forms: panel or switchboard mountings, portable, and conduit mounting. Can be furnished to match operating characteristics of various machines and to record operating time in hours, tenths of hours, or minutes. Time meter is furnished in a molded Textolite case similar to the miniature

SWITCHBOARD INSTRUMENTS - 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.

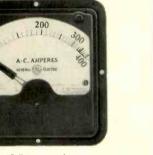
A-C TYPES	RANGE	OPERATING PRINCIPLE	CYCLES	ACCURACY
VOLTMETER "TRIPLEX	25-750 v. 150-750 v.	Moving-iron, Inclined Coil Moving-iron, Inclined Coil	25-125 Single Range 25-125	±1 per cent ±1 per cent
AMMETER * TRIPLEX	5-600 a. <mark>5 a.</mark>	Moving-iron, Inclined Coil Moving-iron, Inclined Coil	25-125 Single Range 25-125	±1 per cent ±1 per cent
D-C TYPES				
VOLTMETER	1.5-750 v.	Perm. Magnet, Moving Coil		$\pm$ 1 per cent
AMMETER	1-3000 a.	Perm. Magnet, Moving Coil		±1 per cent
MILLIAMMETER	1-750 ma.	Perm. Magnet, Moving Coil		±1 per cent

WATTMETERS: 25-125 cycle, a-c and d-c; Accuracy  $-\pm1\%$ ; Scale Length and Dimensions same as single instruments; Operating Principle – Electro-dynamometer; Single-Phase and Polyphase types.

VARMETERS: 1-phase, 2-wire; 3-phase, 3-wire; 2-phase, 3-wire; 2-phase, 4-wire; 3-phase, 4-wire; 5 amps; 120-208 v; 25 cycles to all commercial frequencies; Accuracy  $=\pm1\%$ ; Operating Principle - Electrodynamometer with autotransformer.

FREQUENCY METERS: 120 v; 25-400 cycles; Accuracy - 22.5-27.5 c -0.08 c, 45-55 c -0.15 c, 55-65 c -0.15 c, 40-65 c -0.25, 20-90 c -1.00 c, 350-450 c -1.50 c; Operating Principle - Resonant-circuit.

POWER-FACTOR METERS: Single-Phase, 2-wire, 60 cycles; 3-wire, 3-phase, 25-125 cycles; 3-wire, 2-phase, 4-wire, 2-phase, 25-125 cycles; 5 amps; 120-600 v; Accuracy - ±.01 power factor for rated current, voltage and frequency; Operating Principle—Crossed-coil. SYNCHROSCOPES: 25 cycles with external impedor; 50 and 60 cycles, self-contained; 120 v; 360° rotation; Operating Principle — Polarized-vane.



Type AD-7 ammeter for semiflush mounting.



Z

SCALÉ LENGTH					<mark>5 in.</mark>
SCALE LENGTH - Triplex Types					
DIMEN. — Surface Mounting .	1		×	. 5 1/2	x ó in.
Semiflush Mounting *				. 61/2	x 7 in.
Triplex — Surface Mounting				5 1/2 ×	12 in.
Semiflush Mounting	÷			6 1/2 ×	13 in.

Type AD-12 triplex ammeter for semiflush mounting.

ACCESSORIES: Various accessories have been designed to widen the scope of measurement of these switchboard instruments. They are adaptable to all types mentioned and include the following:

 External Shunts for D-C Ammeters Standard Shunt Leads Long Shunt Leads

Contact Devices

Transfer Switches

WRITE G-E APPARATUS DEPT., SCHENECTADY, N. Y. for complete details or Bulletins





HP

1/6 1/4 1/3 1/3 3/4

General-purpose Capacitor-start Motors. Used

for a multiplicity of general applications. Oper-

ate at 1725 rpm on 60 cycle, single-phase

power. Open (dripproof) construction with sleeve bearings and solid welded-on base.

Polyphase motors for Machine-tool and Other

Industrial Applications. Operate at 1725 rpm

Model

KC43AB280

KC63AB666 KC65AB559

KC45AB1400 KC47AB899

Volts

115 115 115/230

115/230

### 400-CYCLE MOTOR-GENERATOR SET - TWO UNIT - TWO BEARING

60-CYCLE DRIVE MOTOR - OPEN DRIPPROOF - CONTINUOUS DUTY - 40 C RISE

Ball Bearing - Overbolt Construction - Separately Excited Generator - Induction Drive Motor

Statement of the local division of the local		R	ating — Outp	ut			- Input Motor				Field
PERFORMANCE: Voltage regulation-5%. (Frequency	Kva	Rpm	Volts	Freq.	Phase	Volts	Freq.	Phase	Model No.	Field Amp.	Rheostat Recommended
varies slightly depending on speed of induction motor. FIELD RHEOSTAT: CR8000 6-inch single plate is rec- ommendea. Order separately from Ind. Cantrol Div., Schenectady.	2.5	3428 3428	230 Field/ 115 Arm.	400 400	3 1	208-220/440 {	60 60	33	} 5ATB75PA1	1.2	80 ohms



#### FRACTIONAL H P MOTORS

on 60 cycles, 3 phase power. Totally enclosed construction with ball bearings and bolted-on cast-iron base.

НР	Volts	Model
1/4	208-220/440	K43AC2717
1/3	208-220/440	K45AC2000
1/2	208-220/440	K63AC2528
3/4	208-220/440	K65AC179

High-frequency Motor Alternators. Highly recommended for testing equipment and source of power supply for high-frequency machines. Small and lightweight units, but sturdy and hard-working.

CAST GLASS BUSHING .... In ratings up to the 15-ky powertransformer 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. 1. Attached directly to apparatus, making gaskets unnecessary and providing a hermetic seal. Designers may utilize all the advantages of present-day insulating materials without fear of reduced dielectric strength caused by the entrance of moisture. 2. Make possible design of more compact, lighter-weight apparatus at lower cost for airborne and other specialized equipment uses. 3. Thermal characteristics of the glass used have been coordinated 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.

TERMINAL BOARDS ... Where leads are brought to any part for permanent or temporary connection, especially if many wires are involved, G-E terminal boards provide a neat, compact, and convenient method for attaching the wires. Several types are available to meet the various requirements.

Type EB-1: (Fig. 1) Are 1-piece molded terminal boards with washer-head binding screws for circuit-wire connections. 4, 6, 8, and 12 pole units available. Combinations of these are used to meet specific conditions. Rated 30 amp and 600 v.

Type EB-2: (Fig. 2) Identical in form and construction, except that pressure connectors are furnished for the wire connections. These connectors are simply screwed on the stripped end of the circuit-wire and accommodate 1 No. 8 Awg stranded, 2 No. 12 Awg stranded, or 3 No. 12 Awg solid wires. Rated 30 amp and 600 v.

EB-1 (Fig. 3) with Hinged Cover: To prevent collection of dust around connections are recommended when the EB-1 or EB-2 terminal boards are mounted flat. Covers are black Textolite,\* available for all sizes of boards. A boss at each end of both EB-1 and EB-2 prevents breakage when mounted on uneven surfaces, and angular construction of base provides increased creepage distance.

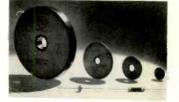
Type CR5885: (Fig. 4) Have sturdy, compact, multipole. 1-piece molded construction, available in 3-, 5-, 7-, and 9-pole units. Staggered arrangement of poles provides more clearance and creepage distance in less space between poles and permits installation where dust conditions are severe. Have clamp-type connectors, and end bosses for mounting on uneven surfaces. Rated 30 amp and 600 v. Write for Bulletin GEA-1497.

\*Trade-Mark Reg. U. S. Pat. Off.

#### **OTHER G-E APPARATUS DEPT. PRODUCTS**

Amplidyne cont	rol				Bulletin	GEA-4889
Circuit breakers					Bulletin	GEA-4477
Gear-motors .					Bulletin	GEA-1437
Generators ,					Bulletin	GEA-1607
Strain gages .					Bulletin	GEA-4226
Test sets					Bulletin	GEA-4552
Thermostats .						GEA-1265
Thickness gages	5.					GEA-4363
Voltage stabiliz	ers					GEA-3634
-						0

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THYRITE\* . . . A nonlinear resistance material possessing unique electrical property whereby the current varies approximately as a fourth power of the applied voltage. Some of its many applications are: For protective purposes (to limit voltage surges) • As a stabilizing influence on circuits supplied by rectifiers • As a potentiometer (the division of voltage can be made substantially independent of load current) . For the control of voltage-selective circuits, either independent of, or in combination with, electronic devices. Write for Bulletin GEA-4138A.

#### **CALROD SOLDERING IRONS**

Designed for heavy-duty industrial use, G-E Calrod soldering irons combine outstanding construction features with unmatched performance. Ironclad-copper tips and built-in Calrod heaters give fast dependable heat - permit continuous, high-speed soldering-eliminate frequent dressing and reheating. Strong 18-8 stainless steel shells withstand hard use. Simplified disassembly features permit "onthe-spot" maintenance. Write for Bulletin GEA-4519.

Cat. No.	Watts	Tip Diam, In.
6A161	75	3/8 8 1/2
6A162	100	3/8 & 1/2
6A200	100	3/4
6A201	200	1
6A202	300	11/4
6A318	650	15/8
6A319	1250	2

Weighing only 1 3/4 ounces, this 25-watt, 6-volt, 8-in. featherweight iron is ideal for close-quarter soldering with pin-point precision. Designed for use where conventional irons might cause damage . . , be clumsy to handle . . . be more expensive to operate. The Midget literally "goes places" with greater efficiency and less power . . . with no sacrifice in heat or speed. It has chisel-shaped Iron-clad copper tips, either 1/8- or 1/4-in. diam., as desired. Specially designed 115/6-volt transformers available as optional equipment.

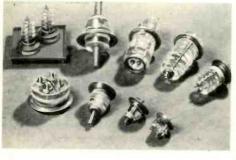




Fig. 1 Type ER.

Fig. 2 Type EB-2



Fig. 4 Type CR5885

**G-E MIDGET SOLDERING IRON** 

# GENERAL SE ELECTRIC

#### A-c or D-c SOLENOIDS-CR9502-9503

#### Industrial-type Solenoids CR9503

	nausmai-ryp	e sorciroras		_
	P ounds Pr	ull or Push	Wt. of	Max
Type of Solenoid	At 85 Per Cent Voltage	At 100 Per Cent Voltage	Plunger in Lb.	Stroke in In.
Pull Pull Pull Push Pull Push Pull Pull Push	0,65 0.9 3.2 4.0 10.2 10.2 22.7 22.7	0.9 1.3 4.5 4.5 6.0 6.0 14 14 30 30	0.12 .15 .31 .5 .5 .8 .9 1.2 2.5 3.3	3/4 1 1 1 1/4 1 1/4 1 1/4 1 1/4 1 3/4 1 3/4
Puli Push Puli Push Puli Push Puli	21.7 21.7 42 42 51 51 70	30.2 57 57 73 73 97	3.3 4.0 5 7.0 10 16 13	2 2 2 3 3 3 3
Push	70 I, Light Duty Sol	97 enoids (110/22		
Puli	.10	.26	.07	1/2
Pull	2.9	3.7	.18	*/4

SIMPLIFY COMPLEX IN-STALLATIONS: In direct or remote control requiring short powerful thrusts.

WIDE SELECTION: 32 different sizes of uniform construction 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



straight line, or to provide mechanical motion at a remote or inaccessible location. 2 types available: small, all welded solenoid especially designed for appliances, vending machines and trip mechanisms; and complete line of sturdy, industrial-type solenoids for heavy duty applications, available in ratings suitable for almost every application. Operate remotely from push-button station, or, automatically by limit switches, pressure switches, float switches, or other pilot circuit devices. Cut-out switches available for use with CR9503 on d-c circuits, CR9502 available only in pull form for 110-

220 v. 60 or 50 cycles. Write for bulletins GEA-2080 (CR9503) and GEA-4897 (CR9502).

### SWITCHETTES—Unit Contact Mechanisms



#### Size 1 Switchette with terminals projecting fram end surfaces. Also available with terminals projecting from top cover.

RATING at 50,000 ft. on 12 and 24 v a. Single-circuit forms or 2-circuit form with electrically separate circuits . . Size 1, 10 amp Size 2, 25 amp b, Wire to provide single-pole, singlethrow .

Size 1, 3.5 amp Size 2, 4 gmp

#### SPECIFICATIONS

	Size 1	Size 2
Weight	0.02 lb	0.125 lb
Plunger travel differential	0.020 in. 0.007 in	0.040 in.4
Travel to trip	0.037 in. 	

\*Approximately same as contact air gap.

one normally closed.

closed contact structure. photos are not exact size.

chanically operated switch is required, such as: float switch in automatic washing machine; 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. These midget devices have snap action and double-break construction. They are especially applicable where space is limited and long life is desired.

Switchettes CR1070 are used

wherever a manually or me-

#### an accuracy of $\pm$ 1 degree and the generalpurpose 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

SELSYNS

**CR9890** 

Indicating or control selsyns are a reliable,

accurate, and rapid means of communication.

Used successfully as indicating positions of

valves, governors, bridges, turntables, damp-

ers, etc. 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

for Bulletins GEA-2177A and GEA-2176A.

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-horse-

power motor starter, or in con-

junction with a magnetic switch

controlling larger motors, heating

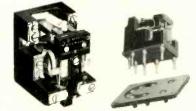
or lighting circuits, and signal

systems. This sturdy, general-

purpose relay comes in 7 open or

0

RELAYS **GENERAL-PURPOSE RELAY CR2790E** 



RATING: 10 amp-110 or 220 v, a-c: 1/2 amp at 110 v or 1 hp at 220 v.

enclosed forms: enclosed in general purpose case, or in explosion-proof and watertight case; open relays may be front-connected or back-connected; or for mounting on a metal base or an insulated base, or with plug-in jacks. 3 contact arrangements are available: double-pole, double-throw; doublepole, single-throw; single-pole, single throw. Protection against hazgrd from restarts after power failures can be provided with the double-pole form when one pole is used as a holding interlock in the coil circuit together with a momentary contact push-button station. The relay can be mounted on either insulated or noninsulated bases. The enclosed forms have convenient conduit entrances at both top and bottom. Write for Bulletin GEC-257.

#### CURRENT-SENSITIVE RELAYS

For electronic applications where switching functions must be performed by small amounts of power, a complete line of current-sensitive, d-c relays is ovailable. Withstand shock and vibration and operate in ambient temperature from-70 F to 200 F. Cover range from

10 mw to 180 mw; 0.47 ma to 1470 ma; 0.07 ohms to 67,000 ohms coil resistance; and weigh from 0.1 to 0.7 lb. Contact ratings from 12 v d-c (a-c) with a contact rating at 24 v (d-c) of 2.0 amp non-inductive and 0.5 amp inductive. Installation easy with plugin base terminals. Write for Bulletin GEA-3819D.

#### **APPLIANCE RELAY CR2790G**

Small, inexpensive relay designed for use in vending machines, coin changers, conditioning control and similar equipments using low power-115 v or less-control circuits. Available in many contact arrangements, priced and tooled for high-quantity production to meet growing demand for control relays for automatic appliances. Will handle up to four-pole double-throw duty at 3 amp on 115 v a-c. Several forms available for use on a-c or d-c. Write for Bulletin GEA-4864.



#### **PUSH BUTTON STATIONS**

For control circuits of magnetic controllers designed for pushbutton control. Standard- and heavy-duty stations available which may consist of various combinations of momentarycontact buttons, maintaining-contact buttons, selector switches, indicating lights and surface or flush mounting. Standard-duty station recommended for use with contactors rated up to and including 150 amp. Heavy-duty push buttons able to 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, dusttight, corrosionresistant and explosion-proof enclosures.



# GENERAL 🛞 ELECTRIC



6RS5GH1 is 15/16 in. - 6RS5GH2 is 11/16 in. Each has 5-1 in. square cells.

APPARATUS DEPT. SCHENECTADY, N. Y.

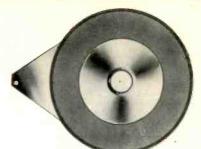
### G-E SELENIUM RECTIFIERS FOR RADIO RECEIVER APPLICATIONS

G-E Selenium Rectifiers have wide application . . . They "UP" Quality. They "CUT" Costs. They pravide dependable performance. They're built by men with "KNOW HOW." Less than ane inch lang and only one inch square. Help builders af radio receivers cut manufacturing casts and design a better praduct. They save space, far they can be maunted in places

where a rectifier tube and socket wan't fit. Special construction pravides canstant and unifarm cantact pressure an all cells, regardless af temperature variations. A caating af moisture-resistant varnish is protection against humidify, candensation, and dampness.

Ample current capacity — designed ta withstand the inverse-peak voltages abtained when rectifying (half-wave) 110-125 valts rms, and when feeding a capacitar as required in various radio circuits. The inverse current is extremely law even with peak valtages up ta 380 valts. Cuts installation costs, as na socket or filament circuit is necessary. Tests prave that the useful life of the selenium rectifier is several times greater than the 117-valt rectifier tube. Standard Model 6R55GH1 is far general use wherever space permits, and 6R55GH2 is recammended where limited space is available.

RATING TABULATION	Model 6	RS5GH1	Model 6	SSGH2
G-E selenium rectifiers	50 C	60 C	50 C	60 C
Normal rms volts	117	117	117	117
Max. rms volts	130	130	130	130
Max inverse-peak	380	380	380	380
Max. peak current	1000 ma	750 ma	800 mg	650 mc
Max. rms current	250 ma	200 mg	200 mg	163 mg
Max. d-c current	100 mg	80 mg	80 mg	65 ma



### G-E COPPER-OXIDE RECTIFIER

#### FOR SELF-CHARGING PORTABLES

The General Electric copper-oxide rectifier, Model 6RC8Y3, specially constructed for "self-charging portable radio" receivers." Capper-axide rectifiers operated in a full-wave circuit have been used successfully for more than six years in thausands of storage-battery-operated portable receivers. Its advantages include: 1. OCCUPIES LESS SPACE. 2. EASY TO INSTALL. 3. COOL OPERATION. 4. LONG' LIFE. 5. AMPLE CURRENT CA-PACITY. 6. ALL-METAL CONSTRUCTION. For further information, write to the Canstruction Materials Department, General Electric Campany, Bridgeport 2, Cannecticut





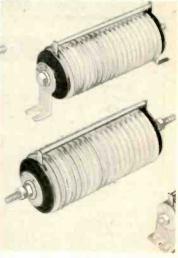
COPPER OXIDE RECTIFIER STACKS

#### **G-E RECTIFIER STACKS**

#### SELENIUM

Variaus types af equipment require direct current for aperation. These include electrachemical pracesses (electraplating and electrolysis pratection); electric equipment (d-c matars, magnetic chucks, various control devices, and battery charging); G-E Selenium Rectifiers, containing na maving parts, aperating from an a-c power supply, deliver the required d-c power.

They have a lang, useful life. If the rectifier has been idle far a cansiderable length af time, it may shaw a lass af same of its rectifying praperties, but the ariginal characteristics are quickly restared after the a-c pawer is again supplied and the blacking layer refarms. Operating efficiency and power factar are similar to those of the copper-oxide type. The application far these rectifier stacks is wide-spread thraughaut industry.



SELENIUM RECTIFER STACKS

#### **COPPER OXIDE**

An efficient, ecanomical device for canverting alternating current into direct current. These stacks are simple and sturdy in canstructian. There are na mixing parts ta wear aut; cansequently, the life af a rectifier stack is virtually unlimited. Rectifiers af any desired voltage and current may be assembled fram the variaus sized cells. The aperating efficiency will vary, depending an type af circuit, rating, and aperating canditians af the particular rectifier. In a single-phase, full-wave circuit, cannected ta a resistance laad, rectifier stack efficiency at rated autput will be fram 60 ta 65 per-cent. In a similar circuit with a battery-charging laad, efficiency may be fram 70 ta 75 per-cent. In three-phase aperatian, 85 per-cent efficiency is obtained at full-rated autput. At low temperatures, the efficiency will be slightly less; while at higher aperating temperatures, the efficiency will be increased slightly due to the lowering af the internal resistance of the rectifier.

The copper-oxide rectifier is a resistance device and, as such, aperates at a unity power factor at low frequencies. When used in a circuit with a transformer, and connected to a normal laad, such as a resistance device or battery, the power factor is usually 95 per-cent ar better. Send far descriptive bulletin. Address Section 640-237, General Electric Campany, Schenectady 5, N. Y.

# GENERAL 🛞 ELECTRIC



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 production controls to assure long-lasting performance according to their ratings. New applications in communications and industrial equipment constantly demand new tube types — G-E designs tubes to meet every need that arises.

2

### A Complete Listing of G-E TRANSMITTING AND INDUSTRIAL TUBES

The following list includes types to meet every presently known electronic circuit requirement. For complete data send for the G-E Tube Manual shown on the opposite page.

	PLIC	TRONS	
GL-2C39	GL-473	GL-858	GL-1629
GL-2C40	GL-592	GL-862-A	GL-1633
GL-2C43	GL-800	GL-880	GL-1851
GL-2E24	GL-801-A	GL-889-A	GL-5513
GL-2E26	GL-802	GL-889-R-A	GL-5518
GL-2E30	GL-803	GL-891	GL-5549
GL-3C22	GL-805	GL-891-R	GL-5556/PJ-8
GL-4C21	GL-806	GL-892	GL-5648
GL-4D21/4-125A	GL-807	GL-892-R	GL-5674
GL-5C24	GL-809	GL-893-A	GL-5691
GL-5D24	GL-810	GL-893-A-R	GL-5692
GL-7C29	GL-811	GL-895	GL-5693
GL-7D21	GL-812	GL-895-R	GL-5739/FP-62
GL-9C21	GL-813	GL-898-A	GL-5740/FP-54
GL-9C22	GL-814	GL-954	GL-5742/PJ-7
GL-9C24	GL-815	GL-955	GL-5743/PJ-21
GL-35T	GL-826	GL-956	GL-8000
GL-100TH	GL-828	GL-957	GL-8002
GL-146	GL-829-B	GL-959	GL-8002-R
GL-152	GL-830-B	GL-1603	GL-8005
GL-159	GL-832-A	GL-1612	GL-8009
GL-169	GL-833-A	GL-1613	GL-8010A-R
GL-203-A	GL-835	GL-1614	GL-8012-A
GL-204-A	GL-837	GL-1619	GL-8025-A
GL-207	GL-838	GL-1620	GL-9001
GL-211	GL-842	GL-1621	GL-9002
GL-242-C	GL-843	GL-1622	GL-9003
FP-265	GL-845	GL-1623	
GL-276-A	GL-849	GL-1624	
FP-285	GL-851	<mark>GL-162</mark> 5	

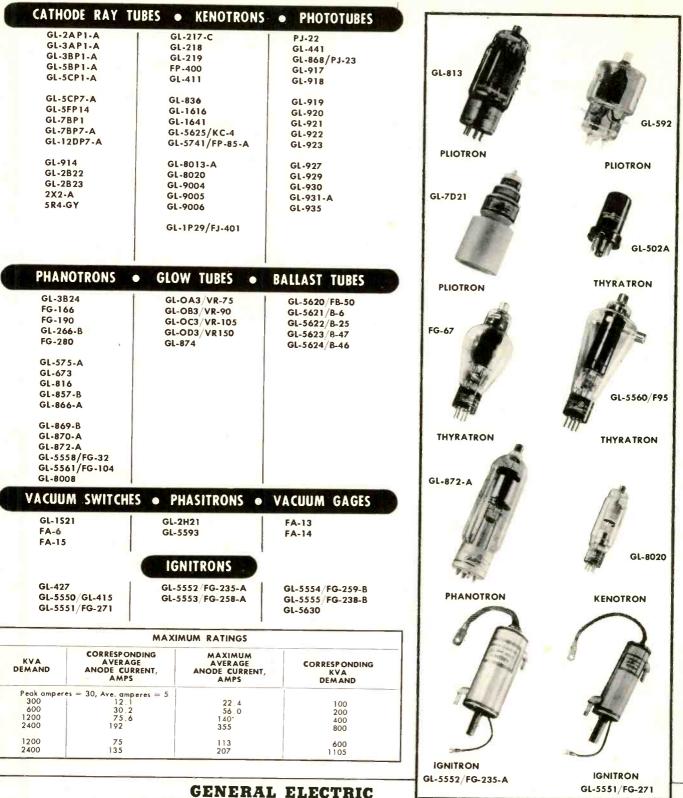
	RATRONS
GL-2D21	GL-627
GL-3C23	GL-672
G-27-A	GL-678
G-41	GL-884
G-81-A	GL-885
G-97	GL-2050
G-98-A	GL-2051
G-105	GL-5545
G-154	GL-5557/FG-17
G-172	GL-5559/FG-57
G-178-A	GL-5560/FG-95
GL-393-A	GL-5663
GL-414	GL-5720/FG-33
GL-502-A	GL-5728/FG-67

VACUUM	CAPACITORS
GL-1L21	GL-1L31
GL-1L22	GL-1L32
GL-1L23	GL-1L33
GL-1L24	GL-1L36
GL-1L25	GL-1L38

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Write G-E TUBE DIVISION, SCHENECTADY 5, N.Y. for complete details or Bulletins



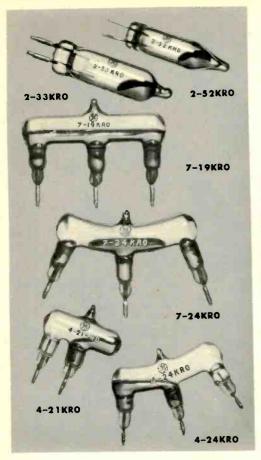


Chetrese The Chetrese Tables

# ELECTRONIC TUBE MANUALS

... complete data available on every G-E tube! Designed for and by technical men, the new G-E Electronic Tube Manuals pictured to the left are complete in every detail. They 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 write Electronics Department, General Electric Company, Schenectady 5, N. Y.

# GENERAL 🛞 ELECTRIC



### KON-NEC-TOR MERCURY SWITCHES

Most Kon-Nec-Tors are made of heat resisting Pyrex brand glass with current conducted to mercury by tungsten lead-in wires. The small force necessary to tilt a Kon-Nec-Tor, wherever available, will cause it to operate positively and silently. Chart on their characteristics is given below and engineering service is available to all users.

#### GENERAL INFORMATION

Type	Switching Action	Max. Height	Max. Length	Max. Diameter	Lead Length (Inches)	Holder Clip /	Average Weight in Grams	Internal Resistance in Ohma*	Total Movement Required in degrees
1-1KR1	SPST	-	212	0.515	412	4839	10	.25	Magnetically
1-2KR1	N. Open SPST N. Closed		212	0.515	4 1/2	4 <mark>839</mark>	10	.25	Actuated
1-15KR0	SPST	-	1 1/2	0.265	-		2.5	0.022	14
2-52KR1	SPST	-	134	0.3376	7	6601	5	0.05	15
2-33KR1	SPST	-	1++	0.416	7 1/2	6601	8	0.006	15
2-25KR1	SPST	_	21	0.512	71-2	4839	14	0.003	14
2-36KR1	SPDT without neutral	-	219	0.588	71/4	6602	30	0.007	14
4-19KR1	SPDT without	133	112	0.477	8	4838	41	0.006	30
4-21KR1	SPST	133	112	0.477	8	4838	28	0.006	20
4-24KR1	SPDT	144	211	0.477	8	4838	41	0.007	20
4-40KR1	SPST	H	255	0.531	73 <sub>4</sub>	4839	28	0.008	15
7-19KR1	SPDT without	23	211	0.548	8	4839	86	0.004	20
7-21KR1	SPST	133	214	0.548	8	4839	57	0.004	15
7-24KR1	SPDT with neutral	2 17	3	0.548	8	4839	71	0.005	20

The type number ending designates type of lead attached to the Kon-Nec-Tor, KR1 means standard leads are attached. KRO means the Kon-Nec-Tor Is furnished without leads. \*Excluding leads.

#### ELECTRICAL RATINGS

	VOLTAG	VOLTAGE MAXIMUM CURRENT RATING AMPERES							MOTOR H	RATINGS-	HORSEPOW	ER
TYPE		Indu	on- ictive	Inductive		Incandescent Lamp Circuit		D-C	Split	A-C 6	Cycles Repulsion-	2 and 3
		A.C	D.C	A.C	D-C	A-C	D-C		Phase	Capacitor	Induction	Phase
1-1KR1 1-2KR1	t { 125 250	0.3 0.15	0.15 0.08	_	Ξ	19	<u> </u>	=	-	Ξ	- 1/60 1/60	_
1-15KR0	{ 8 125	0. <mark>100</mark>	5 0.100	-		E	7	=		=	Ξ	_
2-52KR1	8 125 250	5 2 1	5 1 0.5		1			11			1	
2-33KR1	{ 125 250	3 2	2	32	:	1 1	1	**	1/20 1/10	=	1/12 1/8	
2-25KR1 2-36KR1	t 125 250 550	5 3 1	3 1.5 ••	5 3 1	•	1 1 1	1	**	1/12 1/8	1/12	1/8 1/4	**
4-21KR1 4-19KR1 4-24KR1 4-40KR1	t 125 250 550	15 10 8	10 5 **	15 10 8	:	10 10 5	10 5 **	×4 ••	¥4 ¥4		11/2	3, 11, 3
7-21 KR1 7-19KR1 7-24KR1	t 125 250 550	25 20 15	20 10 **	25 20 15		20 20 15	20 10	1 <u>2</u> 1 <u>2</u> ••	X	1 2	11/2 3	1 2 5

#### MOUNTINGS

Because proper mounting is essential to the satisfactory performance of these

Kon-nec-tors, clips of tempered cadmium plated steel are provided. These are sufficiently flexible to securely hold the somewhat variable diameters characteristic of glass tubes. The use of a drop of adhesive at each clip contact is recommended, to insure the Kon-nec-tor remaining in the correct mounting plane.

No specified rating can be stated. Capacity is lower than on noninductive circuits.
 t Ratings following this bracket apply to all types listed in this individual group.



### TUBE SOCKETS AND WATER JACKETS

Designed and built for G-E Tubes, they have the same high quality and performance characteristics. Specify them for increased assurance of superior performance and tube life. Available in all popular types.



Write G-E TUBE DIVISION, SCHENECTADY 5, N.Y. for complete details or Bulletins

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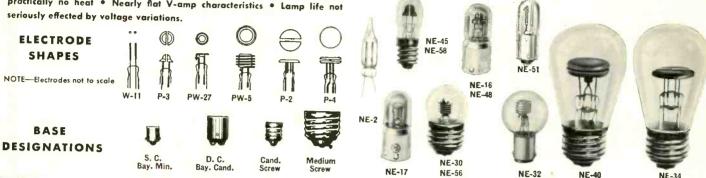
# GENERAL (96) ELECTRIC

### **NEON GLOW LAMPS**

The unique characteristics of G-E Neon Glow Lamps recommend them for a variety of uses in radio and electronic devices . . . as indicators, voltage regulators, pilot lights and test lamps. They have • Distinctive orange-red glow - no colored cover glass needed • Dependable performance and long life — rated at 3,000 hr (In excess of 25,000 hr. for NE-2) • Very low current consumption — less than 1/2 ma for smallest lamp • Variety of sizes and wattages • High resistance to vibration, shock • Produce practically no heat . Nearly flat V-amp characteristics . Lamp life not

SCREW BASE LAMPS . . . Required series resistor mounted within base. See values marked "IN" in calumn "Series Resistance," Lamps may be applied to higher circuit voltages by use of suitable external resistors.

BAYONET BASE LAMPS ... External means must be provided to limit current to normal amount. External resistors, to be supplied by user, should be of the values marked "EX" in column "Series Resistance" for rated volts.



brabe	1000	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	1000	100	1 100	100	100	100		100					10	19	10
				10	10	10	10	10	10	10	10	10	10	10	10
t	-				IN	EX	IN	IN	EX	10000	3500 IN	3500 EX	2200 IN	2200 EX	10000
Dhme	200000	200000	30000	30000	30000	30000									90
D.C.	90	90	90	•	90	700	700	85				-			65
	-	65	85	-	65	66	66	60							P-3
				P-3	P-3	PW-27	PW-27	PW-5	PW-6	PW-5	P-9	P.2			
_		13/16	11/2	11/2	15%	11/2	1%	2%	21/10	21/16	3%	3%	3%		156
	(Wire Term.)	Bay. Min.	Bay. Cand.	Bay. Cand.	Cand. Screw	Bay. Cand.	Cand. Screw	Med. Screw	D. C. Bay. Cand.	Med. Screw	Med. Screw	Sk. D. C. Bay. Cand.	Med. Screw	Sk. D. C. Bay.	
	Unbased		- · · / A				1-41/2	G-10		G-10	S-14	S-14	S-14	S-14	T-49
	T-2	T-31/4	-						-			105-125	105-125	105-125	210-25
	105-125	-						1	1	1	2	2	3	3	1/2
el .	1/25	1/25					-	ME-30	NE-32	NE-56	NE-34	NE-36	NE-40	NE-42	NE-S
	NE-2	NE-51	NE-48	NE-MG	ME-45	ME 17	ME	Mr. on	T and the	1	1	_			
	e L.C. D.C.	al 1/25 105-125 7-2 10hased (Wire Term.) 11/4© • W-11 LC. 85 0.C. 90 Nhme 200000 EX	I         1/25         1/25           105-125         109-125         109-125           T-2         T-3/4         Unbased         S. C. (Wire Bay. Term) Min.           11/4/20         1/4/40         1/4/40         1/4/40           W-11         W-11         W-11         K-11           LC.         85         85         85           LC.         90         90         90           Whme         200000         EX         EX00000	al 1/22 1/25 1/4 105-125 105-125 105-125 105-125 T-2 7-3¼ T-4¼2 Unbased S. C. D. C. (Wire Bay. Bay. Term. Min. Cand. 1¼42 13¼4 1¼4 ■ W-11 W-11 P-3 LC. 85 85 85 10. 90 90 90 Whme EX EX EX	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

Bulbs are designated by a letter to indicate shape and a figure to indicate the approxi-mate diameter in eighths of an inch. \*

- 1. Applies to a new lamp.
- The 1-1/16" dimension is for glass parts only, the lamp has wire terminals which extend 13/16".
- 3. Meets JAN-1A specifications for 991. Special marking JCG-991 supplied at small extra charge.
- 4. Designed for 67-87 volts, D.C. (D.C. operat-ing voltage at 1.5 milliamperes, 53-65 volts.)
- 5. Center electrode connected to base shell. 6. NE-34 and NE-40 are supplied with
- finish at additional charge of 5¢ sprayed each, list.
- 7. D.C. starting voltage is for lamp connected so that center electrode is negative.

NOTE - T - Following List Price indicates subject to Federal Tax N - Nontaxable.

### RADIO DIAL LAMPS

Because of the vibration conditions under which G-E radio dial lights must operate, particular care is given to their design and manufacture. Low voltage filaments are designed to vibrate without damage and are

secured by a shake-proof joint. They feature . . . Dependable, trouble-free performance • High level of maintained light output • Low current consumption . Long life.

Lamp Number	40	41	42	43	44	45	46	47	48	49	1490	1 10.07	-	-
Volta	8-8	2.5	3.2	2.5	6-8	3.2	6-8					10C7	HC7DC	# Bulbs are desig
Ampe		-				3.2	0-6	6-8	2	2	3.2	115-25	115-25	by a letter to in
	0.15	0.50	0.35	0.50	0.25	0.35	0.25	0.15	80.0	0.08	0.16	10 watts	10 watta	shape and a fig indicate the ap
#Bulb	T-3¼	T-31/4	T-31/4	T-31/4	T-31/4	T-31/4	T-31/4	T-31/4	T-31/4	T-31/4	T-31/4	C-7	C-7	mate diamet
Base	Min. Screw	Min. Screw	Min. Screw	Min. Bay.	Min. Bay.	Min. Bay.	Min. Screw	Min. Bay.	Min. Screw	Min. Bay.	Min. Bay.	Cand. Screw	D.C. Bay,	eighths of an inch. TAfter price indica
Bead Color	Brown	White		White	Blue		Blue	Brown	Plak				Dety.	Federal Excise will be billed
Price	\$0.10T	\$0.10T	\$0.12T					-	FNIK					separate item at
	40.101	30.101	30.121	\$0.10T	\$0.10T	\$0.12T	\$0 10T	\$0 10T	\$0.15T	\$0.15T	\$0.11T	\$0.15T	\$0.22T	of list price.

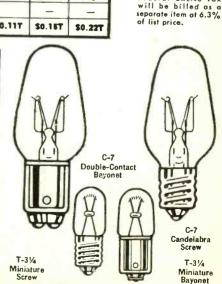
# FUSED QUARTZ INSULATORS FOR CRITICAL ELECTRONIC WORK

1-1

Fused quartz, both clear and translucent, is manufactured by the General Electric Company in rod, tubing and ingot form. This material can also be fabricated into functional shapes to meet most individual requirements. For engineering service on your specific problem, write the G-E Lamp Dept.

Only Fused Quartz Has ALL These Characteristics • stands high temperature • high resistance to thermal shock • low power loss • low surface leakage • high dielectric strength • non-hydroscopic stands high current flashovers without failure • high crushing strength ....

can be machined to accurate tolerances.





# Write G-E LAMP DEPARTMENT, NELA PARK, CLEVELAND 12, OHIO, for complete details or Bulletins

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Hartford 3 Conn	410 Asylum St.
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Jackson 1, Miss	203 W. Capitol St.
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Mabile 13 Ala	.54 St. Joseph St.
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Newark 2 N I	
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Oklahoma City 2 Okla	119 N. Robinson St.
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Peoria 2, 111.	410 Main St.
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Pittsburg, Kan. Pittsburgh 22, Pa.	525 Smithfield St
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Portland 3, Me Portland 7, Ore	920 S W Sixth Ave.
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 3080 Main St.

 Roanoke 11, Va.
 202 S. Jefferson St.

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 202 S. Jefferson St.

 Rochester 4, N. Y.
 89 East Ave.

 Rackford, III.
 110 S. First St.

 Saginaw, Mich.
 128 N. Franklin St.

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 128 N. Franklin St.

 Sat Lake City 9, Utah.
 200 S. Main St.

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 310 S. St. Mary's St.

 San Diego 1, Calif.
 235 Montgamery St.

 San Jose, Calif.
 409 Bank of America Bldg.

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 321/3 S. Phillips Ave.

 Soux Falls, S. D.
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# For high quality For outstanding performance For low cost **D** Electronic Components

Since the Bud line comprises over 2000 different sizes and types, usually you can be supplied from stock instead of having a part specially built for you. Regardless of your requirements, you will save time and money by consulting Bud first. The high quality of Bud electronic components is the result of over 21 years experience in supplying the needs of the radio industry. Our engineering background and production

#### **BUD DE LUXE RELAY RACKS**

These relay racks are made of 16 gauge steel with 1/8" panel supports. The panel mounting supports are recessed so that no edges of the panel will be exposed.

The relay rack is shipped knocked-down and complete with all necessary hardware for assembly. All standard 19" panels will fit these racks.

SPECIAL FEATURE IS THE USE OF FOUR STURDY SUPPORTS ON THE BOTTOM SO THAT CASTERS CAN BE FASTENED DIRECTLY TO THE BASE, THEREBY ACHIEVING READY MOBILITY. Bud RC-7756 casters will fit this unit. Casters are not included in price of cabinet. These relay racks are supplied in either black or grey wrinkle finish. The overall width is 22" and the depth is 1714" on all sizes listed.

Catalog	Overall	Panel	Shipping	Dealer
No.	. Height	Space	Ŵt.	Cost
CR-1774	$42\frac{1}{16}''$	36¾″	90 lbs.	\$28.50
CR-1771	$47 \frac{5}{16}$	42"	100 lbs.	35.45
CR-1772	$66 \frac{9}{16}''$	61 1/4"	135 lbs.	42.30
CR-1773	$82\frac{5}{16}"$	77"	155 lbs.	50.40

#### **BUD "CE" MIDGET CONDENSERS SINGLE SECTION** DOUBLE BEARING



DOUBLE BEARING These Midget Condensers were designed to meet the rigid requirements in design of efficient ultra-high fre-quency electronic devices and precision laboratory equipment. Brass rotor and stator plate stacks are as-sembled into permanent units by means of electro-soldering, which assures long life and accurate plate spacing. End-plates of Steatite insulate the mounting bushings and angles from the rotor and stator assem-blies. A large front sleeve bearing and rear ball thrust bearing pro-vide for smooth rotation. Special wiper contact provides noise-free tuning. All metal parts are cadmium plated. Rotor plates are semi-circular shaped. Provision for either panel or base mounting.

Catalas	Max.	Min.	A !	No.	Over-	D I
Catalog	Cap.	Cap.	Air	of	all	Dealer
Number	MMFD.	MMFD.	Gap	Plates	Length	Cost
CE-2000	15	4	.030"	3	$2\frac{1}{2}$ "	\$1.40
CE-2001	35	6	.030″	7	2 33"	1.55
CE-2002	50	7	.030″	9	2 11 "	1.90
CE-2003	75	8	.030"	14	$3\frac{5}{37}$	2.10
CE-2004	100	9	,030"	18	3 11 "	2.30
CE-2005	150	10	.030″	27	$3\frac{12}{12}$	2.50
CE-2006	200	11	.030″	35	4 Î ⁄ ́ ″	2.85
CE-2007	250	12	.030″	44	484"	3.20
CE-2008	300	15	.030″	52	$5\frac{3}{16}''$	3.40
CE-2011	15	5	.060*	5	2 <sup>8</sup> ⁄4 "	1.60
CE-2012	35	7	.060"	11	314"	1.85
CE-2013	50	8	.060*	15	$3\frac{9}{16}$	2.25
CE-2014	75	10	.060″	23	314"	2.70
CE-2015	100	13	. 060″	31	4 16"	2.95
CE-2016	35	9	.095″	15	4 1 "	2,15
CE-2017	50	10	.095*	23	5 17"	2.45
CE-2018	75	14	.095″	33	6 32"	2.90



#### PIE WOUND R. F. CHOKES

FIE WOUND R. F. CHOKES Each choke has a continuous winding of silk covered enameled copper wire and the pies constituting this winding are wound on a l'a diameter ceramic core. Chokes are made with both strap and wire leads. The CH-876 is a heavy duty choke intended for circuits, such as transmitter plate circuits, where high currents are present. All chokes in this series have an overall length of 1½". Chokes with

Catalog         Inductance         D. C.         Current         Dealer           Number         mh.         Resistance         Rating         Cost           CH-920S         2.5         45 ohms         125 ma         5.42           CH-922S         5.5         60 ohms         125 ma         .50           CH-923S         8.0         72 ohms         100 ma         .60           CH-924S         10.0         78 ohms         100 ma         .63           CH-876S         2.5         16 ohms         250 ma         .65	Cat. No. C-1793 C-1794 C-1795 C-1796 C-1797 C-1798	Height 4" 5" 6" 5" 6"	Width 4" 5" 4" 5" 6" 6"	Depth 2" 3" 4" 4" 6"	$ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 8 \\ 4 \\ 1 \\ 8 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 1 \\ 4 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$
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OF PERFECTION

ALL SHEET METAL PRICES 10% HIGHER WEST OF THE MISSISSIPPI. Send us your blue prints on any special item on which you desire quotation. You will get a prompt reply in complete detail.





you. The Bud catalog gives a complete, concise description of all our products including sizes, applications and prices. Write on company stationery for a copy today. BUD DE LUXE CABINET RACKS

facilities enable us to meet your specifications, give you prompt

Illustrated below are but a few of the many items available to



delivery and lower your cost.

The five large sizes have a hinged rear door, while the small sizes have a welded panel in the rear. There is a recessed, hinged door on the top with a snap catch. These cabinet racks are made of 16 gauge steel and are of sturdy construction. "NO-SCRATCH" EXTENDED METAL FEET ARE EMBOSSED ON THE BOTTOM TO MINIMIZE MAR-RING OF A TABLE TOP. These relay racks are furnished in either black or grey wrinkle finish. Depth 1434", width 22". Will fit standard 19" panels.

Catalog	Overall	Panel	Shipping	Dealer
No.	Height	Space	Wt.	Cost
CR-1741	10 📲	8%4 "	29 lbs.	\$10.05
CR-1740	$12\frac{3}{16}$	101/2"	31 lbs.	11.30
CR-1742	$14\frac{1}{16}''$	1214"	32 lbs.	12.25
CR-1739	15 👬 "	14**	36 lbs.	13.85
CR-1743	19 👬 "	171/2"	40 lbs.	16.77
CR-1727	22 18"	21*	45 lbs.	18.00
CR-1744	28 15"	261/4"	50 lbs.	19.20
CR-1728	$37\frac{7}{16}$ "	311/2"	55 Ibs.	21.20
CR-1745	36 13 "	35″ *	60 lbs.	21.57



**BUD ALUMINUM CHASSIS** 

The construction and design of these chassis is exactly the same as our steel chassis. The aluminum chassis are welders ed on government approved spot welders that are the same as used in the welding of aluminum gimpap parts. The guarge on BUD Aluminum Chassis to do a perfect job for you. Etched Aluminum finish. A few typical sizes shown below.

Catalog Dealer Depth Width Height Gauge Cost

A Street		_			
AC-420	13"	17"	3″	14	2.67
AC-417	11"	17"	3″	14	2.40
AC-408	7"	12"	3″	18	1.14
AC-406	7*	9″	2"	18	.90
AC-402	5"	7″	27	18	\$0.69

### **BUD STEEL CHASSIS BASES**

or Electro-Zinc plated. A few typical sizes are listed below.

Black Wrinkle Cat. No. CB-628 CB-644 CB-789 CB-792 CB-636 CB-660	Zinc Plated Cat. No. CB-629 CB-645 CB-1191 CB-793 CB-637 CB-773	Depth 5" 7" 7" 10" 13"	Width 7" 9½" 7" 12" 17" 17"	Height 2" 2" 3" 3" 3"	Gauge 22 22 20 20 18	Dealer Cost \$0.72 .75 .75 1.05 1.38 2.30
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#### **BUD MINIATURE UTILITY CABINETS** with attached Chassis

Filling a long wanted need for a small cabinet with a chassis attached to the front panel, these cabinets are indispensable when building electronic devices using miniature tubes. Front and rear panels are re-movable and fastened with self-tapping screws, per-mitting easy accessibility. Especially useful for HF converters, television amplifiers and power supplies. Finished in black wrinkle.

CHASSIS SIZE

47%

Cleveland 3, Ohio

Dealer

Cost \$ .95 1.05 1.05 1.15 1.15

1.20

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

# from one reliable source

With the widest line of resistor types in the industry, IRC can supply all your requirements from one reliable source. And because we manufacture all types, our recommendations are unbiased. For more than 20 years, IRC has concentrated exclusively on the design and manufacture of resistors. You benefit by this accumulated experience when you specify IRC.

IRC distributors maintain complete stocks of all standard resistors. A telephone call to your nearest IRC distributor will give you fast, local service on your experimental and maintenance orders.

Complete characteristics and specifications of the resistors shown here are detailed in Catalog Data Bulletin BG-1 through BG-17. Write for the Bulletins in which you are interested.

# INTERNATIONAL RESISTANCE COMPANY

#### 401 N. Broad Street, Phila., Pa.

IN CANADA: International Resistance Co., Ltd., Toronto, Licensee

# FIXED AND

# advanced type BT resistors

Meet JAN-R-11 specifications at 1/3, 1/2, and 1 and 2 watts. Smoll Insulated Composition Resistors, up to 22 megohms in RMA Ranges. Catalog BG-1.

IR)C

IRC

# type BW wire wound resistors

Exceptionally stable and inexpensive for low range requirements. Fully insulated ½, 1 and 2 watts in RMA Ranges up to 8200 ohms. Catalog BG-2.

# new 🗍



type Q

controls



type PR power rheostats

All-metal construction gives unusual heot-dissipating qualities ot 25 and 50 watts. (Type PRT Rheostat meets rigid Army-Navy Specifications AN-3155.) Catalogs BG-7 and BG-8.







### finger-tip controls and switches

Nickel-size, wofer-thin controls with famous IRC element. Rototing cover eliminates knob, shaft, bushing. Catalog BG-9.



# deposited carbon PRECISTORS

Combine occuracy and economy in close tolerance applications. Tiny, lightweight units in wide range of values. Catalog BG-14.



# type MF voltmeter multipliers

Interconnected and encased in sealed ceramic tubes. Completely impervious to humidity. 0.5 meg. to 6 meg. Catalog BG-15.

# VARIABLE RESISTORS

### wire wound potentiometers

Two watt control. 11/4" diameter. Wide variety of rheostat and potentiometer applications. Catalog BG-4.



# type MW wire wound resistors

Flat wire wound resistors, completely insulated and protected. Unique design permits savings in cost and space. Catalog BG-5.



# type MP high frequency resistors

For frequencies above those of conventional resistors. 2 watts to 90 watts. (MPM's are tiny, 1/4-watt units ideal for miniaturization.) Catalog BG-6.



### precision wire wound resistors

Maximum accuracy and dependability in instrument applications. 1% tolerance standard. Variety of terminal types. Catalog BG-10.



type MV high voltage resistors

For use where high resistance and power are required. 2 watts to 90 watts. Variety of terminal types. Catalog BG-11.



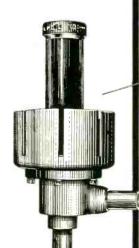
# power wire wound resistors

(Tubular or Flat)

Full range of sizes, types, terminals. Special cement coating resists humidity and aids heat dissipation. Catalogs BG-12 and BG-13.

### type LP water cooled resistors

High-frequency, highpower resistor, cooled by high velocity stream of water. Power dissipation up to 5 KW. 35 ohms to 1500 ohms. Elements interchangeable. Catalog BG-16.





## insulated chokes

Ideal for television and similar circuits. Wide range of size and characteristic combinations permit accurate specification to individual requirements. Inexpensive and versatile. Catalog BG-17.



Wherever the Circuit Says -----

INTERNATIONAL RESISTANCE COMPANY



# ... You Can't Beat BENDIX D.C.MOTORS

M

This new series of fractional horsepower D. C. motors, known as the MA series, has been designed and built to meet the exacting requirements of the aircraft, communications, and electronics industries. The basic design of these motors is the result of years of research and experience in small D. C. motors for many applications, including —

- 1. Servo mechanisms
- Band-change switching
   Recorder drives

4. Telemetering apparatus

- 5. Fan and blower drives
   6. Trim-tab actuators
- 7. Fuel-valve actuators
- 8. Stall warning devices

These motors are available in a variety of voltages, speeds, torques, and horsepower ratings. Frame sizes range from  $1\frac{1}{3}$ " to  $5\frac{1}{4}$ ", producing 1/100 to  $\frac{1}{3}$  horsepower, on continuous duty ratings, with intermittent duty running appreciably higher. Both series and shunt wound motors are available with worms or pinions on the shaft or with plain shaft ends. Forward your specifications to our Engineering Department. We will be glad to recommend the correct motor for your application.

Model	Input Volts	Input Amps.	Rated H.P.	R.P.M. at Rated H.P.	Stall Torque in Ozs.	Rotation	Frame Size	Duty
MA-1A	28	1.25	0.0156	10,500	12	Reversible	1 5/8	Int.
MA-1C	28	0.50	0.0045	3,000	4	Clock	1 5/8	Cont.
MA-1D	14/28	2/2.3	0.020	4,000	10	Reversible	1 5/8	Int.
MA1E	28	0.65	0.0165	11,000	6	C'Clock	1 5/8	Int.
MA-1F	14	2.5	0.0162	10,500	12	Reversible	1 5/8	Int.
MA-1H	14	0.50	0.0045	7,000	6	Clock	1 5/8	Cont.
MA-27A	28	1.25	0.0156	10,500	12	Clock	1 5/8	Int.
MA-11A	28	3.5	0.040	15,000	15	Reversible	1 1/2	Int.
MA-13AX	27	1.0	0.022	3,500	60	Reversible	2 3/4	Int.
MA-22A	26.5	2.0	0.040	5,500	40.5	Clock	2 3/4	Cont.
MA-26A	26	2.0	0.050	4,800	11	Clock	2 3/4	Cont.
MA-25A	150	0.053	0.013	10,000	9	Reversible	2 7/64	Cont.
MA-10A	28	3.0	0.060	6,200	10	C'Clock	3	Cont.

### BANK DIVISION

RED BANK, N. J.

Export Sales: Bendix International Division, 72 Fifth Avenue, New York II, New York

June, 1949 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

RED



# **EXPLOSION-PROOF, REGULATED DYNAMOTOR**





Bendix realizes that today's standards are tomorrow's discards. Our research program is designed to keep *abead* of tomorrow's needs—to produce equipment that is *ready, when* it is needed. Typical of the results achieved by this far-sighted development work are explosion-proof dynamotors, regulated dynamotors, inverters and D.C. motors\* manufactured by Bendix. In addition, Bendix research has produced rotating equipment that will withstand extreme conditions of altitude, temperature, humidity, immersion, shock, and acceleration. To those members of the electronic industry engaged in the design and development of guided missiles, telemetering apparatus, radio, radar, or other electronic devices, we suggest that you call on:

\* Bendix motors meet specification ANM-40.

CHECK AND BE SURE

- Voltage regulation
- Frequency regulation
- Speed control
- High temperature operation
- High altitude operation
- Waterproof construction
- Noise proof (conducted and radiated)

Only Bendix can give you all of these important features.

For immediate information call our Engineering Staff-Red Bank 6-3600. • Staff Members:
W. H. Wells, Director, Sales Engineering K. H. Fox, Chief Engineer
J. J. Korzdorfer, Project Engineer.

RED BANK DIVISION of Red Bank, New Jersey



Dynamotors • Inverters • Convertors • D. C. Motors • Carbon Pille Voltage Regulators



ALL-PURPOSE HOOK-UP WIRES TELEVISION DOWN-LEAD INTER-COMMUNICATION CABLES

"made by engineers for engineers"

WRITE FOR CATALOGUE

# CORNISH WIRE CO., Inc.15 Park RowNew York 7, N. Y.

1237 Public Ledger Bldg. Philadelphia 6, Pa.
1782 North Main Street Los Angeles 31, Cal. 605 North Michigan Ave. Chicago 11, III. 1215 Harmon Place Minneapolis 3, Minn.

# If it's a problem calling for **PRECISION POTENTIOMETERS** Bring it to Helipot

For many years The HELIPOT Corporation has been a leader in the development of advanced types of potentiometers. It pioneered the helical potentiometer-the potentiometer now so widely used in computer circuits, radar equipment, eviation devices and other military and industrial applications. It pioneered the DUODIAL#-the turns-indicating dial that greatly simplifies the control of multiple-turn potentiometers and other similar devices. And it has also pioneered in the development of many other unique potentiometric advancements where highest skill coupled with ability to mass-produce to close tolerances have been imperative.

In order to meet rigid government specifications on these developments-and at the same time produce them economically-HELIPOT\* has perfected unique manufacturing facilities, including high speed machines capable of winding extreme lengths of resistance elements employing wire even less than .001" diameter. These winding machines are further supplemented by special testing facilities and po-tentiometer "know-how" unsurpassed in the industry.

So if you have a problem requiring precision potentiometers your best bet is to bring it to The HELIPOT Corporation. A call or letter outlining your problem will receive immediate attention!

\*Trade Marks Registered

In this Panel are illustrated standard models of HELIPOT multi-ture and single-turn precision potentiometers-available in a wide range of resistances and accuracies to fulfill the needs of nearly any patentiometer appli-cation The Beckman DUODIAL cation The Beckman DUODIAL is furnished in two designs and four turns-ratios, to add to the usefulness of the HELIPOT by permitting easy and rapid reading or adjustment.



MODELS F AND G PRECISION MODELS F AND G PRECISION SINGLE-TURN POTENTIOMETERS Feature both continuous and limited me-chanical rotation. Versatility of designs per-mit a wide variety of special features. F-3.5/16'' dia., 5 watts, electrical rotation 359° -resistances 10 to 100,000 ohms. G-1.5/16'' dia., 2 watts, electrical rotation 356° -resistances 5 to 20,000 ohms. - Ask for Bulletin 105-- Ask for Bulletin 105



v≥rsațility of the poten-ter designs illustrated p≥rmit a wide variety of The and features, iometer le shaft extensions, assemblies, the addition ultiplicity of taps, variaboth electrical and mecal rotation, special shafts mounting bushings, hig low temperature operation, close tolerances on both rena close tolerances on both re-scance and linearity. Examples potentiometers modified for nusual applications are pictured at right.



MODELS A, B, & C HELIPOTS A-10 turns, 46" coil, 1-13/16" dia., 5 watts-resistances from 10 to 300,000 ohms. B-15 turns, 140" coil, 3-5/16" dia., 10 watts -resistances from 50 to 500,000 ohms. C-3 turns, 13-1/2" coil, 1-13/16" dia., 3 watts-resistances from 5 to 50,000 ohms. -Ask for Bulletin 104-

#### LABORATORY MODEL HELIPOT

The ideal resistance unit for use in labora-tory and experi-mental applications. Also helpful in cali-brating and checking test equipment. Com-bines high accuracy and and wide range of 10-turn HELIPOT with

able in eight stock resistance values from 100 to 100,000 ohms, and other values on special order. — Ask for Bulletin 106—



MODELS D AND E HELIPOTS Provide extreme accuracy of control and ad-justment, with 9,000 and 14,400 degrees of shaft rotation.

shaft rotation. D=25 turns, 234" coil, 3-5/16" dia., 15 watts -resistances from 100 to 750,000 ohms. E-40 turns, 373" coil, 3-5/16" dia., 20 watts -resistances from 200 ohms to one megohm. - Ask for Bulletir 104-



MODELS R AND W DUODIALS back model available in standard turns-ratios of 10, 15, 25 and 40 to 1. Inner scale in-dicates angular position of HELIPOT sliding contact, and outer scale the helical turn on which it is located. Can be driven from knob or shaft end.

Manufertu. W=43/4" diameter, exclusive of index. Fea-tures finger hole in knob to speed rotation. — Ask for Bulletins 104 and 114—



**3-GANGED MODEL A HELIPOT AND DOUBLE SHAFT MODEL C HELIPOT** All HELIPOTS, and the Model F Potentiometer, can be furnished with shaft extensions and mounting bushings at each end to facilitate coupling to other equipment. The Model F, and the A, B, and C HELIPOTS are available in multiple assemblies, ganged at the factory on common shafts, for the con-trol of associated circuits.



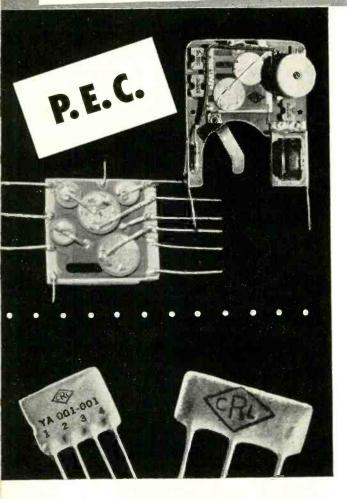


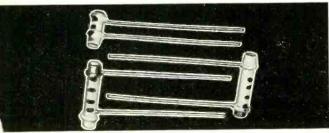
MULTITAPPED MODEL B HELIPOT AND 4-GANGED TAPPED MODEL F This Model B HELIPOT contains 28 taps, placed as required at specified points on coil. The Four-Gang Model F Potententiometer contains of padding resistors to create cestred non-linear potentiometer functions, with advantage of flexibility, in that curves can be altered as required.

#### U CORPORATION, SOUTH PASADENA 7, CALIFORNIA THE

# LOOK TO Centralab

First in component research that means lower costs for the electronic industry.





**CRL Tubular Capacitors.** Negative temperature coefficient *TC Hi-Kaps* are ideally suited to prevent frequency drift in resonant circuits, TV, FM and AM tuners. Also readily adaptable to HF circuits as coupling and blocking condensers where low loss, stable capacity is required. No appreciable change with aging, humidity or temperature—four sizes, capacity from .5 to 2400 mmf., rated at 500 WVDC. *BC Hi-Kaps*, for use where temperature compensation is unimportant. From .000010 to .01 mfd., 500 WVDC. Send for Bulletin 42-3.

# Modernize, Economize on Your Circuit Design with CRL Components

IN MINIATURE circuit design such as hearing aid amplifiers, CRL Printed Electronic Circuits are becoming increasingly popular. First, because of *compact size*; second, *dependable electrical characteristics*; third, *rugged construction*; and fourth, *resistance to humidity*.

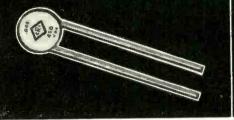
Centralab engineers will gladly show your engineering department how CRL Printed Electronic Circuits can be adapted to your specific needs. Centralab is the *only true* and original producer of printed electronic circuits, integrating resistors, capacitors, inductances and wiring into one unit.

Centralab's *Couplate* is a complete printed interstage coupling plate, consisting of plate load resistor, grid resistor, plate by-pass capacitor and coupling capacitor. For further details get Bulletins 42-6 and 999.

Centralab's *Filpec* combines two capacitors and one resistor into one, tiny balanced diode load filter unit, highly adaptable to a variety of circuits. Saves space, cuts inventory. Write for Bulletin 42-9 for complete specifications.

#### Use CRL Ceramic Capacitors for Television Applications

More and more TV set manufacturers are including CRL's advanced line of TC and BC *Hi-Kaps*, *Disc* and *Hi-Vo-Kap* capacitors in their latest circuit designs. *Reason:* CRL capacitors are made with Centralab's *exclusively* developed Ceramic-X material; afford consistent electrical characteristics, mechanical durability, increased longevity and are impervious to moisture.



**CRL** Disc Capacitors. The miniature, ceramic Hi-Kap disc capacitor, designed for low inductance, low effective resistance at VHF, the best R.F. bypass condenser for TV and FM. Reliability in small size and low weight. Bulletin 42-4.



**CRL Hi-Vo-Kaps.** Principle use — TV video, high voltage power supply. High voltage pulse filter requirement for cathode ray tubes. Also, transmitter low power DC filter. Low power, high voltage power supplies. Bulletin 42-10.

### Centralab Capacitors for other Applications

**High Accuracy** — for rigid frequency control. Capacity tolerance,  $\pm 1\%$  TC tolerance  $\pm 10$ ppm over temperature range: -50 to  $+85^{\circ}$ C. Standard working voltage, 500 D.C. **High Voltage**—capacity tolerance,  $\pm 10\%$ . Five sizes, from 5000 to 15,000 WVDC. Flashover voltage — 10,000 to 30,000 VDC. Current ratings: 1.5 amps to 15 amps, RMS at 30 MC.

Write for information. Trimmers: Four basic types. WV, 500 DC. Flash test 1100 VDC. Power factor, less 0.2% at 1 megacycle. Write for information.

# BUY FROM Centralab

Makers of a complete-line of components for the electronic industry.

**SWITCHES** ... complete line featuring high quality, rugged construction for every type of electronic and industrial application.

Spring Return Rotary Switch: made with coil spring and cam index. 30 degree index, with 10 indexing combinations, permits handling up to three sections. Tested stop-strength of 48 inch pounds. (RMA Standard, 24 inch-pounds). Guaranteed minimum life, 100,000 cycles. (RMA Standard, 10,000 Cycles). Removable coil spring—can be replaced without removing switch from chassis. Bulletin No. 995.

"F" Index: for simple band change or radio-phono operations or general switching applications. V-spring. Life test — 5 positions — 10,000 cycles. "G" Index: ideal for industrial applications. Coil spring replaceable without removing switch. Life test — 5 positions — 250,000 cycles.

"H" Index: (at right) primarily for band change and general tap switch applications. Spring and ball mechanism. Life test—5 positions—10,000 cycles. Tone Switch: 3-4-6-8-9 or 10 clips available in tone switch group. All rated at 6 watts. Contact resistance less than 23/4 milliohms.

Lever Switch: eight basic indexing combinations available. Exclusive coil spring design with cam and roller offers truly long life, (guaranteed minimum life test of 100,000 cycles), and low capacity for all circuit work such as test, inter-com, AF and RF equipment.

**Power Switch:** designed for transmitters, power supply convertors, X-ray equipment, etc. Efficient performance up to 20 megacycles. Life test-25,000 cycles.

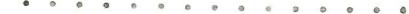
**CONTROLS** . . . low noise level, long life, dependable performance, wide range of possible variations.

**Model 1 Radiohm:** smaller than a dime, for miniature receivers, amplifiers. Rating - 1/10 watt. Shielded from dust, lint, etc. Bulletin 42-7.

Model "R" Radiohm: Two types — wire wound rated at 3 watts, composition rated at 1 watt. Both types can be twinned. Available with AC line switch. Model "E" Radiohm: Composition type. Rubbing contact. Six different resistance tapers. Rated at 1/4 watt. Available with AC line switch.

Model "M" Radiohm: Most versatile control of all. Composition type. Rated at  $\frac{1}{2}$  watt. Can be twinned, tripled — twinned with switch or with concentric shaft.

Switch Covers: Five types for "R" Radiohms; four types for "M" Radiohm; one type for "E" Radiohms. Rated at 3 amp. 125 volts, 1 amp. 250 volts. Rheostots: For commercial use such as small motor speed controls, charging rate adjusters, etc. Two sizes available: 25 and 50 watts.



**CERAMICS** . . . engineered for special industrial and electrical applications requiring specific properties of hardness, coefficient of expansion, porosity. Bulletin 720.

3

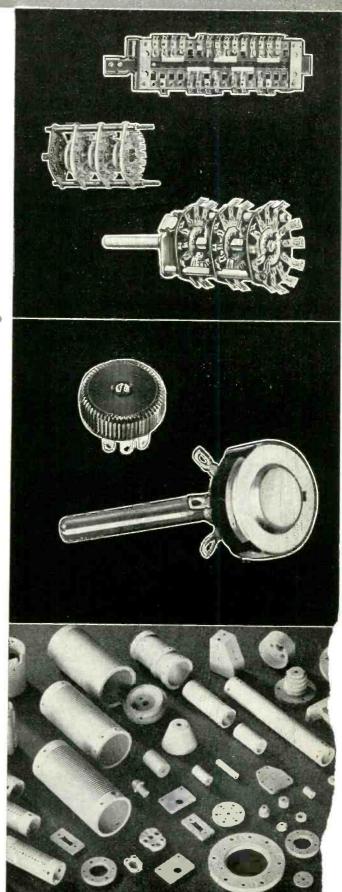
Steatite: Uniform white, high dielectric strength, high mechanical strength, low dielectric loss at high frequencies. Impervious to moisture and common acids, won't warp in use, withstands high temperature, remains stable.

**Centrodite:** For use where low thermal expansion and high resistance to neat shock is desired. Composed chiefly of Cordierite, a magnesium aluminum silicate crystalline material. White in color and low in porosity. Variations available for specific design and production needs.

Zirconite: Low coefficient of expansion. Good thermal shock properties. High strength characteristics. Recommended for extruded or wet-pressed shapes. Variations also available to meet specific needs. Send for information.



Division of GLOBE-UNION INC. Milwaukee, Wis.



Tubes listed on this page can be supplied direct from stock. Many other types are also available for immediate delivery. Write for catalog today. CHATHAM also designs, develops and manufactures special tubes to exact customer specification. Inquiries regarding this service are invited.

HATH



A Xenon filled shield grid thyratron for grid controlled rectifier service. Permits use of high resistance in the grid circuit. Heater 6.3 volts .6 amp.... Inverse peak plate voltage 1300 volts, 100 ma. average plate current.

#### CHATHAM 5594 THYRATRON

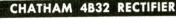
Xenon filled thyratron. Operates through ambient temperatures from  $-55^{\circ}$  C to  $+90^{\circ}$  C without auxiliary equipment to maintain bulb temperature. Fil. 2.5 volts, 5.0 amperes... Peak inverse 5000 volts; anode current 0.5 amps. average, 2.0 amps. peak.

#### CHATHAM 884 THYRATRON

An Argon filled thyratron for use as a sweep circuit oscillator in cathode ray tube circuits. Stable oscillator. Heater 6.3 volts, 0.6 amp....Peak forward plate voltage 300 volts, 75 ma. average plate current.

#### CHATHAM 1846 REGULATOR

A cold cathode glow discharge tube designed for voltage stability. D.C. operating voltage 82 volts —operating current range 1 to 2 mAdc.



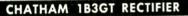
CTRON

BES an

A rugged half wave Xenon filled rectifier. Operates in any position throughout an ambient temperature range of —75° C to +90° C Fil. 5 volts, 7.5 amp....Inverse peak anode voltage 10,000 volts, 1.25 amp. average anode current.

#### CHATHAM 866-A RECTIFIER

A rugged half wave Mercury Vapor rectifier to withstand high peak inverse voltages. Heavy duty filament. Fil. 2.5 volts, 5.0 amp.... Peak inverse anode voltage 10,000 volts, .25 amp. average anode current.



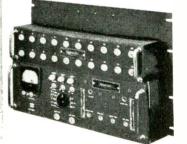
High voltage vacuum rectifier for Television and similar applications. Low filament power permits efficient operation from R.F. supply. Filament 1.25 volts, 200 ma. . . Inverse peak plate voltage 30,000 volts, 2 ma. average plate current, 17 ma. maximum plate current.

#### CHATHAM 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 Fil. 2.5 volts, 5.0 amp.... Inverse peak anode voltage 10,000 volts, .25 amp. average anode current.

#### CHATHAM 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. Fil. 1.25 volts, .265 amp. . . . Inverse peak plate voltage 15,000 volts, 2 ma. average plate current, 10 ma. peak plate current.



• Pulse life test equipment built by CHATHAM checks receiver type tubes under pulse operating conditions.

## CUSTOM BUILT ELECTRONIC EQUIPMENT

CHATHAM specializes in the development, design, and construction of custom-built electronic equipment to exactly meet customers' requirements. Our capable staff of engineers will furnish prompt estimates or, if desired, will call to discuss your problem personally. Call or write today for complete information.

Write today for the informative CHATHAM catalog. For free copy address requests on company letterhead — no obligation.



• 5 Megawatts radar modulator built by CHATHAM to rigid government standards.



# Fansteel PRODUCTS and SERVICES

Fansteel makes Tantalum, Tungsten and Molybdenum in rod,



for electronic tubes,

especially those used at ultra-

high frequencies...Electrical Contacts 77 of tungsten,

molybdenum, silver, platinum and special alloys...complete

**Contact Assemblies** 



for every make-and-break service,

Selenium Rectifiers – complete power units,



and sub-assemblies - for supplying direct current ... Copper-

base Alloys in rods, bars, forgings, castings and special shapes

## for soldering tips and



resistance welding electrodes.

More and more electronic engineers are turning to Fansteel for help while designs are still in the blueprint stage. They have learned that Fansteel experience and Fansteel services are particularly helpful on unusual applications . . . Fansteel Metallurgical Corporation, North Chicago, Illinois.





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 irans 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 \$6.95, No. 58-200 watt \$8.95, No. 78-300 watt \$10.95 and No. 98-550 watt \$12.95. 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 temperoture. Diameter of handle is  $\frac{3}{4}''$  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  $C = \gamma_{B}^{\prime\prime}$  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 \$4.95. Tips A, B, or C 30¢ 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 \$4.50 Model No. 36-21/4 lbs cap. 250 watt Net \$5.50

Model No. 60-3<sup>3</sup>/<sub>4</sub> lbs cap. 325 watt Net \$6.50



### **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; Cot. No. 6, irons 1" to 15/8" dio. tips. List price \$6.50.



**ELECTRIC SOLDERING IRON CO., Inc.** Deep River, Conn., U.S.A.

3849 West Elm Street

# INKLESS RECTILINEAR **Direct Writing** RECORDERS



with extremely high torque movement (200,000 dyne cms), ruggedly built and producing clear, permanent records.

Sanborn Direct Writing Recorders offer these advantages, plus performance characteristics (see table below) that make them outstandingly useful in a wide variety of industrial recording

userul in a wide variety of industrial recording applications. Whenever a phenomenon or action lends it-self to transformation to an electrical quantity, and whether the variation is steady or of a pulse type, these Recorders (with associated amplifiers) can be used for immediate, direct, continuous registration.

registration. Typical applications, actual and potential, in-clude: temperature changes, automotive noise and vibration, varied output of strain gages and bridges, lightning and earthquake recording. pressure variations, audio frequency response.

pressure variations, auto frequency response, and many others. Recording paper (Sanborn Permapaper) is heat sensitive - eliminating ink - yet clear and perma-nent. Trace is rectilinear - no curvature, no nega-tive time intervals-yet with totally negligible

tive time intervals—yet with totally negligible tangent error. Sanborn Recorders are available in self-con-tained, portable recording outfits, complete with cases and controls, or in component form for integration with existing equipment. Associated amplifiers are also available.

TABLE OF CONSTANTS

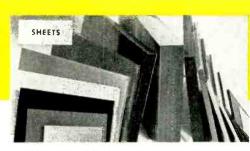
Sensitivity 10 ma/1 cm. Coil resistance 3,000 ohms, center tapped for push-pull operation. 500 ohms. Undamping resistance 500 ohms. Undamped fundamental frequency 45 cycles/sec. Stylus heater requires from external source 1.25 volts, 3.5 amps, AC or DC. Maximum undistarted deflection 2.5 cm. each way from center. 10 ma/1 cm.

1.25 volts, at

trom center. Marker requires from external source 1.5 amps, AC or DC. Paper speed Chart ruling 25 mm/sec I mm intervals

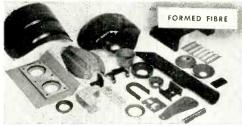


# **Chenolite** Part se solution hat ulation oblem\*"









To help you solve your specific development problem-available without obligation-National Research and Engineering Service.

\*Required:

A material with very high insulation resistance under all atmospheric conditions — with good mechanical strength and ready machinability. Phenolite, laminated plastic, with all these qualities, plus-was the perfect answer.

In your development of efficient, economical products, it pays to investigate

About one-half the weight of aluminum, possesses an unusual combination of properties-a good electrical insulator, great mechanical strength, high resistance to moisture; ready machinability. Sheets, Rods, Tubes, Special Shapes.

A tough, horn-like material with high dielectric and mechanical strength. Excellent machinability and forming qualities, great resistance to wear and abrasion, long life, light weight. Sheets, Rods, Tubes, Special Shapes.

The first fish paper developed for electrical insulation. Strong, smooth, flexible, with excellent forming qualities. High dielectric strength. Sheets, Rolls, Coils.







#### NATIONAL VULCANIZED FIBRE COMPANY WILMINGTON DELAWARE

**Offices in Principal Cities** 



Since 1873



WIDE BAND, FAST SWEEPS



\$845 f.o.b. Portland Tektronix Type 511-AD Oscilloscope

The Type 511-AD, with its 10 mc, amplifier, 0.25 microsecond video delay line and sweeps as fast as .1 microsec./cm. is excellent for the observation of pulses and high speed transient phenomena. Sweeps as slow as .01 sec./cm. enable the 511-AD to perform superlatively as a conventional oscilloscope. The identical instrument without the video delay line is known as the Type 511-A, price \$795, f.o.b. Portland.



\$950 f.o.b. Portland Tektronix Type 512 Oscilloscope

**DIRECT COUPLED, SLOW SWEEPS** The Type 512 with a sensitivity of 5 mv./cm.DC and sweeps as slow as .3 sec./cm. salves many problems confronting workers in the fields where comparatively slow phenomena must be observed. Vertical amplifier band-width of 1 mc. and sweeps as fast as 3 microsec./cm. make it an excellent general purpose oscilloscope as well.

**Both Instruments Feature:** 

- Direct reading sweep speed dials. Single, triggered or recurrent sweeps
- Amplitude calibration facilities.
- All DC voltages electronically regulated.
- Any 20% of normal sweep may be expanded





IRN

# magnetic iron powders

**MEPHAM** hydrogen reduced

IRN magnetic iron powders (Mepham hydrogen reduced) are available in 10 different types for high-frequency cores, core material, tele-communication and magnetic applications. ... All are described in a revised technical bulletin, containing 28 pages of comprehensive data, including performance graphs and engineering reference material of value to designers, manufacturers and users. Your copy of this bulletin will be mailed on request.

> Metallurgical and Electronic Division C. K. WILLIAMS & CO.

> > .

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. June, 1949 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

East St. Louis, Ills.

# **Precision Components**

# FOR THE ELECTRONIC INDUSTRY





**RF Power Supply Coll** 

**MISCELLANEOUS COMPONENTS** 



:19 RF Power Supply

#### TRANSFORMERS

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ransformers

**Output Transformers** 

2

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Dutput	US
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Adulation	
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Plate	Oscille
Power	Loop
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Pulse	
Auto-Stepdown	R-F In
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4.5 mc

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ower Supply Coil-to

formers including midget, high fidelity and Hermetically-seoled Transformers.

	USE OF THE FOLLOWING	420 mmf RMA STANDARD GANG 365 mmf RMA STANDARD GANG						35 mmf		
SUPER ELECTRIC	SUPER ELECTRIC	τι	INING RAI	NGE	ти	TUNING RANGE				
	COMPONENTS Indicated by dots	535- 1620 kc	1.6- 5.6 mc	5.6- 19.25 mc	535- 1620 kc	2.0- 6.0 mc	6.0- 18.0 mc	88- 112 mc		
	Oscillator Coil	•		•	•	•	•	•		
-	Loop Antenna	•			•					
	Antenna Coli	•	•	•	•	•	•			
	R-F Interstage Transformer	•	•	٠	•	•	•	•		
	Band Pass Antenna Coil (Double Tuned)	•			•					
	Band Pass R-F Coil (Double Tuned)	•			•					

#### LOOP ANTENNAE COILS FOR USE WITH STANDARD R.M.A. 420-420 mmf VARIABLE CONDENSERS 1. Multi-Band Combination Loop Antenna Radio Back 2. Broadcast Loop Antenna and Radio Back Combination

- 3. High Q Loop Antenna, Polyethylene Insulated Wire
- 4. Basket Weave Loop Antenna



Super's craftsmanship and technique, garnered over sixteen years of manufacturing experience, are your guarantee of the finest in electronic components.

Part No.	Туре	Coñform Dimensions	Coilform Material	Basic Capacity Range	Oscillator Padder	Oscillator Trimmer	Freq. Range
ÓC-200 AC-200	Oscillator Antenna	1/2 OD x 1-1/4 lg. 5/8 OD x 1-1/2 lg	Kraft Kraft	47.5-467.5 mmf 47.5-467.5 mmf	127.6 mmf	15.1 mmf	135-400 KC
OC-13 AC-13 RC-13 RF-13 L-13	Oscillator Antenna RF Interstage T. R. F. Loop Antenna	1/2 OD x 1-1/4 lg. 5/8 OD x 1-1/2 lg 5/8 OD x 1-1/2 lg 5/8 OD x 1-1/2 lg Various	Kraft Kraft Kraft Kraft Kraft	52.5-472.5 mmf 52.5-472.5 mmf 52.5-472.5 mmf 52.5-472.5 mmf 52.5-472.5 mmf	490.5 mmf	12.3 mmf	535-1620 KC
OC-65 AC-65 RC-65	Oscillator Antenna RF Interstage	1/2 OD x 1-9/16 lg 1/2 OD x 1-9/16 lg 1/2 OD x 1-9/16 lg 1/2 OD x 1-9/16 lg	Bakelite Bakelite Bakelite	37.3-457.3 37.3-457.3 37.3-457.3	1168.5 mmf	3.0 mmf	1.6-5.6 MC
0C-101 AC-101 RC-101	Oscillator Antenna RF Interstage	1/2 OD x 1-9/16 lg 1/2 OD x 1-9/16 lg 1/2 OD x 1-9/16 lg	Bakelite Bakelite Bakelite	37.3-457.3 37.3-457.3 37.3-457.3	4666.0 mmf	1.6 mmf	5.5-19.2 MC
1-F TRA	NSFORMERS	IF-10B Input 455 KC IF-11B Output 455 I			ard sizes and	l miniature	:5

#### STANDARD F-M COILS

1-F 10.7 mc (3/4" x 3/4" and 1 1/4" Square Can) COMBINATION AM-FM I-Fs, 455 kc and 10.7 mc

In addition to the components described, SUPER will build to customer specification.

SUPER ELECTRIC PRODUCTS CORP., 1057 SUMMIT AVENUE, JERSEY CITY 7, N. J.

# ALLIED'S RELAY GUN

#### ADDITIONAL FEATURES

I. Available with Standard Ceramic Insulation.

2. Available with bakelite base and ecrew terminals. 3. Available hermetically sealed.

4. Available with auxiliary contacts.

5. Available for low capacity.

6. For intermittent operation only.

7. Available in doublepreak contact arrangement. 3 Available with ceramic nsulation only.

9. Listed by Underwriters' Laboratories, Inc.

0. Designed to handle a maximum of 75 watts of radio frequency up to 150 megacycles when inserted in a propedly terminated 52 ohm line.

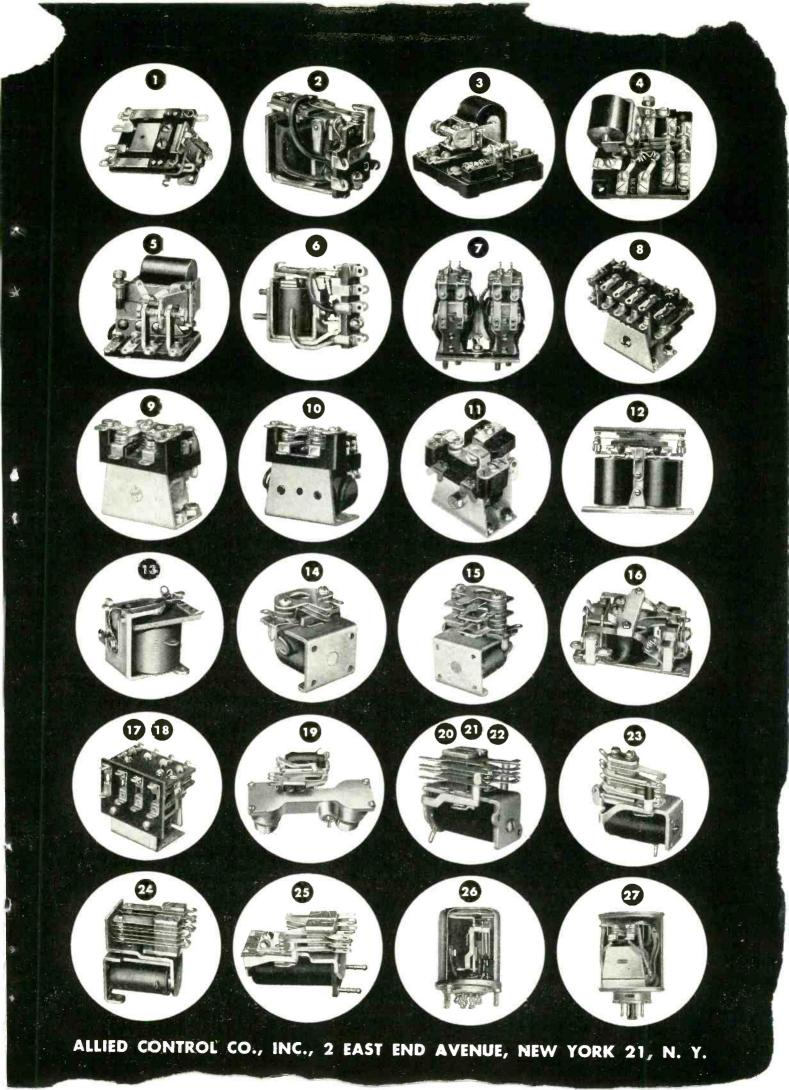
NOTE 1.

Minimum coil data applies where shock and vibration are not a factor.

#### NOTE 2.

Maximum coil data based D∎ 85°C rise above 20°C ambient for continuous operation except for mercury type relay which are based or 65°C ambient.

											in the second se			
P	WEATHING PARAMACON	D.P.D.T.	COIL DA VOLT-AC.	AMPER OR W	ATTS	WAT 0, C. C.	WET PAN	THE YOLIS	DIME	NSIONS	Welch	IN OUNCES		
"LI	PARK PC	PAC PAIN	TIOZ	1		6	TH WS	202	L	4		OUN		
	PARPICES HPE	MENT 10271	CURREN	MINIMU	PATEO	HAINE	NO OF	OIS	Hele	WID WID	LENG.	TI ES		
	$ \rightarrow $		14	AC	5.2	6.5	10.5	1380	230					
0	AH	D.P.D.T.	5	DC	0.15	1.0	5.0	8000	90	I-3/8	1-19/32	2-3/8	3-1/2	-
2	AS	S.P.D.T.	5	AC DC	2.5 0.5	3.5 1.0	5.0 4.6	3500 3485	230 60	1-3/16	15/16	1-5/8	2	3
3	В	S.P.D.T.	1	AC	0.09	0.12	9.5	12000	110	1-3/4	2-3/8	2-3/4	7	2
9	D	3, F.D.1,			0.009	0.012	4.9	12000	12	1-3/4	2-3/0	2-9/ T		
4	BK	D.P.D.T.	L	AC DC	.190 .019	.24 .024	9.5 4.9	12000	150 18	1-21/32	2-5/8	2-5/8	7	2
6	BG	S.P.D.T.	2	DC	.011	.05	4.8	5000	16	1-1/4	1-3/4	1-3/8	2-3/4	3
6	BJ	D.P.D.T.	5	AC	2.8	3.5	7.3	3370	220	1-9/16	25/32	2-5/16	2-1/4	1, 2,
				DC	1.0	2.0	5.5	3370	82					3, 7
0	BJU	ELECT, LATCH 4.P.D.T.	5	AC DC	3.6 2.8	9.0 3.5		3370 3370	220	1-15/16	I-7/8	1-9/16	6-1/2	6
8	BN	6.P.D.T.	10	DC	1,5	3.5	8.0	4460	125	2-9/16	3	1-23/32	Н	2, 7
				AC	3.6	4.5	10.0	2675	250	1.7/0	1 12/22	1-5/8	4	2, 3,
9	BO	D.P.D.T.	15	DC	1.5	2.5	5.7	5000	112	1-7/8	1-13/32	1-5/0	4	7
10	BOY	D.P.D.T.	15	DC	.50	.75	7.2	10000	87	1-7/8	1-13/32	1-5/8	5	2, 3, 7
Ð	CN	S.P.S.T.	50	AC	7.2	9.0	14.0	700	230	2-1/2	2	2-1/4	9-1/4	
		N.O. OR N.C. DIFFERENTIAL	1	DC	1.0	3.5	8.5	4460	125	-				
12	DS	D.P.D.T.	5	DC	.04	.05	5.0	8000		1-13/16	1-3/16	2-3/8	7	3
B	E	S.P.D.T.	1	DC	0.5	.75	3.0	3100	55	15/16	1-1/16	1-1/16	1	
14	FID	S.P.S.T.	2	DC	.08	.20	4.5	4900	31	1-3/8	1-3/16	1-3/8	2	
13	F6D	D.P.D.T.	2	DC	.75	1.0	4.5	4900	70	1-11/16	1-3/16	1-3/8	2.5	
16	HRX	3.P.D.T.	15	AC	5.2	6.5	12.0	1800	230	1-1/2	2-11/16	1-5/8	6-3/4	8
•		3.1.0.1.		DC	1.5	3.0	7.0	4420	115	1-1/2				
Ð	PO	3 & 4.P.D.T.	15	AC	8.0	10.0	17.2 8.2	870 5000	230	2-1/4	3.P.D.T. 1-5/8	1-7/8	7	2, 3, 7
13	POY	3 & 4.P.D.T.	15	DC	0.6	1.0	8.0	10000	110	2-1/4	4.P.D.T. 2-3/16	1-7/8	7	2, 3, 7
	P.A.	CO-AXIAL	1.25	DC	0.5	1.5	5.0	2000	55	2	2-7/8	1-3/4	4	4,10
D	RA	S.P.D.T.	R.F.	DC	0.5	1.5	5.0	2000	55	4	2-770	1-3/4	7	
20	SK-C-C	D.P.D.T.	1	DC	.340	2.5	4.2	4500	110	1-5/16	31/32	1-7/16	2.0	1, 3, 5
2	SK-CC-C	3.P.D.T.	I	DC	.545	2.5	4.2	4500	110	1-1/2	31/32	1-7/16	2.1	3
22	SK-CC-CC	4.P.D.T.	1	DC	.755	2.5	4.2	4500	110	1-1/2	31/32	1-7/16	2.5	3
23	TSL	D.P.D.T.	Т	DC	0.5	1.0	5.0	2000	55	1-9/16	1-3/16	11/16	1	1, 5
24	PR	4.P.D.T.	10	AC DC	4.8	6.0 2.5	13.0 7.5	620 5700	220 110	2-1/16	I-7/8	1-1/8	5	3,7
25	LK	6.P.D.T.	2	DC		.65	7.0	5200		1-5/8	1-3/32	2-7/32	4	1,3
23	SKH		F	lerme	tically	sealed	] relay	— da	l ta sam	e as SK	1		1	1
27	воно		ŀ	lerme	tically	sealed	relay	da	ta sam	e as BO				



## Kollsman offers additional AC units for remote indication or control applications

SYNCHRONOUS MOTORS-for timing applications where variable loads stay in exact



synchronism with constant or variable frequency source. Synchronous power output up to 1/100 H.P.

MOTOR DRIVEN IN-DUCTION GENERAT-**ORS** — combination of a 2-phase, hightorque, low-inertia induction motor and an induction generator. Used as a fast



reversing servo motor. Available with maximum stall torques of 1.0 (unit shown) to 6.7 (other units) oz/in.



**SYNCHRONOUS** DIFFERENTIAL UNITS-electromechanical error detector with mechanical output for use in position or speed control servo

half speed synchroscope. Small combination unit with two variable fre-

quency synchronous motors and differential gearing. Output: Speed =  $\frac{N_1 - N_2}{2}$ ; torque up to 1.0 oz/in.

DRAG CUP MOTORS - miniature 2-phase motors with high torque/inertia ratio and extremely fast stopping, starting and reversal characteristics. Suitable for many special applications requiring torque of 0.4 oz/in. or less.





TELETORQUE UNITS -precision built selsyn type units for remote indication. Accurate to ±1 degree. Actuated by units producing as little as 4 gr/cm of torque.

GEARED INDUCTION MOTORS-miniature 2-phase servo motors with gear reducer. Desirable motor features: Maximum torque at stall with low wattage input and 'high torque/ inertia ratio. Gear re-



ducer conservatively rated at 25 oz/in. Maximum torque with gear ratios from 5:1 to 75,000:1 available.

Because of their high responsiveness and precision, Kollsman Special Purpose Motors are particularly suited to systems requiring extremely accurate remote indication or positive electronic control. The units shown above are only representative of a complete line which includes many similar units in various voltages and frequencies. Among them, the instrumentation or control engineer will find, in many instances, the device that fills his specifications exactly.

Reliable performance, light weight and compact size are characteristics of the entire line. In each unit is to be found the same ingenuity of design and care in manufacture that has for twenty years made Kollsman the outstanding leader in the field of aircraft instrumentation.

For full information on any or all of these Special Purpose Motors, write to: Kollsman Instrument Division, Square D Company, 80-64 45th Avenue, Elmhurst, N. Y.



### **HEINEMANN ELECTRIC COMPANY**

**150 PLUM STREET** 



TRENTON, NEW JERSEY

Agents in Most Principal Cities

#### SHORT CIRCUIT and OVERLOAD PROTECTION

, Fully Electro-Magnetic Circuit Breakers–Instantaneous and Time Delay Types

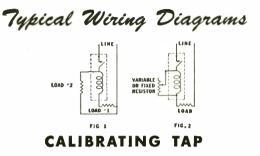


Figure 1 illustrates two separate loads wired to a single pole calibrating tap Circuit Breaker. Both load #1 and load #2 are disconnected when an overload occurs in load #1.

Figure 2 illustrates the use of a variable or fixed resistor in parallel with the trip coil to gain an adjustable variation in the rating or different fixed ratings giving a wide range of calibration of the tripping point.

Innumerable combinations can be obtained by use of 2 and 3 pole Circuit Breakers.

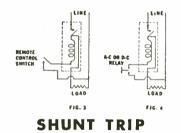
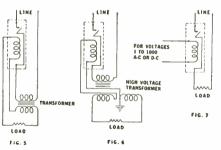


Figure 3 illustrates a shunt trip Circuit Breaker that can be tripped at some remote station.

Figure 4 illustrates a shunt trip Circuit Breaker that can be operated by an AC or DC relay operating a set of contacts upon which the line voltage is impressed.

These Circuit Breakers must be reclosed manually.



#### **RELAY TRIP**

Figure 5 illustrates a relay trip Circuit Breaker protecting a transformer by limiting the current in the secondary. When the Circuit Breaker is tripped the primary of the transformer is open circuited.

Figure 6 illustrates a relay trip Circuit Breaker protecting a high voltage transformer by having the relay coil inserted between the two secondary windings at the grounded terminal. When the Circuit Breaker is tripped the primary of the transformer is open circuited.

Figure 7 illustrates a relay trip Circuit Breaker operated by an independent source of current, either AC or DC, and for voltages of 1 to 1000.

#### Circuit Breakers

in ratings from 50 milliamperes to 50 amperes operating on circuits to 460 volts AC or 250 volts DC.

A complete line of circuit breakers furnished in both Instantaneous Trip and Time Delay types. The former trips instantly on short circuits and sudden overloads, opening the circuit even before an ammeter could indicate the amount of current.

The Time Delay Type also opens instantly on short circuits but eliminates unnecessary opening of the circuit on harmless overloads of short duration such as that caused by inrush current when starting motor.

Time delay breakers are available in any one of 3 inverse time delays that match the characteristics of almost any circuit. The magnetic trip unit is hermetically sealed to prevent tampering. All breakers are calibrated, set and adjusted at the factory.

These breakers are available in single, two and three pole designs as illustrated; bakelite enclosed or in steel cabinets or explosion proof housings.

Send for NEW Catalog with complete engineering data.



**1 Pole Breaker** 



2 Pole Breaker



**3 Pole Breaker** 

37



More and more electronic equipment and appliance manufacturers are looking to "Rome" for their wire and cable requirements. That's because in the "Rome" organization they have found ...

Product engineers who know and understand electronic wiring problems . . . plus an eagerness to study a customer's particular requirement and come up with the right answer.

A broad scope of research and manufacturing facilities, with the "know-how" of developing and producing quality wires and cables that best serve the customer's needs.

Dependable and courteous service.

#### Rome Synthinol and Rome Hi-Temp

Rome hook-up wires are especially designed for the chassis wiring of radio and electronic equipment. They are regularly manufactured in two types of insulation: Rome Synthinol<sup>\*</sup> is a polyvinyl chloride type of thermoplastic compound, impervious to oils, acids, alkalies, moisture and flame, conforming to all requirements of Underwriters' Laboratories for 80°C appliance lead wires-300 and 600 volt ratings. Rome Hi-Temp is a rubber insulated type, possessing high resistance to heat and moisture and approved by Underwriters' for 75°C ap-pliance lead wire use at 300 and 600 volt ratings.

#### RoTran

#### **Radio Frequency Transmission Line**



RoTran is particularly designed for minimum signal loss and maximum freedom from distortion of reception. The satin-smooth polyethylene insulation is practically unaffected by moisture, weath-

ering, oxidation, corona, and most chemicals, thus avoiding subse-quent impedance discontinuities. For 300 ohm RoTran conductors are #20 AWG stranded (7x#28) bare copper separated and incased in a flat pigmented polyethylene cover. It is available in either a two or three conductor type.

#### Kome Magnet Wire

Rome Magnet Wire is of exceptionally high quality. Every step is rigidly controlled from the rolling of the copper bar through the application of the insulation to insure a product that is free from all surface blemishes . . . all traces of oil and grease . . . that the temper is dead soft - that the insulation is uniform and true to dimensional tolerance. It is available in round, square and rectangu-lar types and with insulation of cotton, paper, glass and asbestos.

#### **KOME** Flexible Cords

Rome Flexible cords are manufactured in a wide selection of types, sizes and insulations. They are available with insulation and outer jacket of rubber or Rome Synthinol\* Thermoplastic compound in heavy, medium and light duty types. They are designed and manu-factured to meet the highest electrical and mechanical standards for the particular service intended for each type.

#### Kome Army-Navy Hook-Up Wires

Rome Cable also manufactures a complete range of Army-Navy approved hook-up wires conforming in every respect to joint Army-Navy specifications and JAN-C-76.

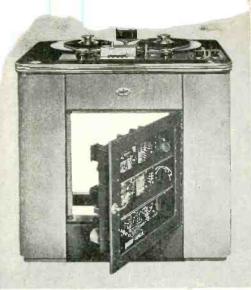
#### **Rome Special Electronic Wires and Cables**

In addition to products listed above Rome Cable regularly manu-factures for the electronic industry: Shielded cables for sound and radio – Low capacity microphone cables – Special control and signal cables. If your needs cannot be met by Rome's regular line of wires and cables, our engineers will be glad to work with you in developing cable constructions which fit your special requirements. Our research personnel, with experience and training in the elec-tronics field, has modern laboratory and manufacturing facilities with which to find the right answer for your particular problem. On all your electronic wiring needs it will pay you to consult Rome Cable. Cable.

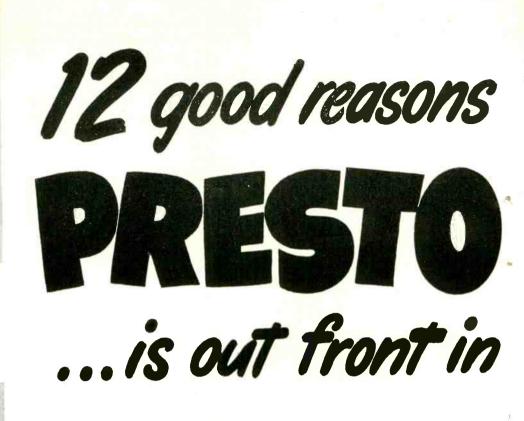


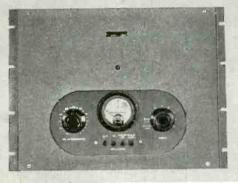


ELECTRONICS BUYERS' GUIDE --- June, 1949 --- MID-MONTH



PRESTO STUDIO TAPE RECORDER . . . Measures up to most exacting requirements, yet priced moderately. Many features: three motors and three heads; frequency response 30 to 15,000 cps 1 db; signal to noise ratio — over 60 db below max. signal; fast speed, 240 ft. per second forward and rewind, instantly reversible; everything mechanical and electrical serviced from front and top.





92-A RECORDING AMPLIFIER. Vertically mounted chassis, all circuits easily accessible. A 60 watt amplifier, output stage has four 807's in push-pull parallel. Pushbutton selection of recording characteristics: flat (20-17,000 cps  $\pm \frac{1}{2}$  db), 78 rpm, standard NAB lateral, NAB vertical. Distortion only  $1\frac{1}{2}$ % at full output. Selector switch and meter provide output levél indicator and plate readings for all tubes.



THE 90-B PORTABLE RECORDING AMPLIFIER unit incorporates the following: three channel mixing pre-amp. and line input — response: NAB, 78 rpm, and flat (30-15,000 cps)—high and low frequency equalizers—outputs for one or two turntables or a line. Provision for automatic equalization.



64-A TRANSCRIPTION TURNTABLE, with many exclusive features, is directly gear driven at both  $33\frac{1}{3}$  and 78 rpm, using a separate motor for each speed. Completely eliminates error in total speed regulation, reduces mechanical disturbances to a new minimum. Double throw mercury switch changes speeds. At  $33\frac{1}{3}$  rpm full turntable speed is reached within about  $\frac{1}{8}$ revolution.



6-N RECORDER (16") has proven ideal for most broadcast stations and recording studios because of its high quality and relatively economical cost. It is supplied in carrying case for portable and remote assignments as well as in a cabinet. Its design is of the conventional rim driven type with overhead feed mechanism.



89-A POWER AMPLIFIER is a high fidelity, medium power unit for recording or monitoring use. 25 watt output, all stages are push-pull and sufficient feedback is provided to produce a low output impedance and general performance of the 807 type tubes superior to that of triodes. Chassis constructed for vertical rack mounting, all circuits accessible. Meter and selector switch indicate output level at 1000 cps and current readings of all tubes.

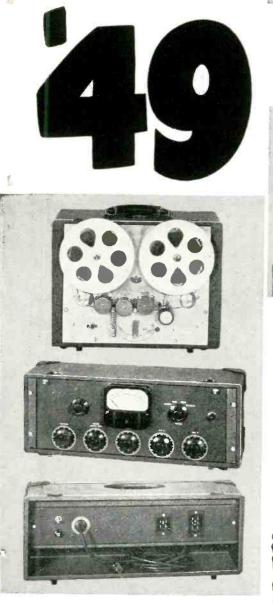


41-A PEAK LIMITING AMPLIFIER controls program peaks, removes cause of overcutting and distortion in recording and overmodulation in broadcasting. Serves simultaneously as a line amplifier; its 60 db gain adequately compensates for line losses due to pads, equalizers, etc. Vertically mounted chassis, all circuits accessible. Meter and selector switch indicate amount of limiting and current readings of all tubes.



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2



PORTABLE TAPE RECORDER 900-P . Complete in two easily portable cases. Includes three heads for superior performance, three microphone channels in amplifier, Weston type V. U. meter, 2-speed single motor drive. New, and the finest recorder of its type available anywhere.

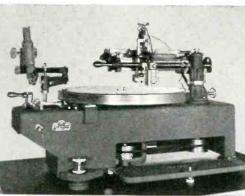
World's largest manufacturer of instantaneous sound recording equipment and discs.



66-G RECORDER (Standard and Microgroove) combines the best features of Presto's dual-motor gear drive with the overhead mechanism and turntable of the famous Presto 6-N. This combination lists at \$996 for standard, (\$70 additional for microgroove), and gives perfect total speed regulation and very low mechanical disturbance.



65 PLAYBACK ("PRESTO EXECUTIVE") especially designed for use in advertising agencies. It is a complete high fidelity transcription playing unit with 16" turntable, 12" speaker, high fidelity amplifier and lateral reproducer for both standard and microgroove recordings. Microphone input for auditioning live talent. (Microphone extra equipment.)



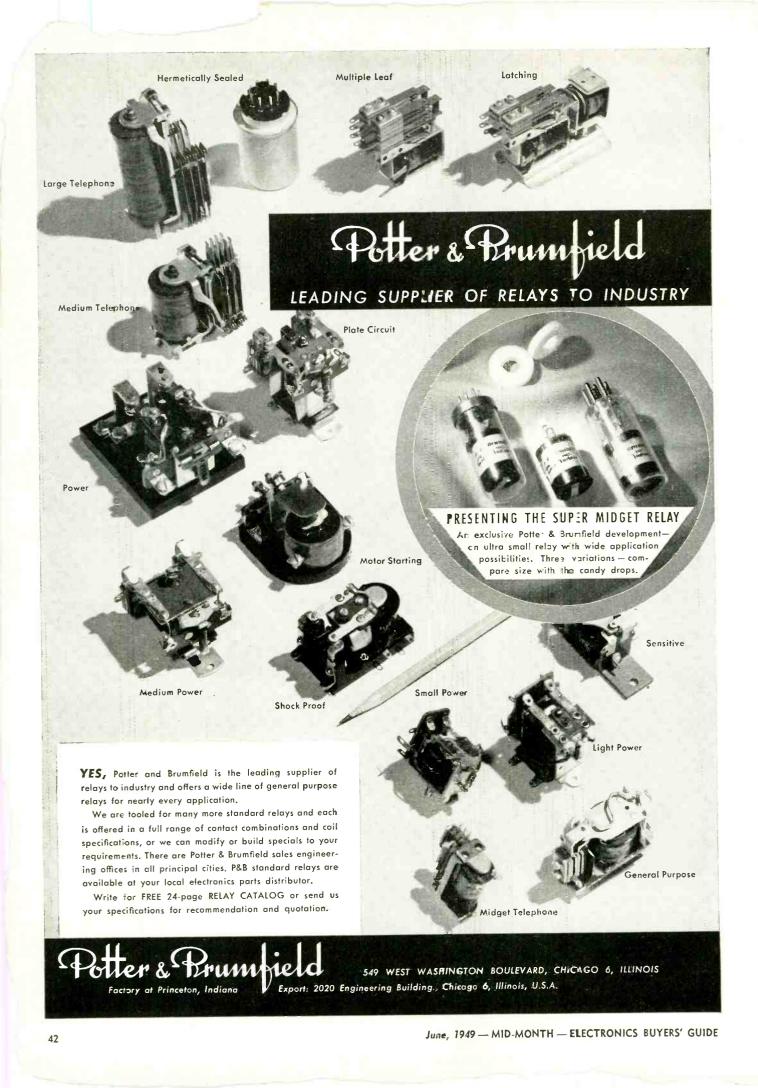
8D AND 8D-G RECORDERS (16") are of unusually heavy construction and include such features as a cantilever type overhead, reversing gear on the feed screw and belt driven feed with 7 different feed pitches in each direction. 8D is a conventional rim driven unit; 8D-G, directly gear driven at  $33\frac{1}{3}$  and 78 rpm by Presto's exclusive dual-motor drive mechanism which eliminates total speed variation and greatly reduces mechanical disturbances.



More than fifteen years ago, Presto developed the first lacquer-coated recording disc. Today Presto's instantaneous recording and master discs are the finest known to the trade.

WRITE TODAY to be put on our maining is to me PRESTO RECORDER, new house organ of practical ideas for anyone in the recording and broadcasting field.

**RECORDING CORPORATION** Paramus, New Jersey Mailing Address: P. O. Box 500, Hackensack, New Jersey In Canada: WALTER P. DOWNS, Ltd., Dominion Square Bldg., Montreal



# **DRIVER-HARRIS** Your dependable dependable source for

## Wire and Ribbon **Resistor and Radio Alloys**

ALLOY WIRE

#### FOR RESISTANCE

There are Driver-Harris Alloys for every electrical resistance requirement. Most widely used are:

. . . Nichrome\* and Nichrome\* V, for winding large value resistors where overall size is limited, but dependability is a must.

. . . Mongonin, for fixed stability and constant resistance under normally variable operating conditions; examples being precision bobbins, potentiometers, National Bureau of Standards type resistance standards.

potentiometers, National Bureau of Standards type resistance standards. ... Advance\*, most frequently specified for precision resistors in electric meters and laboratory testing devices, because in its finer sizes it has a temperature coefficient of only ±.00002/°C. ... Kormo\*, high ohmage, 800 ohms/cmf at 20°C., makes possible extremely small resistors. Especially suitable for service in resistors requiring negligible temperature coefficient of resistance. Thermal e.m.f. against copper only .002 millivolts /°C. between 0°C. and 100°C. Where mechanical strength is important, larger diometer Karma wire can be used for a given resistance per foot

used for a given resistance per foot. ... Plus a total of more than 80 *electrical heat and corrosion-resistant* alloys which singly, or in combination fill any electrical resistance specifications.

#### FOR RADIO

Always abreast of the latest developments in radio metallurgy, Driver-Harris has been headquarters for Radio Alloys since the earliest days of the industry. In greatest demand are:

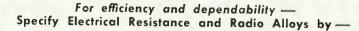
Nickel and Nichrome\*, for plate strip. Thin but rigid, they take a tightly adhering heat radiation coat.

Gridnic\* Alloys, having a very low electron emission - especially suitable in tubes where back-emission is involved.

. . . Cathode Sleeve Material: special melted Nickel Alloys to meet any emission requirements

Other widely accepted D-H Alloys, meeting or exceeding most radio specifications are: Nilvar\*, #42 Alloy, #52 Alloy, and Nickel "A", "D", "E", "Z",

HARRISON





Driver-Harris COMPANY

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NEW JERSEY

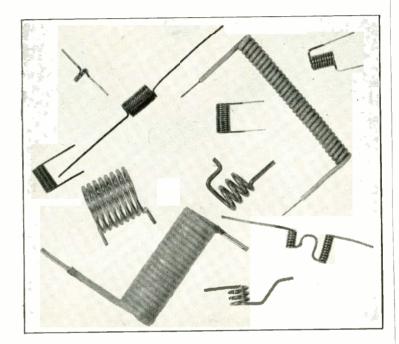
BRANCHES: Chicago • Detroit • Cleveland • Los Angeles • San Francisco • Seattle The B. GREENING WIRE COMPANY, LTD., Hamilton, Ontario, Canada

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## **TELEVISION SPRINGS**

6 Servin

has the FACILITIES, EXPERIENCE to meet your requirements



DEPEND ON LEWIS for your spring needs - choke springs, band tuning springs, channel springs, contact springs and others. You're assured of precision work, economical prices and prompt delivery.

We are well equipped to handle volume production on any type television springs desired. Experience in designing and manufacturing such a variety as shown above gives us a valuable "know-how" of efficient television spring production. Our modern facilities and skillful techniques permit moderate costs.

Have a Lewis Engineer check your spring requirements today. There's no obligation.

#### LEWIS SPRING & MANUFACTURING CO. 2656 W. North Ave., Chicago 47, Illinois







Low in cost! Easy to erect! Eliminates inter-ference! Stops "trouble calls" for servicemen. An Antenna that gives sufficient signal re-sponse to minimize the importance of the otherwise difficult task of impedance match-ing. Works equally well on all channels from 2 to 13. Sturdy . . easy to erect . . yields good profit for the serviceman making the installation.

Send for special TV Bulletin showing why the Premax Adjustable ''V'' Dipole An-tenna is a better antenna.

PREMAX PRODUCTS DIVISION CHISHOLM-RYDER CO., INC. Niagara Falls, N. Y.

4912 Highland Ave.,

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A REVOLUTIONARY NEW SPACE-SAVING CONDENSER PAPER WITH AMAZING SELF-HEALING QUALITIES.



#### NEW!!! NEW!!! Never before has anything like Smith Metallized Condenser Paper been offered the Electric and Electronic Industries.

It's here! Today ... now ... Smith Paper, Inc. makes available its new Metallized Condenser Paper that bids fair to revolutionize the entire electric and electronic field. Smith Metallized Condenser Paper makes possible the first one-layer condenser with an .0003" dielectric material. It also makes possible a 75% saving in space factor over most conventional capacitors. And because of its self-healing characteristics it almost completely eliminates the factor of conducting particles and the usual serious effect of a breakdown.

#### Answers a long-unfilled

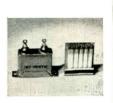
need. Design engineers since earliest days of the capacitor industry have sought capacitors that would provide higher capacities, smaller space factors, higher dielectric strength, longer life characteristics, and the elimination of breakdown causes. Since such improvements in design have been limited by the dielectric materials available, the introduction of Smith's Metallized Paper will prove a great boon towards the attainment of these special characteristics. This industry-sought paper not only permits 75% savings in space factor, but also provides other extraordinary advantages.

Increased insulation resistance. It has been found in the manufacture of metallized paper that by covering the base Kraft Condenser sheet with an extremely thin, continuous and uniform film of lacquer, a marked increase in insulation resistance is obtained. This lacquering causes an increase in the thickness of .00030 condenser paper of .03 - .05 mils; while the succeeding zinc coating operation causes an increase in thickness of 3-5 millionths of an inch.



SMITH'S New-type Metallized Condenser Paper not only reduces space factor by eliminating the use of electrodes, but gives longer life, higher dielectric strength, and ends forever the disastrous effects of breakdowns.

Metallized Paper



1 MFD-400 WVDC



Self-healing on breakdowns. Another of the outstanding properties of metallized paper is its capacity to self-heal on a breakdown. In other words, a capacitor wound with metallized paper may be brought to a breakdown voltage, but the effects of the breakdown are sufficient to cause a re-insulation around the breakdown areaso that the capacitor is satisfactory for continued use. Numerous breakdowns do not appear to impair this self-healing characteristic. Smith Paper, by taking advantage of this property, is able to furnish a metallized paper devoid of particles which are conducting at the usual test voltages.

Automatically Controlled. Today equipment has been perfected for automatically controlling and continuously recording (where necessary) such properties as lacquer thickness and consistency, thickness of the metal layer, color and resistance of the metal layer, width of margin, etc. all important characteristics of the product, the close control of which is essential for the best design and manufacture of metallized paper capacitors.

**Complete facts available.** All facts on Smith Metallized Condenser Paper as it applies to your industry may be had on request. Simply address Smith Paper, Inc., Lee, Massachusetts. There is no obligation.

## SMITH PAPER, INC. LEE, MASS.

## BARRYMOUNTS THE BEST WAY TO CONTROL SHOCK AND VIBRATION

#### AIRCRAFT MOUNTING BASES

Standard bases with dimensions to government specifications. Special bases to customers' exact requirements.

#### AIRCRAFT VIBRATION ISOLATORS

Unit isolators designed to meet Army, Navy, and CAA requirements. Stock mountings — 1/4 pound to 45 pound load range. Others on order.



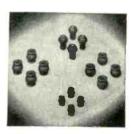
#### SHOCK MOUNTINGS

For mobile, railroad, and shipboard electronic and electrical equipment. Also for isolation above 2000 c.p.m., and for general sound isolation.



#### **INSTRUMENT MOUNTINGS**

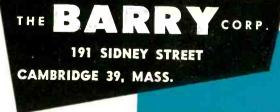
For electronic components, tiny fractional H.P. motors, record changers, dictating machines, and other lightweight apparatus.



#### INDUSTRIAL MOUNTINGS

For fans, motor generator sets, transformers, presses, and other heavy industrial equipment.





**SPECIAL MOUNTINGS -**

CONSULTING SERVICES Mountings designed and built for special applications. Consulting Engineering Service for research,

product design, and labora-

tory testing.

 NEW YORK
 PHILADELPHIA
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 FOR ASSURED SHOCK AND VIBRATION CONTROL



STANDARD FIXED RESISTORS ADJUSTABLE RESISTORS from 10 to 200 Watts. OVAL RESISTORS limited space requirements from 30 to 75 Watts. FERRULE RESISTORS—for connection through fuse-clips in installations where rapid inser-tion and removal is a factor— from 12 to 200 watts. FOR SPECIAL ESISTORS FOR SPECIAL INTERPLICATIONS made to order. I-LE Power Resistors are made i-T-E Power Resistors are made with a normal tolerance of 10%-with a normal tolerance of 10%-made to order. • Now you can secure modern electronic products, specially designed to meet the exacting and changing needs of the electronics industry. All I-T-E wire-wound components are *engineered for quality* — given the same thought in design, the same care in fabrication that the most complicated I-T-E Switchgear devices receive.

Whatever your wire-wound needs, it will pay you to investigate I-T-E precisionbuilt products. For complete information on any of these products — or for information on special wire-wound fabrications write us specifying your needs.

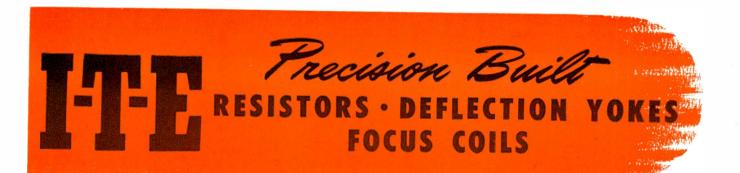
#### I-T-E STANDARD AND OVAL POWER RESISTORS

All I-T-E Standard and Oval Power Resistors are ruggedly constructed, fully capable of meeting the most critical conditions of heavy usage. Bases are made of best, nonhygroscopic ceramics. Terminals are tinned, double-leaf tabs, securely fastened to ceramic base tube. Resistance wires are purest obtainable; and are uniformly wound, mechanically tied, and silver-soldered for permanent, solid connections. The glazed, moisture-repellent surface is made of blue-black vitreous enamel or organic coating, if specially ordered, which locks and insulates the wire winding, and provides fast heat dissipation.

## PRECISION-BUILT

I-T-E CIRCUIT BREAKER COMPANY

RESISTOR DIVISION, 19th & HAMILTON STS. · PHILADELPHIA 30, PA.



#### I-T-E "METCLADS" (Metal-Clad Resistors)

These precision built metal-clad resistors are made of high grade resistance wire, wound on a special heat resistant bakelite strip, insulated by special phenolic insulation. The resistance element is completely enclosed in a metal case of either brass or zinc plated steel to provide an efficient path to dissipate heat to the chassis. The brass terminals are securely anchored to the wire wound bakelite strip and are tinned for easy soldering. I-T-E "Metclad" resistors are available in length from 2" to 12"; in wattage from 7 to 42. They may be had in various mountings to customer's specifications.



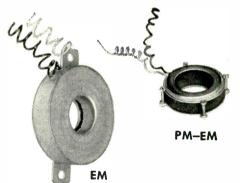
#### **I-T-E DEFLECTION YOKES**

Deflection yokes are built with uniform characteristics; wire size and quality is constantly checked. The coils are impregnated in a special moisture resistant thermo plastic material properly cured to insure a firm coil with the minimum of losses. Deflection yokes may be obtained complete with wire leads, resistors and capacitors to customer's specifications.

#### I-T-E FOCUS COILS

I-T-E Focus Coils are available in two types: The first type utilizes an electro-magnet. The second type combines a permanent magnet with an adjustable electro-magnet. Both are wound of finest enameled uniform-cross-section copper wire. Leads are securely anchored, and the entire wound assembly is enclosed in a pressed-steel case, which is zinc-plated to resist corrosion. PM-EM construction makes possible the use of smaller and less expensive power supply, retains proper focusing longer, and minimizes temperature rise. I-T-E Focus Coils are made for use with tubes 10", 12", and 16" in size. Information required to manufacture: Type of tube; second anode voltage; focusing current. Mountings and leads are made to specifications.









TV Monitor Console



Desk Panel Cabinet Rack

## How Karp Makes Custom-Built Metal Cabinets and Boxes at Prices that Compete with those of Stock Items

It's

Amazi



Induction Heater Housing



Chassis

............



Marine Radio Housing



Cabinet

The advantages and true economies of Karp custom-built cabinets, boxes, or housings over stock items are these:

- Your own exclusive design distinguishes and "styles" your product ... gives it more market value.
- Flexibility of construction details speeds and simplifies your final assembly —saving you time and money.
- Our vast stock of dies can save you special die costs.
- Our 70,000 square feet of modern plant, with hundreds of craftsmen, means ample capacity for many types of work—simple or elaborate—at one time.
- Plant is fully equipped with every mechanical facility that aids economical production.
- Finishing is done in dustproof paint shop, with latest water-washed spray booths and gas-fired ovens mechanically and electronically controlled.
- We make no stock items or products of our own. Our plant, time and effort are 100% for our customers' work.
- Our engineering staff can help solve any possible design and production problems.
- It's results that count-and we give you the results you want.

Write for illustrated data book describing our facilities and showing the wide range of sheet metal fabrication we do.

CABINETS . BOXES . CHASSIS . HOUSINGS . ENCLOSURES

## KARP METAL PRODUCTS CO., INC.

225 63rd STREET, BROOKLYN 20, NEW YORK

Custom Craftsmen in Sheet Metal

June, 1949 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

### SPERRY GYROSCOPE COMPANY

Klystrons A complete line of Sperry Klystron tubes covering a range of 750-15,000 megacycles is available for industrial use. These include transmitting types and local oscillators.

Туре	Description	Fre- quency Range	Power Output	Beam Volt- age	Re- flector oitage	Fittings
2K41	Low Reflex Oscillator	2660-3310	250m w*	1250	-750	2-SKL
2K42	Low Reflex Oscillator	3300-4200	250mw*	1250	750	1-SKL
2K43	Low Reflex Oscillator	4200-5700	250mw*	1250	-750	1-SKL
2K44	Low Reflex Oscillator	5700-7500	250mw*	1250	-750	1-SKL
2K39	Low Reflex Oscillator	7500-10,300	250mw*	1250	-750	1-SKL
SRX16	Low Reflex Oscillator	10,000-15,000	50-20mw	1250	<b>-75</b> 0	1-SKL
3K27	Med. Reflex Oscillator	750-960	1-3w	1000	-1500	1-SKL
3K23	Med. Reflex Oscillator	950-1150	1-5w	1000	-1500	2-SKL
SRL4	Med. Reflex Oscillator	1145-1600	5-10w	1000	-1000	Type N
SRL7A	Med. Reflex Oscillator	1825-2100	5-10w	1000	-1000	Type N
SRL6	Med. Reflex Oscillator	2220-2540	5-10w	1000	-1000	Type N
SRC20	WG Reflex	4400-4600	1-5w	1000	-1000	Waveguide (2"x1")
SRC21	WG Reflex	4600-4800	1-5w	1000	-1000	Waveguide (2"x1")
SRC12	WG Reflex	4800-5000	1-5w	1000	-1000	Waveguide (2"x1")
SRC13	WG Reflex	5000-5200	1-5w	1000 -	-1000	Waveguide (2"x1")
SRC8 Series	26 Reflex Oscillators	5500-7800	0.2-1.5w	1250	-1750	Waveguide (1½"x¾")
3K21	Oscillator Amplifier	2300-2725	15-20w	3000	none	4-SKL
3K30	Oscillator Amplifier	2700-3300	20=30w	3000	none	4-SKL
3K22	Oscillator Amplifier	3300-4000	15-20w	3000	none	4-SKL
2K47	Frequency Multiplier	250-280 in 2250-3360 out	125-250mw	1000	none	4-SKL
2K46	Amplifier- Multiplier	2730-3330 in 8190-10,000 out	10-70mw	1500	none	5-SKL
2K34	Oscillator-Buffer	2730-3330	16w*	3000	поле	2-SKL
2K35	Cascade- Amplifier	2730-3330	25-35w	3000	none	3-SKL

·Minimum rated power output.

## Microline test equipment

In this group of test equipment is virtually every type of instrument essential to precision microwave measurements, covering every microwave frequency band.

Microline test instruments are also available in waveguide sizes for frequencies from 12,400 to 18,000 mc; 18,000 to 26,500 mc; and 26,500 to 40,000 mc. Each of these instruments does not cover the entire band width listed here; however as much band width as possible is maintained limited only by the utility and accuracy required. Development of new instruments is continuous. Your inquiry for special requirements is solicited.

#### SHORTS

lodel	Description	Frequency Range mc	Fitting
114A	2"x1" Waveguide	4000-6000	Fits into line
203	1½"x¾" Waveguide	5300-8100	UG-344/U
371	0.360"x0.220" Waveguide	26,500-39,000	UG-381/U
377	1"x½" Waveguide	8100-12,400	UG-39/U
636	½" Coaxial	750-4000	UG-46/U-Female

#### ATTENUATORS

Model	Descrip- tion	Fre- quency Range mc	Attenu- ation Range	Accuracy	Power Ca- pacity	Fittings
110	Variable	4000-6000	0-20 db	Uncalibrated	1w	UG-148/U & UG-149/U (2"x1")
127A	Precision Variable	29-32	15-95 db	±0.1 db	1w	UG-19/U (Type N)
134A	Calibrated Variable	8500-9600	2-45 db	±0.5 db	1w	UG-39/U (1"x <sup>1</sup> /2")
152	Variable	8500-9600	2-15 db	Uncalibrated	1w	UG-39/U (1"x½")
173	Calibrated Fixed	8500-9600	3 db	±0.5 db	1w	UG-39/U (1"x½")
174	Calibrated Fixed	8500-9600	6 db	≠0.5 db	1w	UG-39/U (1"x½")
183	Calibrated Fixed	8500-9600	10 db	±0,5 db	1w	UG-39/U (1"x½")
215	Calibrated Variable	5300-8200	2-20 db	±1.0 db	lw	UG-344/U (1½"x¾")
216	Variable	5300-8200	2-20 db	Uncallbrated	1w	UG-344/U (1½"x¾")
289	Variable	4000-6000	2-20 db	Uncalibrated	1w	UG-149/U (2"x1")
290	Calibrated Variable	4000-6000	2-20 db	±1.0 db	1w	UG-149/U (2"x1")
292	Variable	7050-10,000	2-20 db	Uncalibrated	1w	UG-51/U (1¼″x½″)
293	Calibrated Variable	7050-10,000	2-20 db	<b>±1.0 db</b>	1w	UG-51/U (1¼ "x¾")
294	Variable	2600-4000	2-20 db	Uncalibrated	1w	UG-53/U (3"x1½")
295	Variable	2700-4000	2-20 db	Uncalibrated	1w	UG-53/U (3"x1½")
374	Variable	26,500-39,000	10 db	Uncalibrated	½ w (0.1	UG-381/U 360″x0.220″)

#### DETECTORS AND MIXERS

				E State	Fittings		
Model	Description	Description Range mc	Detector Element	Input	Local osc.	Out- put	
337	Mixer, CV-52/U 3/8" Coaxial	2600-4000	1N23B Crystal	Type N Female	Type N	UHF	
357	Detector, 0.702" x0.391" Waveguide	12,000-18,000	1N26 Crystal	UG-419/U	none	UHF	
358	Detector, ½" x¼" Waveguide	18,000-26,500	1N26 Crystal	UG-425/U	none	UHF	
359	Detector, 0.360" x0.220" Waveguide	26,500-39,000	1N53 Crystal	UG-381/U	none	UHF	
360	Detector, 1" x½" Waveguide	7500-10,300	1N23B Crystal 821 Barretter	UG-39/U	none	UHF	

#### ADAPTERS

		Frequency	Fitt	ings	
Model	Description	Range mc	Input	Output	
100A	% " Coaxial to 2"x1" Waveguide	4000-6000	UG-140/U Male	UG-149/U	
101A	%" Coaxial to Type N	0-7050	UG-140/U Male	UG-20/U Female	
144A	3"x1/2" Waveguide to %" Coaxial	2600-4000	UG-53/U	UG-45/U Male	
167A	1"x1/2" Waveguide to Type N	8100-12,400	UG-39/U Flange	UG-20/U Female	
204	1½"x¾" Waveguide to Type N	5300-8200	UG-344/U	UG-20/U Female	
217	%" Coaxial to Type N	0-4000	UG-46/U Female	UG-20/U Female	
248	2"x1" Waveguide to Type N	4000-6000	UG-149/U	UG-20/U Female	
249	1¼"x5%" Waveguide to Type N	7050-10,000	UG-51/U	UG-20/U Female	
250	3"x1½" Waveguide to Type N	2600-4000	UG-53/U	UG-20/U Female	
352A	1/8" Coaxial to Type N	0-4000	UG-45/U Male	UG-20/U Female	
354A	1/8" Coaxial to 1/8" Coaxial	0-4000	UG-45/U	UG-45/U	
355A	1/8" Coaxial to 1/8" Coaxial	0-4000	UG-46/U	UG-46/U	

#### TERMINATIONS

Model	Description	quency Range mc	Ca- pacity	VSWR	Fittings
105	2"x1" Waveguide	4000-6000	lw	1.03	UG-149/U
150	1"x1/2" Waveguide	8100-12,400	0.5w	1.04	UG-39/U
113	2"x1" Waveguide	4000-6000	500w	1.15	UG-149/U
181	Type N	8100-10,000	2w	1.2	UG-18/U Male
213	1½"x¾" Waveguide	5300-8200	150w	1.10	UG-344/U
213	11/2 "x3/4" Waveguide	5300-8200	1w	1.04	UG-344/U
	1"x1//" Waveguide	8100-12,400	100w	1.10	UG-39/U
246 637	%" Coaxial	600-3500	12w	1.2	UG-46/U

IMPEDANCE METERS

Descrip-		Durania	Fre- ing guency Accu-		lute Accu-	ser-	Fittings	
	Model	tion	Range mc	racy	racy	Loss	Input	Output
	103A	2"x1" Waveguide	4000-6000	≠0.1mm	±2%	0.03 db	UG-149/U Flange	UG-149/U Flange
	116A	%" Coaxial	4000-6000	±0.1mm	±2%	0.03 db	UG-141/U Female	UG-140/U Male
	145	1″x½″ Waveguide	8100-12,500	±0.1mm	± 2%	0.03 db	UG-39/U	UG-39/U
	201	1½" x¾" Waveguide	5300-8200	±0.1mm	<b>±</b> 2%	0.03 db	UG-344/U	UG-344/U
	320	1/2"x1/4" Waveguide	18,000-26,500	±.01mm		0.05 db	UG-425/U	UG-425/U
	346	0.360" x 0.220"	26,500-39,000	±.01mm	±2%	0.05 db	UG-381/U	UG-381/U
	361A	Waveguide <sup>7</sup> 8" Coaxial	600-3500	±0.1mm	±3%	0.03 db	UG-46/U Female	UG-45/U Male

#### FREQUENCY METERS

	Fre- Iu		Abso- lute Accu-	prox.	Fittings	
Model	Description	Range mc	racy	Q	R-F	Video
S22	Detector Wave-	2400-3400	1/2000	1500	UG-18/U (Type N)	UHF
27 A	meter Kit Coaxial	3500-6500	1/1000	800	UG-18/U	UHF
28B	Cavity	4050-6000	1/10,000	10,000	(Type N) UG-149/U (2"x1")	UHF
124B	Broadband	660-3000	1/2000	500-600	ÙG-18/U	UHF
126	Coaxial Coaxial	8500-9600	1/2000	1000	(Type N) UG-39/U (1"x½")	UG-39/U (1"x½")
207	Coaxial	5300-8100	1/2000	1000	ÚG-18/Ú	ÛĤF
208	Cavity	5490-8100	1/10,000	10,000	(Type N) UG-150/U (1½"x¾")	UHF
273 291A	Cavity Cavity	8100-11,900 2570-3750	1/10,000 1/20,000	5000 10,000 to 16,000	UG-39/U UG-18/U (Type N)	UHF
349	Cavity	19,000-26,000	1/1000	450	UG-425/U	none
350	Low Q Cavity Low O	26,500-39,000	1/1000	450	UG-381/U	none

#### IMPEDANCE TRANSFORMERS

Nodel	Description	Frequency Range mc	Max. VSWR	Fittings
34 A	Triple-Stub %" Coaxial	1700-3750	50-100	UG-46/U & UG-45/U
109A	Double-Slug 2"x1" Waveguide	4000-6000	8-15	UG-149/U
117A	Susceptance 2"x1" Waveguide	4000-6000	40	UG-149/U
146	Double-Slug 1"x1/2" Waveguide	8100-12,400	8-14	UG-39/U
178	Susceptance 1"x½" Waveguide	8100-12,400	40	UG-39/U
202	Susceptance 1½"x¾" Waveguide	5300-8200	40	UG-344/U
363	Double-Slug 1/8" Coaxial	650-3700	6-12	UG-46/U 8 UG-45/U

#### BARRETTER MOUNTS

	Bar- rette		Fre- guency	Max.	Fittings	
Model	Description	Type	Range mc	VSWR	Input	Output
	2"x1" Waveguide	821	4600-5650	1.50	UG-148/U Choke	UHF
85	Type N Coaxial	821	2700-2900	1.50	UG-18/U Male	UHF
148	%" Coaxial	811	500-2500	2.00	UG-46/U Female	UHF
163	(tunable) Type N Coaxial	821	2500-2700	1.50	UG-18/U Male	UHF
164	Type N Coaxial	821	2900-3100	1.50	UG-18/U Male	UHF
184	1"x½" Waveguide	821	8500-9600	1.50	UG-39/U Flange	UHF
212	1½"x¾" Waveguide	821	6000-7000	1.50	UG-344/U Flange	UHF
245	2"x1" Waveguide	821	3700-4500	1.50	UG-149/U Flange	UHF
253	1½"x¾" Waveguid	e 821	5300-6600	1.50	UG-344/U Flange	UHF
285	Type N Coaxial	821	3100-3300	1.50	UG-18/U Male	UHF
313	1½″x¾″ Wavegulde	821	6600-8100	1.50	UG-344/U Flange	UHF

#### HORNE

HOK	NS	AN Designa-	Frequency Range	Gain	Beam	VS	
Model	Description	tion	mc	db	Width	WR	Fittings
175	Type N	AT-68/UP	8500-9600	9.4	50°	1.5	Type N

#### TEES AND BENDS

Model	Description	Frequency Range mc	Fittings
106A	2"x1" Waveguide-Series Tee	4000-6000	UG-149/U
107A	2"x1" Waveguide-Shunt Tee	4000-6000	UG-149/U
165A	1"x1/2" Waveguide-Series Tee	8100-12,400	UG-39/U
166A	1"x1/2" Waveguide-Shunt Tee	8100-12,400	UG-39/U
170	1"x1/2" Waveguide-E-Plane Bend	8100-12,400	UG-39/U
171	1"x1/2" Waveguide-H-Plane Bend	8100-12,400	UG-39/U
274	3" x11/2" Waveguide-Series Tee	2600-4000	UG-53/U
275	3"x11/2" Waveguide-Shunt Tee	2600-4000	UG-53/U
276	11/2"x 4" Waveguide-Series Tee	5300-8200	UG-344/U
277	11/2"x1/4" Waveguide-Shunt Tee	5300-8200	UG-344/U
278	1¼"x%" Waveguide-Series Tee	7050-10.000	UG-51/U
279	1¼ "x%" Waveguide-Shunt Tee	7050-10,000	UG-51/U
	0.702"x0.391" Waveguide-Series Tee	12,400-18,000	UG-419/U
392	0.702"x0.391" Wavegulde-Shunt Tee	12,400-18,000	UG-419/U
393	1/1 x1/4" Waveguide-Series Tee	18,000-26,500	UG-425/U
394	1/2"x1/4" Waveguide-Shunt Tee	18,000-26,500	UG-425/U
395	0.360"x0.220" Waveguide-Series Tee	26,500-39,000	UG-381/U
396 397	0.360 x0.220 Waveguide-Shunt Tee	26,500-39,000	UG-381/U

#### DIRECTIONAL COUPLERS

		Fre-	Coupl.		FITTINGS	
Aodel	Description	quency Range mc	Atten- uation	Line	Line Out	Auxil- lary
209	11/ "x1/ " Waveguide	5300-8100	24 db	UG-344/U	UG-344/U	UG-344/U
233	2"x1" Waveguide	4000-6000	24 db	UG-149/U	UG-149/U	UG-149/U
233	1"x1/2" Waveguide	8100-12.400	40 db	UG-39/U	UG-39/U	UG-39/U
234	1"x1/2" Waveguide	8100-12,400	20 db	UG-39/U	UG-39/U	UG-39/U
	1"x1/2" Waveguide	8100-12,400	24 db	UG-39/U	UG-39/U	UG-39/U
236			30 db	UG-344/U	UG-344/U	UG-344/U
237	11/2" x 3/4" Waveguid	4000-6000	30 db	UG-149/U	UG-149/U	UG-149/U
321	2"x1" Waveguide	4000-6000	40 db	UG-149/U	UG-149/U	UG-149/U
322	2"x1" Waveguide	26,500-39,000		UG-381/U	UG-381/U	UG-381/U
405	0.360"x0.220"	20,000-00,000	20 00	00-301/0	00-001/0	00 001/0
	Waveguide	10 000 20 500	20 db	UG-425/U	UG-425/U	UG-425/U
413	1/2"x1/4" Waveguide	10,000-20,000		UG-425/U	UG-425/U	UG-425/U
415	1/2 "x1/4" Waveguide	18,000-26,000		UG-425/0	UG-45/U	UG-45/U
711	%" Coaxial	950-1150	40 db			UG-45/U
712	1/8" Coaxial	1080-1300	40 db	UG-46/U	UG-45/U	
714	1/8" Coaxial	1260-1540	40 db	UG-46/U	UG-45/U	UG-45/U
730	1/8" Coaxial	2470-3130	26.6 db	UG-46/U	UG-20/U	UG-45/U
					(Type N)	110 45 41
775	1/8" Coaxial	660-840	40 db	UG-46/U	UG-45/U	UG-45/U
794	1/s" Coaxial	830-1050	40 db	UG-46/U	UG-45/U	UG-45/U

Other Sperry electronic instruments and components in stock: Marine and aeronautical navigation devices, vibration and balancing analyzers, and microwave radar analyzers.

Other Sperry electronic instruments and components designed and manufactured for special applications: Coils, transformers, small motors, communication systems, remote controls, special test equipment and navigation devices.

For detailed information write Industrial Department

#### SPERRY GYROSCOPE COMPANY

DIVISION OF THE SPERRY CORPORATION . GREAT NECK, NEW YORK

#### FREE "PRODUCTS of EXTENSIVE RESEARCH" **INSTRUMENTS & COMPONENTS!** FIDELITY OUTPUT TRANSFORMERS HIGH "()" INDICATOR



Decade Inductors

Type No.	Primary matches fallowing typical tubes	Primary Impedance	Secondary Impedance	± ½db	Maximum
F1950	Push pull 2A3's, 6A5G8s, 300A's, 275A's, 6A3's, 6L6's.	5000 ohms	500, 333, 250, 200, 125, 50	29-30000 cycles	15 watts
F1951	Push pull 2A3's, 6A568s, 300A's, 275A's, 6A3's, 6L4's,	5000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	20-30000 cycles	15 watts
F1154	Push pull 245, 250, 6V6, 42 or 2A5 A prime	8000 ohms	500, 333, 250, 200, 125, 50	20-30000 cycles	IS watts
F1956	Push pull 245, 250, 6Y6, 42 or 2A5 A prime	8000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	20-30000 cycles	15 watte
F1958	Push pull 685, 6A5, 53, 6F6, 59, 79, 81, 6V6, Class 8 46, 59	10,000 ohms	600, 333, 250, 200, 125, 50	20-30000 CVC as	15 watts
F1959	Push pull 685, 6A6, 53, 6F6, 59, 79, 89, 696, Class 8 46, 59	10,000 ohms	30, 20, 15, 10, 7.5, 5, 2.6, 1.2	20-30000 cycles	IS watts
F1962	Push pull parallel ZA3's, 6A5G's, 300A's, 6A3's, 6L6	2500 ekms	5C0, 333, 250, 200, 125, 50	20-30000 cycles	36 watts
F1963	Push pull paratlel 2A3's, 6A5G's, 300A's, 6A3's, 6L6	2500 okms	30, 20, 15, 10, 7, 5, 5, 2, 5, 1, 2	20-30000 cycles	36 Watts
F1966	Push pull 61.6 or Push pull parallel 61.6	3800 okms	500, 333, 250, 200, 125, 50	20-30000 cycles	50 wette
F1967	Push pull 6L6 or Push pull parallel 6L6	2800 ohms	30, 20, 15, 10, 7.5, 5, 2.6, 1.2	20-30000 Cycles	50 wetts

No. 1030 Frequency range from 20 cycles to 50 kilo-cycles. "Q" range from .5 to 500. "Q" of induc-tors can be measured with up to 50 volis across the coil. Indispensable instrument for measure-ment of "Q" and induc-tance of coils, "Q" and capacitance of capaci-tors, dialectric losses, and power factor of in-sulating materials.



IMPEDANCE RANGE: One millibeary to hearies in five ranges, inductance values read directly from a four dial decade multiplier switch. This range can be extende 10,000 hearies by the use of an external scheme.

NOUCTANCE ACCURACY: Within plus minus 1% through the frequency range 60 to 1000 cycles. er frem



No. 1140 For bridge measurements, providing visual null indications or aural indications when used in con-junction with headphones. The unit may also be used as a high gain am-plifier for general laboratory work. Functionally, the instrument consists of a high gain linear amplifier with a 30 db input attenuator in addition to the variable gain control. Output voltage is 40 volts undistorted into 1 megohm load, and 10 volts into 20,000 ohms.

## **COMPARISON BRIDGE**

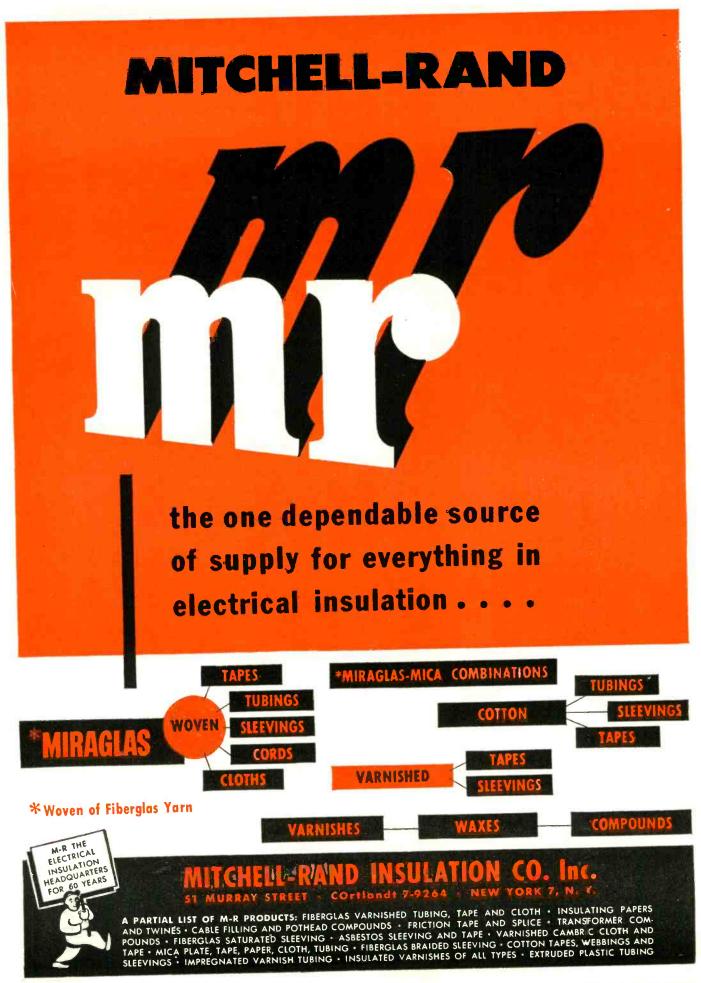
No. 1010 An invaluable instru-ment for precision laboratory adjustment and incoming in-spection of resistors, capacita-tors and inductors... Entirely self-contained, A.C. operated and includes a three frequency oscillator, an A.C. bridge and a null detector.





Discriminators

Ne. 1160 10 x 1 HY steps 10 x.1 HY steps 10 x.01 HY steps 10 x.01 HY steps 10 x.01 HY steps 2000-50,000 cycles 500-15,000 cycles	No. 1164 101 10 HY steps 10x 1 HY steps 50-1000 cycles	
Toroidal Inductors LOWF	REQUENCY HI"Q"COILS Filters	
Type T1.2Type T1.21000-15,000 cycles1000-15,000 cycles1000 cycles1000 cycles <td colspan<="" td=""><td>#1900100 HY#190175 HY#190250 HY#190325 HY#190410 HY#19055 HY#19061 HYAvailable from stock in the indicated in- ductance values.</td></td>	<td>#1900100 HY#190175 HY#190250 HY#190325 HY#190410 HY#19055 HY#19061 HYAvailable from stock in the indicated in- ductance values.</td>	#1900100 HY#190175 HY#190250 HY#190325 HY#190410 HY#19055 HY#19061 HYAvailable from stock in the indicated in- ductance values.
FREED TRANSFOR DEPT. BG TRANSFOR 1718-36 WEIRFIELD ST.,	(RIDGEWOOD) BROOKLYN 27, NEW YORK	
ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH	53	



## RAYTHEON COMMERCIAL MICROWAVE POWER

#### QK-217

- ★ 1500 watts continuous power at 2450 megacycles.
- ★ Efficiency 50%.
- ★ Unipotential indirectly heated cathode.
- ★ Integral magnet construction.
- \* Pre-plumbed.

### QK-174A

- F-M communications magnetron
  - ★ Tunable 1990-2110 megacycles.
  - ★ Frequency modulation 15 megacycles.

QK-217

- ★ Power 100 watts.
- ★ Efficiency 35%.

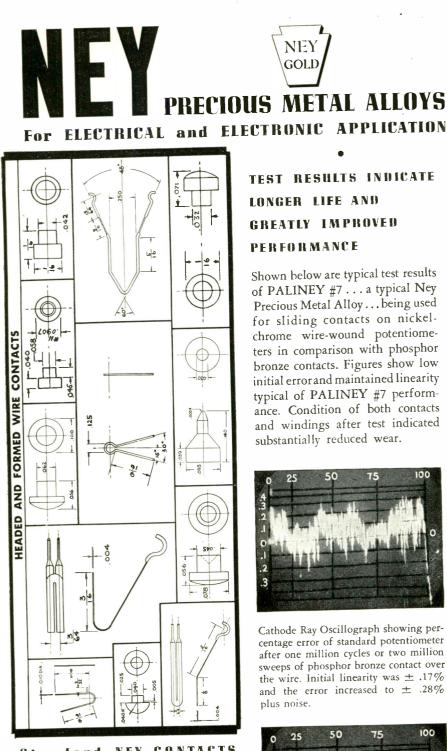
Also a complete line of low power klystrons from 6 millimeters to 30 centimeters



Data available on request

RAYTHEON MANUFACTURING COMPANY POWER TUBE DIVISION Waltham 54, Massachusetts

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH



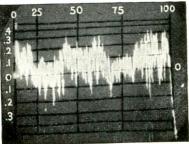
Standard NEY CONTACTS Simplify design problems Chart shows form and overall dimensions of a few of the many types of contacts made from Ney Precious Metal Alloys for brush or wiping contact applications. Full technical and test data are available on request. Other Ney Precious Metal Alloys have solved many special industrial application problems. Consult us freely without obligation.

Write or telephone (HARTFORD 2-4271) our Research Department.

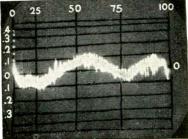
The J. M. NEY COMPANY **179 ELM STREET • HARTFORD 1, CONNECTICUT** 17NY49

#### TEST RESULTS INDICATE LONGER LIFE AND **GBEATLY IMPROVED** PERFORMANCE

Shown below are typical test results of PALINEY #7 ... a typical Ney Precious Metal Alloy ... being used for sliding contacts on nickelchrome wire-wound potentiometers in comparison with phosphor bronze contacts. Figures show low initial error and maintained linearity typical of PALINEY #7 performance. Condition of both contacts and windings after test indicated substantially reduced wear.



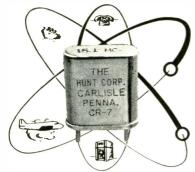
Cathode Ray Oscillograph showing percentage error of standard potentiometer after one million cycles or two million sweeps of phosphor bronze contact over the wire. Initial linearity was ± .17% and the error increased to  $\pm$  .28%



Performance of standard potentiometer modified by substitution of PALINEY #7 contact after one million cycles or two million sweeps over wire. The initial error was reduced to  $\pm$  .12% and this linearity was maintained throughout the test.

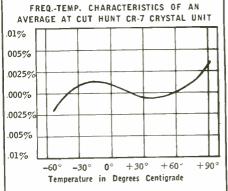


about the **High Stability** HUNT CR-7 CRYSTAL



MINIATURE TYPE CR-7 CRYSTAL UNIT (Illustration is actual size)

Metal plated quartz plate, wire mounted in hermetically sealed metal HC6/U holder. Average weight .077 oz., CAATC 1335 Outline dimensions: .750'' x 750'' x .350''. Pins: diameter .050'' length .217" spacing .486". Fre-quency range: 1 MC to 100 MC. Fre-Fundamental operation, AT cut crystal, to 20 MC. Harmonic mode operation, AT cut crystal to 100 MC



The CR-7 crystal unit—pioneered by The Hunt Corporation—has gained wide acceptance all over the world for many applications including ground and airborne systems as well as mobile radio telephone equipment.

For the high stability, close tolerance, precision quartz crystal units you need contact HUNT. Send along the details of your circuit.



## **"EVEREADY" RADIO BATTERIES**

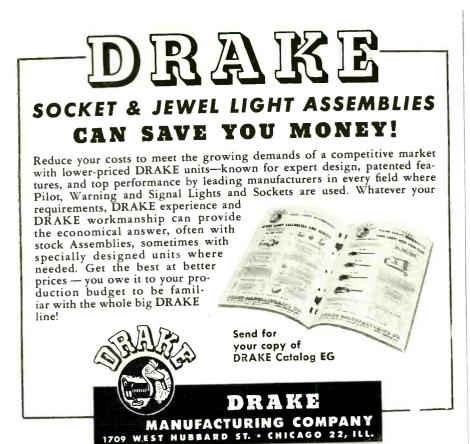
1.5 A 90 B 1.5 A 90 B 7.5 & 9 A 90 B 7.5 & 9 A	<u>10118</u> " <u>15118</u> " 9 <sub>52</sub> "	4 1/8 " 4 352 "	8" PACKS FC	Socket -, +1.5	A:200-300 m.a.	14.11 0
90 B 1.5 A 90 B 7.5 & 9 A 90 B 7.5 & 9 A	1511 "	4 32 "			A:200-300 m a	1411 0
1.5 A 90 B 7.5 & 9 A 90 B 7.5 & 9 A			618"			14 lb. 8 oz
90 B 7.5 & 9 A 90 B 7.5 & 9 A			618"	Socket $-, +90$	B:7.0-12.0 m.a.	1110. 00
7.5 & 9 A 90 B 7.5 & 9 A	Q.7."			Socket $-, +1.5$	A:200-300 m.a.	17 lb. 6 oz
90 B 7.5 & 9 A	9.7."			Socket $-, +90$	B:7.0-12.0 m.a.	
90 B 7.5 & 9 A	9.7."	"A-B"	PACKS FOR	PORTABLE RECEIVERS		
7.5 & 9 A	- 32	233"	4 18"	Socket -, +7.5 & 9	A :50 m.a.	1 lb 15 ar
1				Socket -, +90	B:5.0-15.0 m.a.	4 lb. 15 oz
00 50 1	<u>1035</u> "	31/4 "	4″	Socket -, +7.5 & 9	A:50 m.a.	6 lb. 8 oz
90 B				Socket -, +90	B:5.0-15.0 m.a.	0 10. 0 02
6 & 7 ½ A	8 <sup>9</sup> 16″	$2_{16}$ "	3 3/4 "	Socket -, +6&71/2	A :50 m.a.	3 lb. 8 oz
75 B				Socket -, +75	B:5.0-15 m.a.	0.15. 0.02
7½ A	<u>933"</u>	2 1/8 "	332"	Socket -, +7 ½	A:50 m.a.	3 lb. 14 oz
90 B				Socket -, +90	B:5.0-15 m.a.	
		"A" E	BATTERIES FO	OR HOME RECEIVERS		
1.25	515"				100 000	F 11 + 0+ /
1.5	2 5/8 " D	02				5 lb. 13 1/2 02
		"B"			100-250 m.a.	2 lb. 2 oz.
45	51/8"				7.0.10.0	
					7.0-12.0 m.a.	4 lb. 4 oz.
71/2	9.7.1				·	
					50 m.a.	8¾ oz.
				Socket —, +6	50 m.a.	2 lb. 13 oz.
				Flat Contact -, +6	50 m.a.	$2\frac{2}{3}$ oz.
	and the second se				50 m.a.	1 lb. 1 oz.
		the second se				2 lb. 13 oz.
						1 lb. 6 oz.
6		and the second se				2 lb. 1 oz.
1.5						1 lb. 6 oz.
4.5			the second se			2 lb. 13 oz.
6	37/8"	and the second se				1 lb. 4 oz.
					50 m.a.	2 lb. 13 oz.
45	919/	1				
40	032				5.0-15.0 m.a.	1 lb. 14 oz.
		"A" BA1	TERY FOR F	ERSONAL RECEIVERS		
1.5	$1^{21}_{64}$ " D		237"	Flat Contact —, +1.5	25-250 m.a.	3 1/3 oz.
/		"B" BATT	ERIES FOR	PERSONAL RECEIVERS		
45	$2\frac{21}{32}$ "	1″	311"		10-100m2	8 oz.
	$2\frac{13}{16}$ "	1 3/8 "	3***	Snap Type $-$ , $+67.5$		8 oz. 12 oz.
90	3332"	1 3/8 "	345 "			1 lb. ½ oz.
		"А" ВА	TTERIES FOR			1 10. /2 02.
1.5	<sup>35</sup> / <sub>64</sub> " D					
1.5	1%4" D	19/1/ 32/1/	21/64"	1111100000000000000000000000000000000		<sup>1</sup> / <sub>2</sub> OZ,
		"R" PAT			20-100 III.a.	1.1 oz.
22.5	1.1."					
				Flat Contact -, +22.5		1 ¼ oz.
						1 <sup>2</sup> / <sub>3</sub> oz.
						2 <sup>1</sup> / <sub>3</sub> oz. 3 oz.
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$1.5$ $2\frac{5}{6}$ " D $45$ $5\frac{1}{6}$ " $45$ $5\frac{1}{6}$ " $6$ $3\frac{1}{8}$ " $6$ $3\frac{1}{8}$ " $1.5$ $3\frac{1}{6}$ " $1.5$ $3\frac{1}{8}$ " $1.5$ $3\frac{1}{8}$ " $1.5$ $3\frac{1}{8}$ " $6$ $2\frac{3}{2}$ " $1.5$ $3\frac{1}{8}$ " $6$ $2\frac{3}{2}$ " $1.5$ $3\frac{1}{8}$ " $6$ $3\frac{1}{6}$ " $45$ $3\frac{1}{8}$ " $45$ $3\frac{1}{8}$ " $45$ $2\frac{3}{2}$ " $1.5$ $1^{2\frac{1}{64}}$ " D $45$ $2\frac{3}{8}$ " $45$ $3\frac{3}{8}$ " $1.5$ $1^{2\frac{1}{64}$ " D $1.5$ $1\frac{3}{94}$ " D $1.5$ $1\frac{3}{94}$ " D $1.5$ $1\frac{3}{2}$ " $30$ $1\frac{3}{2}$ " $22.5$ $1\frac{3}{5}$ "	$1.25$ $5.48''$ $4\frac{1}{2}\frac{1}{2}''$ $1.5$ $2\frac{5}{6}$ " D       "B" $45$ $5\frac{1}{6}$ " $2\frac{1}{6}$ " $7\frac{1}{2}$ $2\frac{3}{2}$ " $1\frac{1}{48}$ " $6$ $3\frac{1}{8}$ " $2\frac{3}{4}$ " $6$ $3\frac{1}{8}$ " $1\frac{5}{4}$ " $4\frac{1}{2}$ $3\frac{1}{8}$ " $1\frac{5}{4}$ " $4\frac{1}{2}$ $3\frac{1}{8}$ " $2\frac{3}{4}$ " $6$ $3\frac{1}{8}$ " $2\frac{3}{4}$ " $1.5$ $3\frac{7}{6}$ " $2\frac{1}{8}$ " $1.5$ $3\frac{1}{8}$ " $2\frac{3}{4}$ " $6$ $2\frac{3}{8}$ " $2\frac{3}{4}$ " $6$ $2\frac{3}{8}$ " $1\frac{5}{76}$ " $1.5$ $3\frac{1}{8}$ " $1\frac{5}{76}$ " $45$ $3\frac{1}{8}$ " $1\frac{5}{76}$ " $45$ $3\frac{1}{8}$ " $1\frac{3}{8}$ " $45$ $3\frac{1}{8}$ " $1\frac{3}{8}$ " $45$ $2\frac{3}{8}$ " $1\frac{3}{8}$ " $90$ $3\frac{3}{8}$ "	$1.25$ $5\frac{1}{56''}$ $4\frac{1}{32''}$ $8\frac{5}{6''}$ $1.5$ $2\frac{5}{6}$ " D       "B" BATTERY FO $45$ $5\frac{1}{6}$ " $2\frac{1}{6}$ " $7\frac{1}{4}$ " $45$ $5\frac{1}{6}$ " $2\frac{1}{6}$ " $7\frac{1}{4}$ " $7\frac{1}{2}$ $2\frac{1}{52}$ " $1\frac{1}{6}$ " $3\frac{1}{2}$ " $6$ $3\frac{1}{6}$ " $2\frac{3}{4}$ " $5\frac{1}{2}$ " $6$ $3\frac{1}{6}$ " $2\frac{3}{4}$ " $5\frac{1}{2}$ " $6$ $3\frac{1}{6}$ " $2\frac{1}{6}$ " $2\frac{1}{6}$ " $1.5$ $3\frac{1}{6}$ " $2\frac{1}{6}$ " $4\frac{1}{3}^{2}$ " $1.5$ $2\frac{1}{8}$ " $2\frac{1}{8}$ " $4\frac{1}{3}^{2}$ " $6$ $2\frac{3}{8}$ " $1\frac{1}{5}$ " $1\frac{3}{6}$ " $1.5$ $3\frac{1}{8}$ " $1\frac{1}{5}$ " $1\frac{3}{6}$ " $1.5$ $3\frac{1}{6}$ " $1\frac{3}{8}$ " $1\frac{3}{6}$ " $1.5$ $3\frac{1}{6}$ " $1\frac{3}{8}$ " $3\frac{1}{8}$	"A" BATTERIES FOR HOME RECEIVERS         1.25 $5\frac{4}{16}$ " $4\frac{14}{16}$ " $8\frac{5}{6}$ "       Socket -, +1.25         1.5 $25\frac{6}{10}$ " $2\frac{14}{10}$ " $7\frac{14}{10}$ "       Socket -, +1.25         "B" BATTERY FOR HOME RECEIVERS         45 $5\frac{16}{10}$ " $2\frac{14}{10}$ " $7\frac{14}{10}$ "       Socket -, +22.5, +45         "A" BATTERIES FOR PORTABLE RECEIVERS         "A" BATTERIES FOR PORTABLE RECEIVERS         7 $\frac{16}{2}$ $2\frac{16}{20}$ " $5\frac{16}{20}$ "       Socket -, +7\frac{14}{20}         6 $3\frac{16}{20}$ " $2\frac{16}{20}$ "       Socket -, +7\frac{14}{20}         6 $3\frac{16}{20}$ " $2\frac{16}{20}$ "       Socket -, +7.5         1.5 $2\frac{16}{20}$ "       Socket -, +1.5         1.5 $2\frac{18}{10}$ " $4\frac{16}{20}$ "       Socket -, +1.5         1.5 $3\frac{16}{10}$ " $2\frac{16}{10}$ "       Socket -, +4.5         1.5 $3\frac{16}{10}$ " $2\frac{16}{10}$ "       Socket -, +4.5         1.5 $3\frac{16}{10}$ " $2\frac{16}{10}$ "       Socket -, +4.5         1.5 $3\frac{16}{10}$ " $3\frac{16}{10}$ "         1.5	"A" BATTERIES FOR HOME RECEIVERS           1.25 $5\sqrt[4]{6}$ " $8\sqrt[6]{6}$ "         Socket -, +1.25         100-600 m.a.           1.5 $2\sqrt[6]{6}$ "         BATTERY FOR HOME RECEIVERS           "B" BATTERY FOR HOME RECEIVERS           45 $5\sqrt[4]{6}$ " $2\sqrt[4]{4}$ "         Socket -, +22.5, +45         7.0-12.0 m.a.           "A" BATTERIES FOR PORTABLE RECEIVERS           "A" BATTERY FOR HOME RECEIVERS           "A" BATTERY FOR PORTABLE RECEIVERS           6           1.5           5.0 m.a.           1.5           1.5           "B" BATTERY FOR PORTABLE RECEIVERS           "B' BATTERY FOR PORTABLE RECEIVERS

These Battery Engineering Bulletins are available on request: 1. Batteries for post-war electronic equipment. 2. "Mini-Max" "A-B" packs for 1.4 volt receivers. 3. Bat-teries for vacuum tube hearing aids. 4. High voltage batteries.



The registered trade - marks "Eveready," "Mini - Max," and "Air-Cell" distinguish products of NATIONAL CARBON COMPANY, INC.

30 East 42nd Street, New York 17, N.Y. Unit of Union Carbide Use and Carbon Corporation



SOLDER PRE-FORMS

SOCKET & JEWEL LIGHT ASSEMBLIES

PEED ASSEMBLY

STANDARDIZE



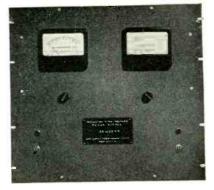
Step up production—bring costs in your shop down—with solder preforms. Pre-formed rings, washers, pellets, discs, etc., made to your order, insure better bonds, lower costs, and faster assembly. We can supply you with custom-made pre-forms of any shape required, in a wide variety of solders, copper and brazing alloys.

Write for complete information.



Dept. C, Summit, N. J.

### HI-VOLTAGE REGULATED RF POWER SUPPLY



#### 25 to 30 KV at 1 Ma. Maximum

Regulation within 1% from no load to full load at any output voltage within rating. Within 1% for line voltage variations from 95 to 125 volts at any output voltage or load within ratings. Ripple voltage within 1% at any output

voltage.

No. of Tubes: 11 Dimensions: Length — 19", Height — 171/4", Depth — 15".

Depth — 15". Also available in voltage ranges of 15 to 20 KV, 20 to 25 KV. Also available without meters.

Focus voltage tap available upon request for use with 5TP4 Projection Kinescope.

Write for Specification Sheet for Model RP30 Supply.

SPELLMAN TELEVISION CO., INC. 130 WEST 24th STREET \* NEW YORK 11, N. Y.

> THIS BOOK... The electronics BUYERS' GUIDE

tells you who makes each of fourteen hundred different electronic and allied products.

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W HETHER you need one thousand or a hundred thousand . . you'll get a degree of UNIFORMITY in G.S. Small Gearing unapproached, we believe, in the history of the industry! Such extreme accuracy in the speedy mass production of Fractional Horsepower Gears comes from over 30 years of specialization. G.S. craftsmen, together with highly developed methods and machinery, possess the ability to economically produce quantities of Small Gears . . each one uniformly cut to meet the most exacting specifications. Here, then, is a really dependable source of supply for ALL of your Fractional Horsepower Gearing requirements. Year after year, more and more particular buyers are looking to us for the kind of service and cooperation they need. Let our Small Gearing Specialists also help you to get better gears at moderate cost. Suggestions, ideas, and cost estimates won't obligate you at all. Write or phone us today!





## GUARDIA

ECONOMY

RODUCTION

### EADING INDEPENDENT PRODUCER OF





Series R Stepper Series 595 D.C. Relay Midget telephone type Three basic types of A.C and D. C. operation: con-tinuous rotation, add and power provided. Size only 1 7/16" x 1 3/8" x 1". Three outstanding features — frictionless subtract, electrical reset. First two types have 40 active positions, electripivot — proper copper-iron balance—capacity to carry up to 8 single pole, single throw contact combinations. cal reset has 36 contacts. All three types follow 10 pulses per second with in rated voltage range second with-

**Guardian HAS the ANSWER!** 

cost-free recommendations.

Name a Relay, Switch or Solenoid problem ...

99 times in 100 Guardian has the solution. Sub-

mit your specifications for application data and



Series 600 Relay Small, compact, lowsmall, compact, low-cost. Size: 2 1/8" x 1 1/2" x 1 1/8". Contact combina-tions up to 4 P. D. T. Power consumption, 6 V. A. Max. cap., 8 amps, 3 v. to 230 v. A. C., or 3 v. to 110 v. D. C. Coil and contact assemblies interchangeable If it's a Control Problem..



Series 100 A. C. Relay Used successfully in automatic home washing machines. It is incorporated in many new house-hold appliances now on drafting boards.



Series 220 A.C. Relay Capable of breaking currents up to 20 amps at 230 v., 60 c., A. C., non-inductive load. Bakelite contact block tests 1500 v. break-down to around down to ground. 5/16" dual contacts minimize arcing

### **COMPLETE CONTROL ASSEMBLIES:**

Guardian engineers are tops at designing complete assemblies, from simple start-stop controls to the complexities of time-delay, timing, counting, multiple credit, add and subtract or sequence operations. Thousands of Guardian control applications attest to Guardian's flexibility. Without question—Guardian qualifies to design and furnish composite parts or completely packaged control assemblies housings, mountings and harnesses—all set to plug in!





#### PRECISION MEASURING INSTRUMENTS FOR

#### THE RADIO AND ELECTRONIC INDUSTRY

#### FM SIGNAL GENERATOR TYPE 202-B

RF COVERAGE: 54—216 megacycles in two ranges; accuracy±0.5%. FM DEVIATION: Three ranges, 0—24 kc., 0—80 kc., 0—240 kc., continuously adjustable.

FM DISTORTION: Less than 2% at 75 kc. deviation.

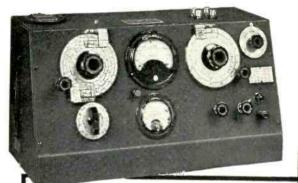
AMPLITUDE MODULATION: One range, 0—50%; calibrations at 30% and 50% modulation.

INTERNAL MODULATING FREQUENCIES: Eight frequencies from 50 cycles to 15 kc.

RF OUTPUT: 0.1 microvolt to 0.2 volt, continuously adjustable by means of 26.5 ohm piston type attenuator.



23



#### Q-METER TYPE 160-A

FREQUENCY RANGE: 50 kc. to 75 mc. (±1%, 50 kc.—50 mc.; ±3%, 50 mc.—75 mc.). May be extended down to 1 kc. with external accessory oscillator.
RANGE OF Q MEASUREMENTS, COILS: 50—625.
ACCURACY OF Q MEASUREMENT: In general, ±5%.
RANGE OF Q TUNING CAPACITOR: Main Section, 30—450 mmf. (±1% or ±1 mmf., whichever is greater). Vernier Section, plus 3, zero, minus 3 mmf., (±0.1 mmf.).

#### **UNIVERTER** TYPE 203-B

An FM-AM frequency converter accessory with unity gain for use with 202-B FM Signal Generator.

- RF RANGE: 0.4 mc. to 25 mc.
- RF INCREMENT DIAL: =250 kc. in 10 kc. increments.

RF OUTPUT: 0.1 microvolt to 0.1 volt, calibrated output (26.5 ohms); 2 volts max. uncalibrated output (approx. 470 ohms).

#### Q-METER

TYPE 170-A FREQUENCY RANGE:

30 mc. to 200 mc. (±1%). RANGE OF Q MEASURE-MENT: 80-1200.

ACCURACY OF Q MEASUREMENT: In general,  $\pm 10\%$ .

RANGE OF Q TUNING CAPACITOR: 11-60 mmf. ( $\pm 1\%$  or  $\pm 0.5$  mmf., whichever is greater).



#### QX-CHECKER TYPE 110-A

- FREQUENCY RANGE: 100 kc. to 25 mc. using accessory plug-in inductors. A calibration sheet is supplied with each inductor, accurate to within  $\pm 3\%$ .
- RANGE OF COIL CHECKS: Inductors having values between 10 microhenries and 10 millihenries may be checked against a standard to an accuracy of about  $\pm 0.2\%$ provided the Q of the inductor is 100 or greater.

CAPACITANCE RANGE: Capacitance values between about 2—1000 mmf. may be checked against standard by direct substitution, with an accuracy of a few tenths of one mmf., provided Q of capacitors is high.

#### BEAT FREQUENCY GENERATOR

**TYPE 140-A** 

FREQUENCY RANGE: 20 cycles to 5 megacycles in two ranges; LOW RANGE: 20 to 30,000 cycles. HIGH RANGE: 30 kilocycles to 5 megacycles. Accuracy ±2 cycles up to 100 cycles, ±2% above 100 cycles. OUTPUT POWER: One watt, available from a variety of output

impedances. ATTENUATOR: 5 steps; X1.0, X0.1, X.01, X.001, X.0001. DISTORTION: 5% or less.



Cinaudaqraph Speakers

THE WORLD'S FINEST AND MOST COMPLETE LINE



Square



Round



Single H. F.



Public Address

## **STANDARD SPEAKERS**

FIELD COIL MODELS . . . the most complete line of ED units available. 24 models, from 3½-inch to 15-inch dameters. Square, round, pin cushion and oval styles. Choice of field coil resistance (from ¼-lb. to 3-lbs. of copper). Voice coil diameters from 9/16-inch to 1½-inches. Highest quality workmanship and materials. All units equipped with bucking coils or "hum slugs." Transformers if desired.

**PERMANENT MAGNET MODELS** . . . all Cinaudagraph permanent magnet speakers use Alnico 5 magnets, cemented or soldered in place to give trouble-free operation. Choice of 7 magnet weights (.68-oz. to 6.8-oz.) in oval, round and pin cushion styles. 62 quality speakers from 21/2-inch to 12-inch diameters. Ideally suited for home receivers, portables, phonographs and inter-communication systems requiring dependable low-cost operation. Transformers available.



Round



Oval

## EXTENDED RANGE SPEAKERS

**SINGLE AND DOUBLE SPEAKERS**... designed for use where the widest possible frequency coverage is desired. Especially suitable for FM and Television use, and all installations requiring top performance to 10,000 c.p.s. and beyond. Single speakers available in 8-inch and 12-inch sizes. Dual-speaker Cinaxial units give finest performance from 50 to 15,000 c.p.s. No special controls required. 12-inch and 15-inch sizes.

Cinaxial

## **PUBLIC ADDRESS SPEAKERS**

**HEAVY DUTY PERMANENT MAGNET MODELS** . . . Alnico 5 magnets soldered or bolted in place. Moisture and dust proof. Accoustically selected cones give uniform frequency response and maximum conversion to accoustical power. Excellent high and low frequency definition. Voice coil forms, from 1-inch to 2-inch diameters, are double-cemented to prevent breakdown from momentary overload. Nine models from 6-inch to 15-inch, with choice of magnet weights from 4.64-oz. to 32-oz.



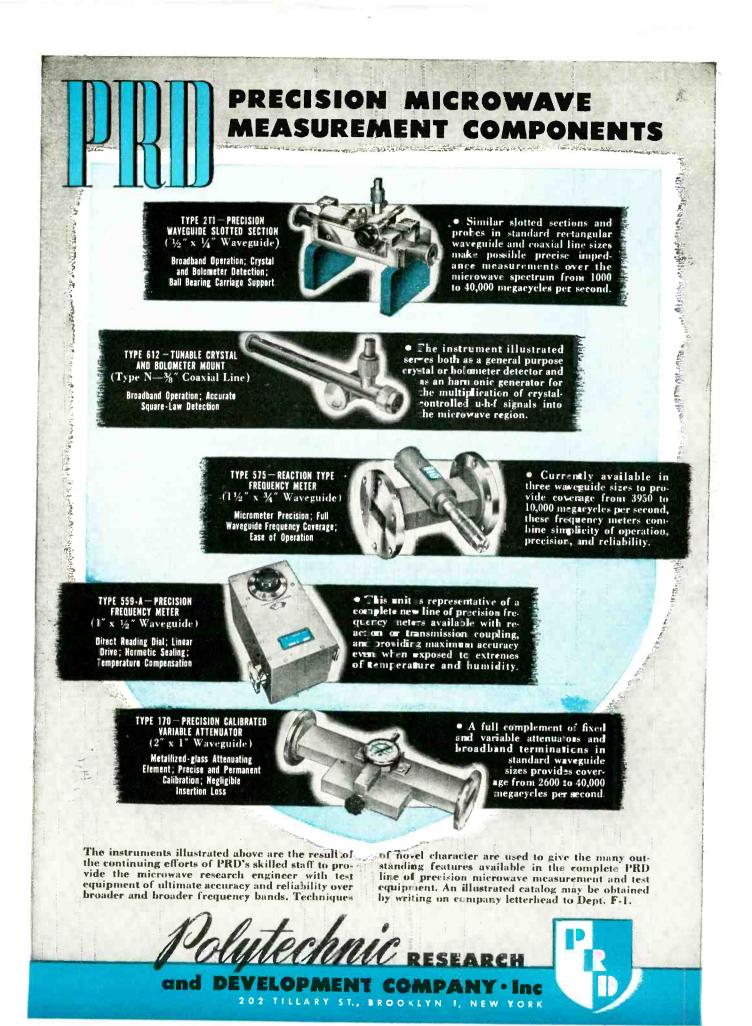
**Public Address** 

There's a **CINAUDAGRAPH** speaker for every purpose . . . from  $2\frac{1}{2}$ " portable radio units to 15-inch public address and commercial phonograph systems. No matter what the special application needed, **CINAUDAGRAPH** makes a speaker that will do the job better, longer and more economically. Diligent research, tested engineering, precision manufacture and careful inspection make every **CINAUDAGRAPH** speaker the finest of its kind. **FREE CATALOG ON REQUEST.** 

## "Heard Throughout the World"

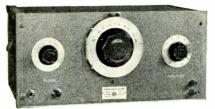
CINAUDAGRAPH SPEAKERS Division of Aireon Mfg. Corp. General Office & Factory, 1401 Fairfax Trafficway, Kansas City 15, Kansas





ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

### HEWLETT



-hp- 2000 Audio Oscillator



-hp- 650A Signal Generator



-hp- 616A UHF Signal Generator



-hp- 330B Distortion Analyzer



—hp— 400C Vacuum Tube Voltmeter



-hp- 410A Vacuum Tube Voltmeter



-hp- 805A Slotted Line



-hp- 202B Low Frequency Oscillator

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	PA	CN	Ar	N D	
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FREQUENCY

MODEL

FUNCTION

CHARACTERISTICS

	10		Binding Post
HARDWARE	14		Flexible coupler, ceramic insulated; permits mis- alignment of 1/32" and/or 5°
LOW FREQUENCY	100A	100 kc, 10 kc, 1 kc, 100 cps	Accuracy 3 cps per mc per degree Centigrade
STANDARDS	100B	100 kc, 10 kc, 1 kc, 100 cps	Temperature controlled; accuracy 0.001%
REQUENCY DIVIDER	110	100 to 10 cps	Controlled by 100A or 100B. Multipliers olso available up to 1 mc
	200A	35 to 35,000 cps	Output 1 wott into 500 ohms; 1% distortion
	200B	20 to 20,000 cps	Output 1 watt into 500 ohms; 1% distortion
	200C	20 to 200,000 cps	Output 10 volts into 1,000 ohms; 1% distortion
	200D	7 to 70,000 cps	Output 10 volts into 1,000 chms; 1% distortion
RESISTANCE-TUNED	200H	60 to 600,000 cps	Output 10 mw into a 100 ohm load; 3% total distortion
OSCILLATORS	200 I	6 to 6,000 cps	Frequency setting closer than 1%; output 10 volts into 1,000 ohms; 1% distortion
	201B	20 to 20,000 cps	Output 3 watts at 1% and 1 watt at 1/2% distortion into 600 ohms
	202B	1/2 to 50,000 cps	For low frequency studies. Output 10 volts into 1,000 ohms; 1% distortion
	202D	2 ta 70,000 cps	Output 10 valls into 1,000 ohms; 2% distortion
	204A	2 to 20,000 cps	Portable, battery-operated; output 5.0 volts to 10,000 ohm load; 1% distortion
	205A	20 to 20,000 cps	Output 5 watts, 1% distortion into impedances of 50, 200, 600, 5,000 ohms. Output VTVM and 110 db attenuator, 1 db steps
AUDIO SIGNAL	205AC	20 to 20,000 cps	Same as 205A, plus separate VTVM for complete gain measurements
GENERATORS	205Ał	<b>1</b> to 100 kc	Output 5 watts, 3% distortion into 50, 200, 500, 5,000 ohm impedances. Output VTVM and 110 db attenuator, 1 db steps
	206A	20 to 20,000 cps	Output +15 dbm with less than 0.1% distortion into 50, 150, 600 ohm impedances. Output VTVM and 111 db attenuator in 0.1 db steps
SQUARE WAVE GENERATOR		20 to 10,000 cps	Output 50 volts peak to peak; 1,000 ohm internal impedance; 70 db attenuator, 5 db steps
WAVE ANALYZER	<b>{</b> 300A	30 to 16,000 cps	Variable selectivity; measurement ronge 1 mv to 500 volts; 5% accuracy
		-	

## ELECTRONIC MEASURING INSTRUMENTS

## HEWLETT



FUNCTION	MODEL	FREQUENCY	CHARACTERISTICS
	320A	400 cps ond 5 kc	Measores total distortion as low as 0.1%. 70 d attenuator, 1 db steps far comparison
	320B	50, 100, 400 cps and 1, 5 ond 7.5 kc	Same as 320A
DISTORTION ANALYZERS	325B	30, 50, 100, 400, 1,000 cps; 5, 7.5, 10 and 15 kc	Measures total distortion as low as 0.1%. Inpu amplifier and complete VTVM each usable separately
	330B	Any frequency 20 to 20,000 cps	Similar to 3258 but measures at any frequency and includes AM detector
	330C	Any frequency 20 to 20,000 cps	Similar to 330B, no AM detector. Meter has VI chorocteristics ta meet FCC requirements for FM broadcosting
FM BROADCAST MONITOR	335B	88 to 108 mc	FCC opproved. Monitors corrier frequency and modulation. High fidelity output for aural monitoring
	350A	Max 100 kc	110 db, 1 db steps; 5 watts, 500 ohm level. Bridged T type. Accurocy 1 db in 50 db ot 100 kc
ATTENUATORS	350B	Max 100 kc	Same as 350B but 600 ohm level
	400A	10 cps to 1 mc	Nine ranges 0.03 to 300 volts full scale. Accurac $\pm$ 3% to 100 kc, $\pm$ 5% ta 1 mc. Average reading Calibrated in rms.
	400B	2 cps to 100 kc	Same as 400A with response flat to 2 cps. 10 megohm input impedance
	400C	20 cps to 2 mc	Twelve ronges 0.001 to 300.0 volts full scale; accuracy ±3% to 100 kc, ±5% to 2 mc; 10 megohn input impedance; average reading; colibrated in rms volts; may be used as 54 db amplifier
VACUUM TUBE	404A	2 to 50,000 cps	Portoble, bottery-operated; eleven ranges; 0.003 to 300 volts full scale; accuracy ±3% to 20 kc; 10 megahm input impedance
AND ACCESSORIES	410A	20 cps to 700 mc	AC: six ranges 1 to 300 volts. DC: seven range to 1,000 volts. Resistance: seven ranges 0.2 ohm to 500 megohms
	415A	300 to 2,000 cps	Standing Wave Indicator for use with a bolometer or crystal rectifier; standord fre- quency 1000 cps, others on special order
	430A		Microwave Power Meter. Measures directly pawer dissipated in a standard borretter. Full scale reading 0.1 to 10.0 milliwatts.
	455A	to 1,000 mc	Connects probe of 410A across 50 ohm transmi sion line. Type N fittings
	458A	ta 1,000 mc	Connects probe of 410A to open end of 50 ohr transmission line. Type N fittings
AMPLIFIERS	450A	10 to 1,000,000 cps	40 db and 20 db stabilized gain. Input imped ance 1 megohm shunted by opproximately 15 uu
ELECTRONIC	500A	5 cps to 50 kc	Ten ranges, $\pm 2\%$ accurocy. Input 0.5 to 200 vol
ELECTRONIC	505A	300 to 3,000,000 rpm	Ten ranges, ± 2% accuracy
TACHOMETER	505B	5 to 50,000 rps	Same os 505A except calibrated in rps
	610A	500 to 1,350 mc	Colibrated output 0.1 microvolt to 0.1 volt. Intern pulse modulation. Direct colibration
SIGNAL GENERATORS	616A	1,800 to 4,000 mc	Direct reading. Pulse modulation, CW and FN Calibrated output 0.1 microvolt to 0.2 valts
	650A	10 cps to 10 mc	Direct reading. Six bands. Output 3 volts to 60 ohm load, VTVM and output attenuator
POWER SUPPLY	710A		Any dc voltage 180 to 360 for 0 to 75 ma load approximately 1% regulation. Also 6.3 volts, 5 amps ac.
	805A		

Accurate measurements are fundamental to electronic progress. -*hp*- precision instruments are basic tools for making these measurements swiftly, surely, easily... -*hp*- instruments are used in laboratories, factories, radio and television stations, military installations and technical colleges throughout the world.

#### ANOTHER -hp- SERVICE



#### Person-to-Person Attention to Your Measuring Problems

Almost anywhere in America, *-bp*field representatives can provide personal help with your measuring problems. They have complete data on all *-bp*- instruments—their performance, servicing, and adaptabilities.

BOSTON, MASSACHUSETTS
 Burlingame Associates
 270 Commonwealth Ave.
 KEnmore 6-8100
 CHICAGO 6, ILLINOIS
 Alfred Crossley & Associates
 549 W. Randolph St.
 State 7444
 CLEVELAND 12, OHIO
 M. P. Odell
 1748 Northfield Avenue
 Potomac 6960
 DALLAS 5, TEXAS
 Earl W. Lipscomb
 4433 Stanford Street
 Logan 6-5097
 DENVER 10, COLORADO
 Ronald G. Bowen
 1896 So. Humboldt Street
 Spruce 9368

Spruce 9368 FORT MYERS, FLORIDA Arthur Lynch and Associates P. O. Box 466 Fort Myers 1269M

HIGH POINT, NORTH CAROLINA Bivins & Caldwell Room 807, Security Bank Building Phone 3672

LOS ANGELES 46, CALIFORNIA Norman B. Neely Enterprises 7422 Melrose Avenue Whitney 1147

NEW YORK 7, NEW YORK Burlingame Associates 11 Park Place Digby 9-1240

SAN FRANCISCO 3, CALIFORNIA Norman B. Neely Enterprises 954 Howard Street Douglas 2-2609

TORONTO 1, CANADA Atlas Radio Corporation, Ltd. 560 King Street West Waverley 4761

WASHINGTON 9, D. C. Burlingame Associates 2017 S. Street N. W. Decatur 8000

For details on any -hp- instrument, contact the nearest -hp- representative or write direct to factory.

#### **HEWLETT-PACKARD CO.**

 1862-A Page Mill Road, Palo Alto, California Export Agents: Frazar & Hansen, Ltd.
 301 Clay Street • San Francisco, Calif., U.S.A.

## FOR SPEED AND ACCURACY



## Westinghouse

Quality Controlled Electronic Tubes

### FOR ALL TYPES OF DEPENDABLE

## ELECTRONIC TUBES

Westinghouse offers you the right combinations . . .

- I. A COMPLETE LINE. Westinghouse provides dependable, high quality tubes for industrial and communications applications.
- 2. QUALITY CONTROLLED ELECTRONIC TUBES. From raw materials to finished tube, every manufacturing step is rigidly controlled and checked. This Westinghouse feature assures you of top performance.
- 3. REPLACEMENT TUBE SERVICE. Westinghouse Distributors throughout the country will maintain, at no obligation to you, a "Personalized Inventory" of the tubes you use, ready for immediate delivery from local stock.

#### FOR COMPLETE INFORMATION SEND FOR THE . . .

This Electronic Tube Guide lists tubes according to "family" classification and provides essential technical data on each tube. Send for your copy today. Electronic Tube Sales Department, Bloomfield, N. J.

Westinghouse Easty Julia ELECTRONIC TUBE

5

#### RESISTANCE WELDING

Resistance welders use two main types of tubes: Ignitrons to switch the welding current on and off, and Thyratrons to control the Ignitrons and "time" the switching to a split cycle. We carry a complete line of both types.



WL-5550/681

WL-5553/655

To cover the various voltage and current ratings of electronic rectifiers, we carry a complete line of Kenotrons, Phanotrons, Ignitrons, and Thyratrons. These tubes are available at our local warehouse.

**R-F** heating means Radio-Frequency Heating. This type of heating is accomplished quickly and accurately by means of highfrequency radio waves. Our local stocks of tubes for R-F heating will help solve your tube replacement worries. Replacement tubes always available in



RECTIFIERS

R-F HEATING



Phototubes can convert visible, infrared or ultraviolet light into electrical current and thus perform many tasks tirelessly and with the utmost precision. Our complete line of phototubes is stocked locally.

stock.



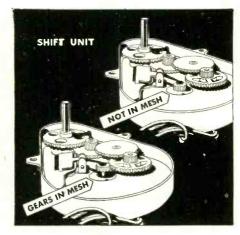
PHOTOTUBES

Vestinghouse Quality Controlled Electronic Tubes

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

## TIMING MOTORS







## WHEN IT'S TIME FOR TIMING RELY ON HAYDON FOR QUALITY

#### 1600 SERIES MOTOR

Most versatile; consists of basic motor, speed reducing gear train, sealed housing, capillary lubricating system. Mounts in any position. Wide range of speeds.

#### 2200 SERIES MOTOR

Two basic Haydon motors in line, coupled rotor shafts to avoid binding, pear-shaped gear cup. Wide range of speeds, with twice torque of single unit or reversible output shaft action.

#### SHIFT UNIT FOR AUTOMATIC RESET

Magnetically operated, counterbalanced gear shift — automatically engages and disengages gear train when motor field is energized or de-energized — frees drive shaft for resetting by means of external spring. For all timing mechanisms requiring automatic resetting, such as time delay relays.

#### BRAKE UNIT FOR INSTANT STOP

Brake stops rotor instantly, prevents coasting, avoids accumulated error. For applications requiring extreme accuracy, such as fixed interval timers, elapsed time indicators.

#### FRICTIONS FOR MANUAL RESET

Both one-way and two-way frictions are available in several types and torque ranges.

#### 3100 SERIES MOTOR

Basic Haydon motor, heavy duty gear train. For applications requiring higher torque at slow shaft speeds, such as chart drives.

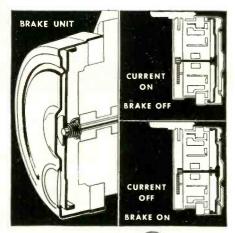
#### 4100 SERIES MOTOR

Double gear train, basic Haydon motor, for slow speed applications. Reversible output shaft action available in 4200 series.

Other types of quality motors are available from Haydon. Speed range — 450 RPM to 1 revolution per 1,000 hours. Motors custom-made to fit individual requirements as to rotation, voltage, frequency, drive shaft, lead length and other special features.









## IT'S TIME FOR HAYDON PERFORMANCE and FLEXIBILITY

## TIMING DEVICES



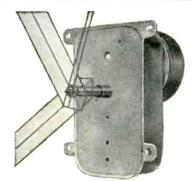
5800 SERIES REPEAT CYCLE TIMERS

For continuous repeat cycling, or single cycle operation initiated by external circuit. Available with cam operated switches to suit users' needs.



5700 SERIES ELAPSED TIME INDICATOR

Cyclometer-type counters, available in four types — minutes and tenths of minutes, minutes, hours and tenths of hours, and hours. Resetting type also available.



1876 CLOCK FIT-UP

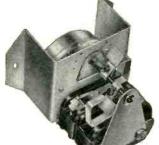
Designed for industrial, advertising and novelty clocks. Demountable motor in either back-set or bottomset model. Choice of four arbor sizes.

#### ENGINEERING SERVICE HAYDON SPECIALIZES IN THE DESIGN AND MANUFACTURE OF CUSTOM TIMING DEVICES FOR VOLUME REQUIREMENTS

Haydon is the leader in the field of electric timing devices for industrial uses. While Haydon timing motors are standardized in their basic design, each one is individually adapted to meet such specific requirements as output speed, direction of rotation, voltages, frequency, lead length, lubrication requirements and other special features. For immediate reference see the Haydon Catalog in Sweet's Product Designers File . . . complete with specifications and dimensional drawings.

Standard and specially-designed devices available include repeat cycle and reset timers, time delay relays, interval timers, sequence timers, interrupters, elapsed time indicators, flasher timers, clock movements, and other apparatus covering nearly every timing application. Take time to talk time with Haydon engineers on your applications. A fully illlustrated Engineering Data Catalog is yours for the asking.

Write 549 Elm Street, Torrington, Connecticut



#### 5908 SERIES REPEAT

**INTERVAL AUTOMATIC RESET** Automatic beverage dispensing applications. Extremely accurate, high degree of repeatability, repeats within 1/10 second, adjustable, resets automatically.



5901 SERIES ADJUSTABLE RESET TIMERS Adjustable time delay, in four models depending on time delay period.



#### TIME DELAY RELAY

Special timer for preheating electronic tube filaments, other applications where delay must precede operation — adjustable.



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## For Truly Fine Recording and Reproduction

### audiodiscs

For more than a decade, Audiodiscs have consistently set the standards for quality and uniformity in every field of instantaneous disc recording. A superior lacquer, applied by a patented, precision-machine coating process, gives a mirror-smooth cutting surface with positive thread throw, brilliant h-f response, and freedom from background noise. An important improvement, perfected in 1948, makes all Audiodiscs permanently resistant to humidity.

There's an Audiodisc for every recording need – conventional or microgroove.

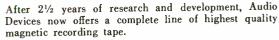
**RED LABEL AUDIODISCS** — exceed the most exacting demands for highest quality professional recordings. Aluminum base. *Double* sided—Sizes: 6½", 8", 10", 12" and 16". Single face—Sizes: 10", 12" and 16".

YELLOW LABEL AUDIODISCS — the popular choice for all generalpurpose recording. Aluminum base, Double sided. Sizes: 61/2", 8", 10", 12" and 16".

**BLUE LABEL AUDIODISCS** — ideal for schools, homes, and general amateur use. Same lacquer as professional discs, but thinner aluminum base. Double sided. Sizes:  $6\frac{1}{2}$ ", 8" and 10".

**MASTER AUDIODISCS** – the choice of professional recordists for use where pressings are to be made. Give fine results with either silvering or gold sputtering. Aluminum base. Double sided or single face. Sizes: 12'',  $13\frac{14}{4}''$  and  $17\frac{14}{4}''$ .

**REFERENCE LABEL AUDIODISCS** – provide maximum economy for test cuts, reference recordings, auditions, etc. Aluminum base. Double sided. Sizes: 10", 12" and 16",



audiota

To meet the most rigid requirements for professional as well as amateur use, and to assure optimum performance in a wide variety of different recording machines, two different types of Audiotape have been developed – one with a high coercive-force, black oxide coating, and the other with a medium coercive-force, red oxide coating. This choice of characteristics enables the user to select a tape that will give much finer performance on his particular recorder than would a tape formulated to give good average results in every machine.

Audiotape is precision manufactured to the same exacting standards of quality and uniformity which have characterized Audiodiscs for the past decade.

As this buyers' guide goes to press, the following types of Audiotape are in full-scale production:

AUDIOTAPE NO. 1200 AND 1201 — Paper-base Audiotape with high coercive-force, black-oxide coating, 1250-feet, on all-aluminum, 7-inch reel designed to fit all standard machines. No. 1200 wound with oxide coating out—No. 1201, with oxide coating in.

AUDIOTAPE NO. 1220 AND 1221 — Paper-base Audiotape with medium coercive-force, red oxide coating. 1250-feet, on all-aluminum, 7-inch reel designed to fit all standard machines. No. 1220 wound with oxide coating out—No. 1221, with oxide coating in.

A new line of plastic-base Audiotape is now being developed and will be available shortly.



The newly expanded line of Audiopoints covers the full range of recording and playback needs — for the most exacting professional recordists, as well as for the non-professional and the general public.

. . . . . . . . . . . . . . . .

#### **Recording Audiopoints**

SAPPHIRE NO. 14 — long recognized as the finest recording stylus made. Short or long dural shank, and 87° or 70° included angle.

SAPPHIRE NO. 202 — a high-quality professional stylus. Short or long brass shank. SAPPHIRE NO. 20 — especially designed for professional microgroove recording. Short or long dural shank.

**STELLITE NO. 34**—a favorite with many professional and non-professional users. Short or long shank. 87° included angle.

DIAMOND LAPPED STEEL NO. 50 - most practical and economical stylus for non-professional use.

#### Playback Audiopoints

**SAPPHIRE NO. 113** — meets the requirements of the most critical professional recordists. Straight dural shank.

"RED CIRCLE" SAPPHIRE NO. 103 - for professional use with instantaneous recordings or vinyl transcriptions. Straight dural shank.

"RED CIRCLE" SAPPHIRE NO. 303 — same as No. 103, except with bent dural shank. Ideal for phonograph records.

**STEEL TRANSCRIPTION NEEDLE NO. 151** – finest steel needles made. 100% shadowgraphed to assure perfection of *every* needle.

The above Audio Devices' products are available through more than 300 authorized distributors, located in principal cities from coast to coast. Audiodiscs are manufactured in the U.S.A. under exclusive license from PYRAL, S.A.R.L., Paris



#### AUDIO DEVICES, INC.

444 MADISON AVE., NEW YORK 22, N.Y.

EXPORT DEPT.: ROCKE INTERNATIONAL, 13 EAST 40TH ST., NEW YORK 16, N.Y.

\*Trade Mark

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# MALLORY APPROVED PRECISION PRODUCTS

### MALLORY ENGINEERING DATA

Complete, current, and factual information about all Mallory products is available for ready reference. Check over this list of Mallory printed matter and ask your Mallory representative for copies, or write direct to the company.

#### CAPACITORS

Dry Electrolytic Capacitor Catalog (GS-107) AC Motor Starting Capacitor Catalog (AC-447) AC Capacitor Data Folder (746-F)

FP Capacitor Data Folder (FP-249)

#### CONTACTS

Electrical Contact Catalog (CC-146) Electrical Contact Data Book (\$2.50)

#### RECTIFIERS

Mg-CuS Rectifier Catalog (R-1247)

Rectotruck Charger Folder

#### RESISTORS

Vitreous Enamel Resistor Data Folder (VER-1146) Variable Resistor Data Folder

#### **RESISTANCE WELDING**

Resistance Welding Catalog (M-400-F) Resistance Welding Data Book (\$2.50) 4th edition Spot Welding Aluminum Alloys Data Folder Fluted Electrode Technical Bulletin

#### SPECIAL METALLURGICAL PRODUCTS

Mallory Metals and Alloys Booklet **Technical Bulletins:** Mallory 100 Metal Mallory 1000 Metal

Mallory 3 Metal Elkaloy A Metal Lithium Capsules

SWITCHES AND CONTROLS RL, RS, MC, Lever Action, and 3100 Switch Data Folders Mallory Midgetrol Data Folder (570-748) Inductuner Technical Information Bulletin

#### VIBRATORS

Vibrapack Catalog (E-555) Vibrator Data Book (\$1.00) Vibrator Characteristic Data Sheets

#### GENERAL

Approved Precision Products Catalog (549) Radio Interference Eliminator Folder Radio Service Encyclopedia (\$2.00) 6th edition Mallory Technical Manual (\$2.00) Manufacturer's Catalog No. 1



## **MALLORY** VIBRATORS

Mallory precision vibrators bear un-disputed leadership in the radio and electronic fields. Wherever high volt-age is required from a low voltage DC source, Mallory vibrators assure de-pendable and efficient electric power conversion. Replacement types for all automobile radios. automobile radios.

## VIBRAPACK\*

(Vibrator Power Supply) The Mallory Vibrapack is a dependable source of high voltage when — and where — com-mercial AC power is not avail-able. Designed to operate radio receivers, transmitters, direction finders, public address systems, and other electronic apparatus on automobiles, boats, and air-craft. Especially suited to police and military applications. Catalog E-555.

\*Reg. U. S. Pat. Off.



#### MALLORY MAGNESIUM-COPPER SULFIDE





#### RECTIFIERS

For top performance in rectification of AC to DC use Mallory Magnesium-Copper Sulfide rectifiers. In the low voltage, high current field, they offer such unparalleled advantages as virtually constant output in any applicable operating temperature, rugged con-struction, self-healing, compact size, wide overload range, low cost. Mallory rectifiers are available in capacities from 0.3 amperes to 35,000 amperes.

#### **RECTOTRUCK\* CHARGERS**

RECTOTRUCK\* CHARGERS Mallory industrial truck battery chargers provide optimum charging characteristics, maximum battery life, and simple trouble-free operation. They charge both lead and Edison batteries, are adaptable to either of two power-line voltages, and have automatic two-rate charge control. Three models for charging motorized lift truck and standard truck batteries are readily available from industrial truck agents.

AUTOMOTIVE BATTERY CHARGERS These chargers offer the simple, easy way to keep batteries fully charged or to supply a low voltage source of DC.

voltage source of DC. Made in five models to cover the complete charg-ing field-from battery boosters to fast chargers, they are designed for operation from 115 volt, 60-cycle power lines. Ideal for charging any 6 or 12 volt batteries, they may also be used directly as a power source for electroplating, relays and solenoids, vending machines, etc.

#### For electroplating applications use

UDYLITE-MALLORY RECTOPLATERS\*

Rectoplaters available for 6 and 12 volts, 400-1500 amperes, 230-460 vorts, three-phase 60 cycle. Standard units may be seriesed or paralleled for any plating loads. (Please direct inquiries for plating equipment to the Udylite Corporation, 1651 E. Grand Blyd., Detroit 11, Michigan.) \*Reg. U. S. Pat. Off.

#### DRY ELECTROLYTIC CAPACITORS



DRY ELECTROLYTIC TYPE FP

The smallest top mounting capacitor available for rated capacity. Features identical type mounting features for all rated capacities—saves space and time in assembly. Available in rat-ings up to 500 volts with a wide variety of capacity combinations.





DRY ELECTROLYTIC TYPE BS

Hermetically sealed capacitors with steel exterior case. Ideal for difficult applications, including high alti-tudes, vibration, and extreme tem-perature. Available in various ratings up to 8 MFD, 600 volts.

Mallory also offers complete lines of



Furnished in hermetically sealed aluminum tubes with insulating sleeves. Wide temperature range. Small size conserves space in assembly. Available in a wide variety of single and dual ratings up to 600 volts.



TRANSMITTING AND TELEVISION CAPACITORS

Mallory transmitting and television capacitors are built with an ade-quate safety factor for long life under adverse operating condi-tions. Available in round and square can styles.

electrostatic, mica and paper capacitors.

#### P. R. MALLORY & CO., INC., Indianapolis 6, Indiana

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

## **MALLORY APPROVED PRECISION PRODUCTS** Rotary Circuit Selector Switches



**RS-30 AND RS-40** selector switches in high grade ceramic and phenolic insulation, respectively. Designed primarily for band and tone control circuit switching in radio receivers, they are generally suitable for lowcurrent, high frequency circuit selection in low power electrical and electronic devices. Flexibility of design permits a wide range of circuits in multiple section assembly with high torque positive hill and valley indexing. Refer Note A (Ceramic stock types 160C and 170C); also Notes B and C.



**RS-50 AND RSA-50** are selector switches of high grade phenolic insulation suitable for a wide range of radio and other electronic applications. The RS-50 employs a star wheel and ball index for medium and low torque requirements, having a wide circuit range with multiple section construction. The RSA-50 employs single spring hill and valley index embodying ear support for one or two sections and is ideally suited for low torque, band and tone switch applications where low cost is a factor. Refer Notes B and C.

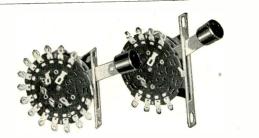




**RS-60 AND RSA-60** are switches ideal for circuit selection up to five positions. The section design is especially adapted to application where limited underchassis space is a factor. The RS-60 employs a star wheel and ball index for medium and low torque requirements having a wide circuit range with multiple section construction. The RSA-60 employs single spring hill and valley index embodying ear support for one or two sections and is ideally suited for low torque, band and tone switch applications, where low cost is a factor. Refer Notes B and C.



**RL SWITCHES** (1200 and 1300 series) are of high quality, rugged in construction, dependable in design, capable of low current switching, especially desirable for test instrument and industrial electronic applications. Design embraces positive high torque hill and valley index, multiple section construction with excellent range of circuit combinations. It is possible to obtain from 1 to 6 circuits per section with the number of positions depending upon the circuit requirements, utilizing a 30° indexing mechanism. When using a 60° index, 1 to 3 circuits are provided. Refer Notes A, B and C.



**LEVER ACTION SWITCHES** are particularly designed for intercommunication, centralized radio, sound distribution, public address and test equipment. Positive indexing available in two, three and four positions. Return spring action available in two and three positions. Both types have appropriate circuit combinations. Refer Notes A and B.



**3100 SWITCHES** are of compact, self-enclosed design, especially intended for radio frequency, tone control, antenna switching, intercommunication, test equipment and many other electronic devices where space is at a premium. Available in twelve or eighteen positions in single section construction, with a wide range of circuit combinations. Refer Notes A, B and C.

P. R. MALLORY & CO., INC., Indianapolis 6, Indiana

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# MALLORY APPROVED PRECISION PRODUCTS

### VARIABLE TELEVISION AND RADIO CONTROLS



**CARBON AND WIRE WOUND VARIABLE RESISTORS** are available in a complete range of appropriate resistance values, tapers and sizes. Designed particularly for the radio, electronic and industrial fields, they employ substantial construction and characteristics that insure maximum satisfaction and dependable performance over long life. Refer Notes A, B and C.



The Mallory Midgetrol

Designed especially to meet the needs of manufacturers for low cost, compact dual controls, the new Mallory Midgetrol-Dual has received wide acceptance from manufacturers of household and automotive radio receivers and television manufacturers.

Particular attention has been given to the high voltage operation characteristics of this control to insure long service-free operation in critical television applications. Mallory Midgetrol-Dual brings to television sets rugged construction, compact size, and versatility.

#### **Mallory Inductuner**



**INDUCTUNER\*** is an exclusive patented Mallory device to provide infinitely variable inductance tuning over all frequencies assigned to Television, FM and other stations within the range of 44 to 216 megacycles. Especially designed for Television and FM receivers, it has application in high frequency generators and electronic measuring instruments. Refer Note B. (\*Inductuner—Mallory registered trade

mark for variable inductance tuning devices.)

#### Vitreous Resistors



VITREOUS ENAMEL RESISTORS serve industrial electronic and electrical fields as voltage dividers, dropping, load and shunt resistors in all circuits where relatively high power dissipation is required. Their rugged design and construction assure dependable operation over long life. Available in fixed and adjustable types over a wide range of ratings and sizes. Refer Notes A and B.

#### Jacks, Jack Switches, Plugs



JACKS, JACK SWITCHES AND PLUGS are available in a wide range of sizes and circuit combinations conventional in design with rugged, long life construction. Jacks and switches are available in standard long frame, junior frame and midget sizes. Refer Note A.

#### **Push Button Switches**



MC SWITCHES (2100 series) are of multiple button, latching type push button design. Especially adapted to push button circuit selection in radio receivers, intercommunication systems, coin-operated record players, test equipment and many electronic devices requiring switching of low current, high frequency circuits. Refer Notes A, B and C.



2000 SERIES single push button switches have application in test equipment, intercommunication equipment, meter circuits and various electronic circuit applications. Available in locking or non-locking (momentary) action, of sturdy construction and compact for service where behindpanel space is a factor. Refer Note A. **NOTE A.** A wide range of standard stock types is available through convenient Mallory distributors. Further particulars are contained in General Catalog 549, available on request.

**NOTE B.** Detailed Engineering Data Folder is available on request, containing complete electrical, mechanical and dimensional specifications.

**NOTE C.** Specification sheets are available on request, permitting the engineer to lay out circuit requirements and accurately provide complete specifications for samples or ordering. Printed on thin paper to permit blueprinting and save drafting time.

#### P. R. MALLORY & CO., INC., Indianapolis 6, Indiana

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## MALLORY APPROVED PRECISION PRODUCTS

#### MALLORY METALS & ALLOYS

Mallory takes pride in its long record of successful research in the field of non-ferrous metals and alloys.

The Mallory Company is a leading producer of special alloys and materials from copper, silver, platinum, palladium, tungsten, molybdenum, and many other non-ferrous elements for unusual applications. Mallory was a pioneer and is still the leader in developing new materials for the contact and resistance welding fields.

In the solution of many nnusual problems, a world of engineering "know-how" has been gained in the applying and handling of these materials. This knowledge came to the fore during the war and led to the development of Mallory 1000 rotor rings, the welding of spark plug electrodes, and several other important military products involving special alloys and metals. It is now being used to solve many peacetime metallurgical problems that common-run materials will not handle.

While your materials problem is still in the design stage, or if you have a production problem due to an inadequate material, you are urged to take advantage of the assistance offered by Mallory engineers.

## **Special Metallurgical Products**

With thirty years of experience in the metallurgical field, Mallory has developed numerous special products of non-ferrous metals and alloys that are used extensively in the electrical, electronic, and industrial fields.



High strength, high conductivity copper base bars, strips, forgings, and castings • Mallory 1000—high strength, high density, machinability • Special ferromagnetic iron cores • Tungsten and molybdenum primary shapes and fabricated parts • Tungsten-welded aviation spark plug electrodes • Silver bimetal • Rare and precious metal parts • Special powder metal parts • Soldaloy\*—modern soldering tip material • Precious metal and heavy density silver plating. \*Reg. U.S. Pat. Off.

### **2000** Precision Electrical and Electronic Items Listed in the Mallory Catalog

For convenience in ordering electrical and electronic components, be sure to keep a copy of the Mallory Catalog handy. It can frequently mean savings in both time and money for purchasing agents, engineers, and designers. Many components, that might be considered "specials" and require expensive tooling and pro-



duction delays, can often be found as standard items in the Mallory Catalog.

For your added convenience, all catalog items are stocked by a coast-to-coast network of Mallory Distributors conveniently located in both the United States and Canada.

Write for your copy today-Catalog 549

MALLORY CONTACTS

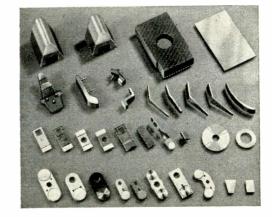
Eight Basic Types Simplify Product Design



As the largest producer of electrical contacts in America, Mallory has created more than 5,000 contact designs in the last 25 years. From this experience, it has come to learn that the eight basic types, shown above, are the ones most commonly needed—the contacts that solve nine problems out of ten.

Mallory offers you a wide variety of these eight basic types. You can get them without delay—without the expense of special tooling. And you can order by catalog number.

### Elkonite<sup>\*</sup> Materials



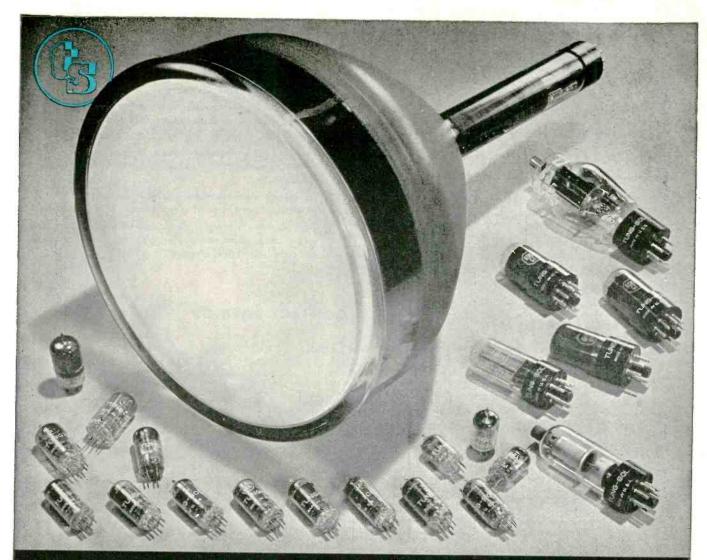
Elkonite, through many years of proved service under severe conditions, is now the standard contact material for most heavy-duty circuit-interrupting equipment. The Elkonite process enables the compounding of metals which will not alloy in any proportion.

Elkonite materials display uniformly high physical properties; and, used in circuit-interrupting devices, they are characterized by hardness, resistance to mechanical wear and impact, good electrical conductivity, resistance to erosion by arcing, and resistance to sticking.

In cases where standard types of contacts cannot be used in electrical apparatus, the Mallory organization can be of great assistance in solving the problem. Mallory engineers, familiar with all phases of contact production, can suggest designs that will give the desired performance without excessive fabrication costs. Where the application requires the development of new materials, a competent metallurgical research staff is available for consultation.

Facilities are available for manufacturing complete contact assemblies and contacts attached to brackets, springs, studs, or arms furnished by customers. \*Reg. U.S. Pot. Off.

#### P. R. MALLORY & CO., INC., Indianapolis 6, Indiana



## TUNG-SOL DEPENDABLE SOURCE OF SUPPLY FOR HIGH QUALITY ELECTRON TUBES

Tung-Sol's reputation has been built because, year after year, Tung-Sol's quality has consistently been of the highest standard. There is a TUNG-SOL Tube to satisfy every receiving tube requirement. That is why Tung-Sol's customers are among the foremost manufacturers in the electronics industry.

IN THE ORIGINAL EQUIPMENT MARKET Tung-Sol is small enough to give individual attention to every customer and large enough to produce high quality products in large quantities. Jung-Sol has always realized that the quality of a customer's product is dependent upon the quality of the tubes used. IN THE REPLACEMENT MARKET most reputable wholesale's prefer to handle Tung-Sol tubes. They like their uniform high quality and appreciate TUNG-SOL's triendly way of doing business.

TUNG-SOL LAMP WORKS INC., NEWARK 4, N. J.



Send for the "TUNG-SOL Technical Data Bock". It is a valuable aid to troubleshooting. You will find its 400 pages to be an up-to-date source of information, on lypas of tubes, both new and old, and their characteri its. In addition to written descriptions there are diagrams, graphs, and curves for at-a-glance reference. Price \$475 delivered

### **TUNG-SOL TELEVISION AND RADIO TUBES**

SALES OFFICES AMANTA · CHICAGO · DALLAS · D'ENTRER · DETRO T & LOS ANGELES · NEWARK Also Manufacturers of MINIATURE INCANDESCENT LAMPS, ALL-GLASS SEALED BEAM HEADLIGHT LAMPS AND CURRENT INTERMITTORS

## Adlake PLUNGER-TYPE MERCURY RELAYS

They have proved their value to American industry by their efficient handling of tough and unusual jobs.

If you have a knotty operating problem, Adlake engineers stand ready at all times to recommend-and if necessary, develop-the relay best suited to your needs. There's no obligation. Due to limited space on these two pages, we can show only a few typical Adlake Relays, but all have these advantages in common:

- Mercury-to-mercury contact assures positive, trouble-free action; chatterless, silent; impervious to burning, pitting or sticking.
- 2. Contacts are hermetically sealed in glass or metal cylinders -dust, dirt, moisture or oxidation can never interfere with operation.
- 3. Armored against outside vibration or impact; designed for either stationary or moving equipment.
- 4. Because they are hermetically sealed, Adlake Relays require no servicing, maintenance or periodic cleaning of contacts; they are dependable, efficient . . . always.

#### CONTACT RATINGS

TYPE 1101 T	ME DELAY RELAY		ÇÜNIA					
	ENERGIZATION	TIME DELAY- Contact Nor	- RMALLY OPEN	110 V A.C.	OLTS D.C.	220 V A.C.	OLTS D.C.	
	Maxinum time delay up to 20 minutes	Quick release Slow operate Slow release Quick operate Slow release	Non-inductive Inductive Non-inductive Inductive Non-inductive Inductive	15 amp 10 amp 5 amp 2.5 amp 5 amp 2.5 amp	1.5 amp 1 amp .5 amp .15 amp .5 amp .15 amp	5 amp 3 amp 1.5 amp .8 amp 1.5 amp .8 amp	.5 amp .3 amp .15 amp .1 amp .15 amp .1 amp	ADLAKE
	Coil voltage up to 440 v. A.C. (25-50 and 60 cy.)	11 to 6 61 to 1	DELAYS: 10 seconds 60 seconds 20 seconds 20 seconds		Loads as al 50% of abo 25% of abo 10% of abo	ove loads		
The second second	Coil—watts input 3.5 to 5 watts (depending on frequency)	TIME DELAY- CONTACT NO	RMALLY CLOSED	110 V A.C.	OLTS D.C.	220 V A.C.	OLTS D.C.	
T	Contact arrangement single pole normally open or closed	Slow operate Quick release Slow operate Slow release Quick operate Slow release	Non-inductive Inductive Non-inductive Inductive Non-inductive Inductive	5 amp 2.5 amp 5 amp 2.5 amp 15 amp 10 amp	.5 amp .15 amp .5 amp .15 amp 1.5 amp 1 amp	1.5 amp .8 amp 1.5 amp .8 amp 5 amp 3 amp	.15 amp .1 amp .15 amp .1 amp .5 amp .1 amp	
Type 1101-8 act Normaliy Open)	Acailable in slow operate—quick release slow operate—slow release quick operate—slow release	11 to 61 to 1	DELAYS: 10 seconds 60 seconds 20 seconds 20 seconds		Loads as a 50% of ab 25% of ab 10% of ab	ove loads		Type 1101-34 (Contact Normally Closed)



#### TYPE 1200 TIME DELAY RELAY FOR D.C. ENERGIZATION

Maximum time delay up to 20 minutes
Coil voltage to 130 v. D.C.
Coil-watts input
Contact arrangementsingle pole normally open or normally closed
Contact ratingsidentical to type 1040 above
Available inslow operate—quick release slow operate—slow release quick operate—slow release

Note: This relay may be used on higher D.C. voltages if an external resistor is placed in series with the coil.

#### TYPE 1110 RELAY WITH

#### **TERMINAL BLOCK**

Illustrated, glass enclosed contacts. Also available with stainless steel enclosed contacts. Standard finish...black enamel (wrinkle finish) Designed for quick operate, and quick release under load conditions

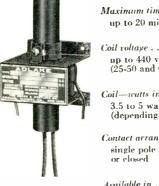
CONTACT NORMALLY OPEN 

CONTACT NORMALLY CLOSED Supplied with external resistor for 220 v., 60 cy. Contact capacity-30 amps, non-inductive at 115 v., 60 cy.

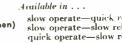
Equipped with compression-type terminals to simplify installation.



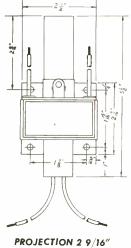
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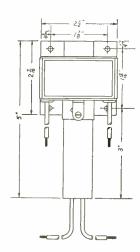
Туре 1101-8 (Contact Normaliy Open)



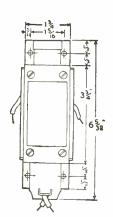
## DIMENSIONAL DIAGRAMS



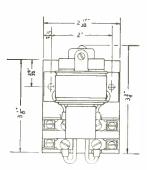
No. 1101 normally open relay



PROJECTION 2 9/16" No. 1101 normally closed relay



PROJECTION 21/2" No. 1200 relay normally open or normally closed



PROJECTION 2 7/16" No. 1110 normally open load relay

## These and Many Other **OPTIONAL TERMINAL BOARD ARRANGEMENTS**

Are Available



Type No. 1040 or No. 1101 Normally open time delay or

quick-acting relay with front panel mounting.



..........

quick-acting relay with back panel mounting.

Type No. 1040 or No. 1101 Normally closed time delay or quick-acting relay with front panel mounting.

Type No. 1040 or No. 1101 Normally closed time delay or quick-acting relay with back panel mounting.

Type No. 1040 or No. 1101 Normally open time delay or



Type No. 1040 or No. 1101 Double unit normally open relay assembly. Time delay and load relay-two-time delays or twoload relays. Normally closed construction not shown but is available.

> Type No. 1200 Double unit normally open or normally closed relay assembly. Time delay or load relay combinations, or twoload relays, or time delay relays.





MANUFACTURERS OF ADLAKE HERMETICALLY SEALED MERCURY RELAYS FOR TIMING, LOAD AND CONTROL CIRCUITS ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH



## TYPICAL APPLICATIONS

#### RADIO AND ELECTRONICS

TUBE COMPONENTS: Cathode ray tube mount supports, Kovar-Glass Terminals and Kovar Metal shapes. Ceramics of Steatite or Refractory and thermal shock resistant oxides.

ANTENNAS: Low loss Strains, Spreaders, Stand-offs, Entrance Cups and Bushings. Ceramic parts or ceramics assembled with metal fittings.

TRANSMISSION LINE: Coaxial Cable insulators. Low loss Supports, Strains and Spreaders for two or more wires.

PRINTED CIRCUITS: Low loss ceramics for miniature radio, hearing aids, etc. Precision ground ceramic plates or printed circuits.

CONDENSERS: Shafts and End Plates, plain or metallized. Ceramic cases for paper condensers. Hi K compositions, P-100 through N-750; K-33 to K-4000 supplied as rods, tubes, discs, special shapes, plain or metallized.

TRANSFORMERS: Plain or metallized ceramic Lead-through Bushings. Kovar-Glass Terminals.

RESISTORS: Plain or metallized Cores and Cases. Temperature Sensitive Ceramic Resistors, resistance decreasing approximately 30% for each 10° C rise.

TRANSMITTERS AND RECEIVERS: Round, square and Conical Stand-offs and Stand-off Assemblies. Cylindrical and Bar Type Coil Forms of ultra low loss Steatite.

#### INSULCON

Stupakoff Insulcon is a rich source of Infra-Red Radiation used in spectrographic and other technical applications. Insulcon is a second class conductor with infinite electrical resistance at room temperature and about 500 ohms at 3000° F.

#### **CASTING CORES**

Investment Casting Cores—precision made, round, tapered, threaded and special shapes. Easily removed with hot caustic soda or by machining.

#### WIRING DEVICES

Ceramic Switch Bases, Ceiling Receptacles, plain or pull-chain, Sockets, Outlet Boxes and Pole Line Insulators.

#### THERMOCOUPLE INSULATORS

Single or multiple hole Tubing for base or rare metal. Flex-Sok Beads. Special thermal shock resistant and highly refractory Insulators.

#### MERCURY SWITCHES

Glass to Ceramic Seals. Kovar-Glass Seals and Terminals. Kovar Metal sheet, rods, tubes or shapes.

#### INSTRUMENTS

Special compositions of controlled porosity and density for Altimeter and Pressure Equalization Applications. Ceramic Dash Pots and Pointer Stops. Kovar-Glass Terminals and Leadthrough Bushings for pressure sealed and Evacuated Devices. Temperature Sensitive Resistors, resistance decreasing approximately 30% per 10° C rise, for Temperature Measurement, Compensation and Control, Pressure, Flow, High Frequency Power Measurement, Time Delay and Audio Frequency Applications.

#### ARC SUPPRESSORS

Arc and flame resistant ceramics in simple or intricate designs. Ceramics or Assemblies.

#### TURBO-JET PARTS

Tubes, Rods and Special Shapes of highly Refractory and Thermal Shock Resistant Compositions.

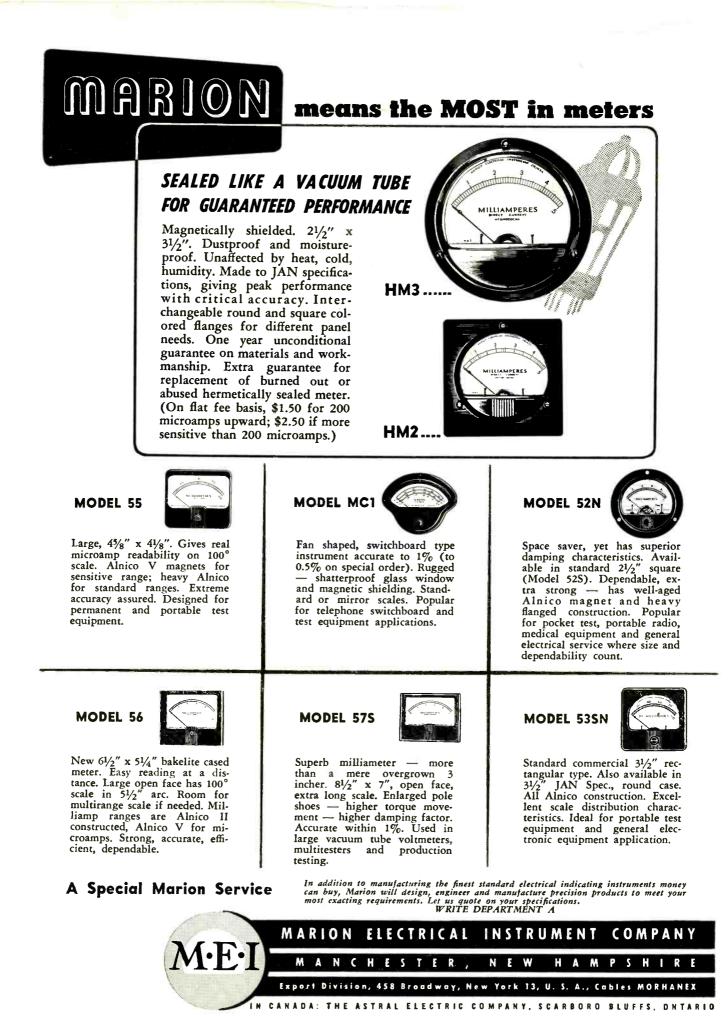
#### ELECTRICAL APPLIANCES

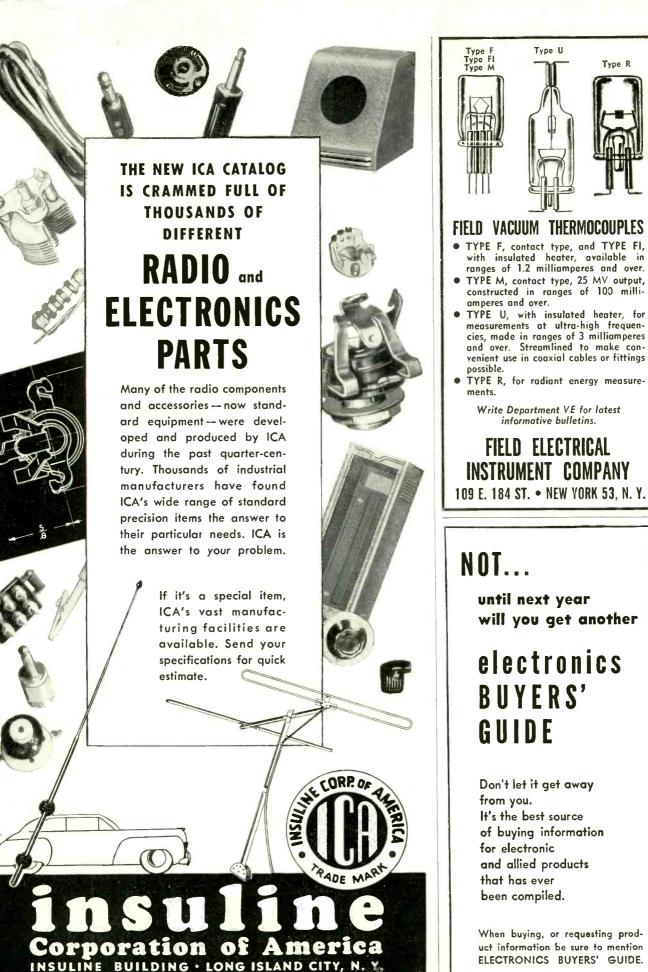
Thermal shock resistant Terminal Blocks, Switch Cases, Entrance Bushings, Grommets, Elements, Cores, Spools and Hooks.

### STUPAKOFF'S FIFTY-FIRST YEAR

AN A TO Z SELECTION OF CERAMICS: ALUMINA, CORDIERITE, MAGNESIA, PORCELAIN, STEATITE, THORIA, TITANIA, AND ZIRCON KOVAR-GLASS TERMINALS KOVAR METAL

STUPAKOFF CERAMIC & MANUFACTURING COMPANY TELEPHONE: LATROBE 1400 Latrobe, Pennsylvania CABLE: STUPAKOFF LATROBE





More than a quarter-century of Quality production

Type R

**Finest Cored Solder** in the World

**TECHNICAL ADVANTAGES** 

Three separate cores of flux eliminate possibility of no flux in a portion of the wire, which may occur in single cored solder. Guaranteed continuity of the flux stream prevents "dry" joints, i.e. those

Although there are three cores of flux in Multicore, the total percentage of flux to solder is no greater

Very rapid melting results from the multiple core construction which provides thinner walls of solder than are found in same gauge single cored solder. Multicore's unique properties make perfect joints possible on difficult metals and alloys, even if oxi-

Ability to tin rapidly produces perfect joints with

Ersin Flux is an exclusive product of Multicore

Solders Limited, and is only supplied as part of Multicore Solder. It is a high grade, water white

Confers on rosin a vigorous fluxing action without

affecting the non-corrosive and protected features

Soldered joints made with Ersin Flux do not cor-

rode even after prolonged exposure to a degree

Reduces the surface tension of molten solder,

causing it to wet metals rapidly, increasing speed

of operation with resultant production economies.

Free from objectionable odor. Non-toxic in use. Leaves nothing but pure rosin on the work after soldering, and may be used wherever plain rosin

less solder. Greater coverage per pound.

rosin, homogeneously activated.

**Multicore Solder** 

having high electrical resistance.

than in single cored solder.

dized.

Ersin Flux

of the original rosin.

of humidity.

is specified.

ERSIN

CONTAINS S

## ERSIN



## The only 3 core solder made with ERSIN FLUX...the original non-corrosive, extra-active flux

#### ALLOY AND MELTING POINTS OF ERSIN MULTICORE SOLDER

Alloy Tin/Lead	Multicore Color Code	Solidus °C.	Liquidus °C.	Recommended bit temperature °C.	USES
60/40	Red	18 <b>3°</b>	190°	230°	High quality work requiring low melting point alloy.
50/50	Yellow	183°	212°	252°	Hand soldering. Rodio, telev
45/55	Crimson/Buff	183°	227 °	267°	ptone ond electrical equipo mant; botteries,
40/60	Green	183°	238*	278°	mani; borrenes.
30/70	White	183°	257*	297°	Fases, motors, dynamos.
20/80	Purple	183°	276°	316°	Lomps, motors, dynamos.

#### STANDARD GAUGES

Standard Wire Gauge	Diameter in Inches	Diameter In Millimeters	Approximate Number of Feet per <b>lb.</b> ALLOY					
Sto	Dig	N.O.	60/40	50/50	45/55	40./60	30/70	20/80
10	1.128	3 251	25.2	24.1	23.5	23.0	21.9	20.8
12	0.104	2.642	38.1	36.5	35.2	34.9	33.1	31.5
13	0.092	2.337	48.7	46.6	45.3	44.5	42.3	40.3
14	0.080	2.032	64.4	61.7	59.2	53.6	56.0	53.3
16	0.064	1.626	100.5	96.4	94.3	92.1	87.5	83.3
18	0.048	1.219	178.5	171.0	167.8	163.5	155.5	148.0
19	0.040	1.016	257.5	246.5	240.4	235.5	224.0	213.0
20	0 036	0.914	318.0	304.5	302.5	291.0	276.5	263.0
22	0.028	0.711	526.0	503.0	492.0	481.0	457.0	435.0

BRITISH

ERSIN MULTICORE SOLDER it made in a wide range of gauges, as shown. It can also be suppliedin any intermediate size. For general radio and electronic production 13, 14, 16 and 18 S.W.G. are the most widely used gauges.

#### 4 PEDERAL SPECIFICATIONS

**ERSIN Multicore Solder meets all** requirements of Federal Specification QQ-S-571-b September, 1947 entitled "Solders Soft Tin Lead" as certified by the New York Testing Laboratory Incorporated.

ALL GAUGES AND ALLOYS READILY AVAILABLE FROM NEW YORK STOCK.

CORP.



Write for Helpful Booklet, "SOLDERS AND SOLDERING"

315 Broadway, New York 7, N. Y.

Inquiries regarding other territories to:

INDUSTRIES

Address U.S.A. and Canadian inquiries to:

MUL CORE SOLDERS

Mellier House, Albemarle Street, London, W. 1, England

Specify III

## COMPONENTS



#### HI-Q TEMPERATURE COMPENSATING CAPACITORS

HI-Q temperature compensating capacitors are available in three types. CN & SI types with capacities from .25 mmf to 1830 mmf and CI types from .25 mmf to 595 mmf with a temperature coefficient range from P 100 to N 1400. All of these HI-Q styles are of tubular ceramic construction with pure silver electrodes precision coated. Style SI is insulated with a synthetic coating of Durez, style CN is of Styrene and CI is Steatite covered.

#### HI-Q GENERAL PURPOSE CERAMIC CAPACITORS

**HI-Q** General Purpose Ceramic Capacitors readily replace mica and paper condensers of corresponding values. **HI-Q** General Purpose Ceramic Capacitors should not be confused with the **HI-Q** line of close tolerance temperature compensating units. **HI-Q** General Purpose Ceramic Capacitors are available in capacity ratings from 5 mmf to 33,000 mmf.





#### **HI-Q** STAND-OFF CAPACITORS

**H1-Q** "stand-off" capacitors are basically tubular with a screw fixture for mounting to the chassis or common ground. Close coupling and their unique construction make them an excellent choice for by-passing RF in the high frequencies. Standard capacity tolerances are  $\pm 10\%$  and  $\pm 20\%$  for "stand-off" capacitors and -20% and  $\pm 30\%$  for multiple tap units. Closer tolerances available wherever economical manufacturing permits. All units flash tested for 1000 volts DC with power factor under 3% maximum and insulation resistance is above 10,000 megohms. All units stamped for capacity.

#### HI-Q FEED-THRU CAPACITORS





**HI-Q** "feed-thru" capacitors provide perfect transmission through the chassis or ground, as well as by-passing to ground. The high quality construction of **HI-Q** "feed-thru" capacitors, is extremely rugged and will withstand severe vibration, making them ideal for use in mobile and aircraft applications.

## HI-Q HIGH VOLTAGE CAPACITORS HI-Q DISC CAPACITORS

HI-Q HV Capacitors are a sturdy unit, capable of withstanding high voltages, operating at extreme humidity and raised temperatures. They are a natural television component. The basic dielectric is body 20, encased in a low loss, mineral filled bakelite. Available in capacities 50 mmf to 1,000 mmf. Specify desired capacity after type HV when ordering.



HI-Q Disc Capacitors are high dielectric by-pass, blocking or coupling capacitors. Designed for application where its physical shape is more adaptable than tubular units. The placement of leads is such that close connections are easily made, thus reducing inductance to a minimum, a much desired feature in high frequency designs, such as television and FM. Available in three types: BPD-5: .005 MFD guar. min., BPD-10: .01 MFD guar. min.



#### WRITE FOR FREE CATALOG



Electrical Reactance Corp.

Plants: FRANKLINVILLE, N. Y.-JESSUP, PA.-MYRTLE BEACH, S. C. Sales Offices: NEW YORK, PHILADELPHIA, DETROIT, CHICAGO, LOS ANGELES



#### HI-Q RE WOUND RESISTORS

HI-Q Wire Wound Resistors are made by winding special resistance wire upon a high refractory ceramic core. The resistor element is anchored at each end to copper terminals and silver soldered to insure excellent electrical contact. The unit is then encased in vitreous enamel, long recognized as the ideal covering for wire wound resistors.

HI-Q Wire Wound Resistors are wattage rated according to the dissipation of heat each resistor will handle without exceeding 300°C (530°F) at its hotspot, from a starting ambient temperature not to exceed 40°C (104°F). HI-Q Wire Wound Resistors are the result of years of specialization and experience by Electrical Reactance Corp.

## HI-Q CHOKE COILS

#### **NON-INSULATED CHOKES**



HI-Q Choke Coils are available in certain types and combinations of special windings. HI-Q C and L combinations of capacity and inductance are available in many values. Consult us for assistance on special windings and

insulated chokes.

powdered iron cores, or wound on steatite. HI-Q Choke Coils are fast becoming the standard of



Plants: FRANKLINVILLE, N. Y .- JESSUP, PA .- MYRTLE BEACH, S. C. Sales Offices: NEW YORK, PHILADELPHIA, DETROIT, CHICAGO, LOS ANGELES

Where electrical contact is required to a moving part, laminated precious metal rings offer unusual operating characteristics at a real saving in cost over solid precious metal rings. Silver or Gold, or Platinum, or Palladium, or their alloys, bonded to the required base metal,

such as copper or bronze alloys, make possible . . .

Uniform contact resistance

- Selected temper for essential wearing quality

PRECIOUS METAL

- Mechanical strength

These rings are now being used in special electric motors, calculators, and computators, Radar, and fire control instruments, potentiometers, and other electro mechanical devices. Our engineers will be pleased to make recommendations to meet your requirements. We would

also be pleased to submit quotations to cover your specifications.

SHEETS .

New York Office, 30 Church Street

Ε.

D.



WIRE . TUBING . SOLDERS . FABRICATED PARTS AND ASSEMBLIES

PRODUCTS

## ACCURATE, Trouble-free

Telechron MOTORS

for automatic timing, switching, controlling and recording instruments

All Telechron Timing Motors are instantly ... constantly synchronous. They will start full load and reach synchronous speed instantly and remain in synchronism throughout their life. Slippage or "drift" is absolutely impossible within rated load.

#### **INHERENT LONG LIFE**

The replaceable, high-speed rotor unit is sealed to keep dust out and lubrication in. Telechron's lubricating system keeps all moving parts lubricated for years... meters correct amount of oil to the terminal shaft bearing... causes the rotor shaft to spin on a film of oil. No Telechron rotor shaft bearing has ever worn out.

#### COMPLETE LINE

Telechron motors come in many different types, torque ratings and terminal shaft speeds. All Telechron motors are Underwriters' Laboratories approved.

#### APPLICATION ENGINEERING SERVICE

Whatever your requirements... standard or special ... you can get complete satisfaction from Telechron, world's largest producer of synchronous electric timing motors. Here, application engineers offer you the benefits of the longest engineering and manufacturing experience in the field. Address Application Engineering Service, Telechron Inc., 45 Union St., Ashland, Massachusetts. A General Electric Affiliate.



Light-duty motor, type H3 Torque rating .018 pound-inch at 3.6 rpm at 60 cycles 115 volts.



Medium-duty motor, type H5 Torque rating from .20 pound-inch at 6 rph to .50 pound-inch at 1 or 2 rph at 60 cycles 115 volts.



Medium-duty motor, type B Torque rating of various models from .015 pound-inch at 60 rpm to .375 pound-inch at ½ or 1 rpm at 60 cycles 115 volts.



Heavy-duty motors, C types Torque ratings of various C types range from .25 pound-inch at 4 rpm to 2 pound-inches at 1 rpm at 60 cycles 115 volts.

Type 1M9 instrument movement Designed especially for chart drives, but adaptable to most instruments. Terminal shaft speeds from one revolution in 15 minutes to 1 revolution in 30 days. Terminal shaft rotation counterclockwise.



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OPEN FRAME TYPE for mass production, minimum cost and weight for enclosed equipment.

ENCLOSED CASE, compound filled, for high moisture resistance. Standard cases up to 500 VA. Wide range of standard audio transformer units. 

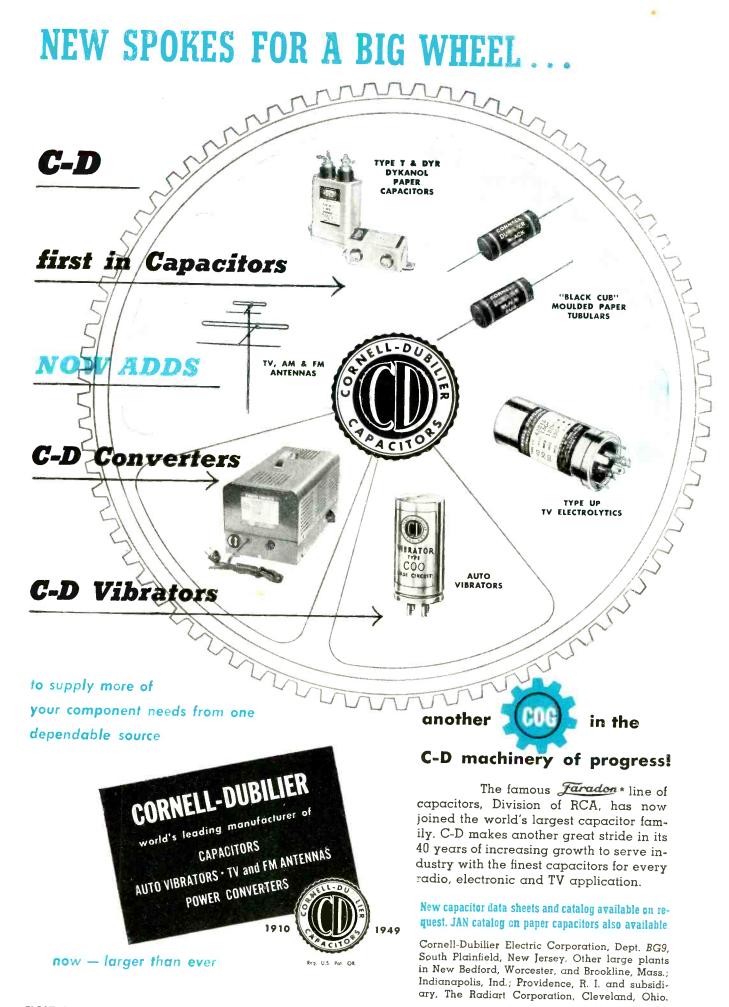
We offer ample modern facilities and intensive experience in up-todate practice, including the latest core material developments, and components for 400 cycle power supplics. Our large accumulation of patterns, tools and dies often makes it possible to supply your specific requirements from standard parts, thus cutting your costs without sacrifice of quality. Whatever the type of unit, our bid will meet your needs. Submit your inquiries.

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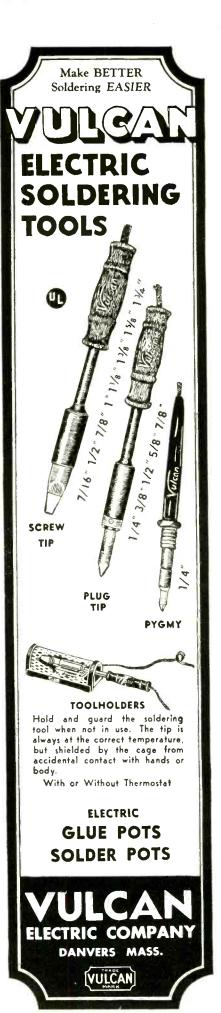
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## — — <u>THE</u> Variable Regulated Power Supply



Voltages stay put when D. Espy supplies are used, even under wide line and load variations. That means dollars and cents to you, for it gives you control over test variables — saves valuable engineering time. And you have a versatile instrument that's equally good for precision applications or general laboratory use. Check the specs; then order for your lab.

D Espy Model P-11

#### MODEL P-11-

- 0 to +400 v.d-c, 200 ma.
- Regulation within 0.1 volt
- Continuously variable
- Hum less than 10 mv.
- 0 to -150 v.d-c for bias
- 6.3 v.a-c, 6 amperes
- Metered output
- Voltages front and rear

#### MODEL P-12-

- 0 to +600 v.d-c, 300 ma.
- Other features same as P-11
- Heavy duty construction
- \$475.00, f.o.b. Los Angeles

- Voltage connections isolated from chassis ground
- SLO-DOWN circuit prevents initial voltage surge at terminals
- Line and hi-voltage fuses on panel
- Rack type panel, with cabinet
- 105/125 v. 50/60 cps source
- \$350.00, f.o.b. Los Angeles

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- Hum less than 20 mv.
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We specialize in custom-built regulated power supplies. If you have a powering problem for applications such as magnetron, Klystron, X-ray, television, or wide-band transient response amplifiers, let our engineers help you work it out. All power supplies complete with cabinet and tubes.

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design, enclosure, base, brackets and terminals. We assemble, wire and seal your component into the enclosure ... or manufacture and supply the component parts.

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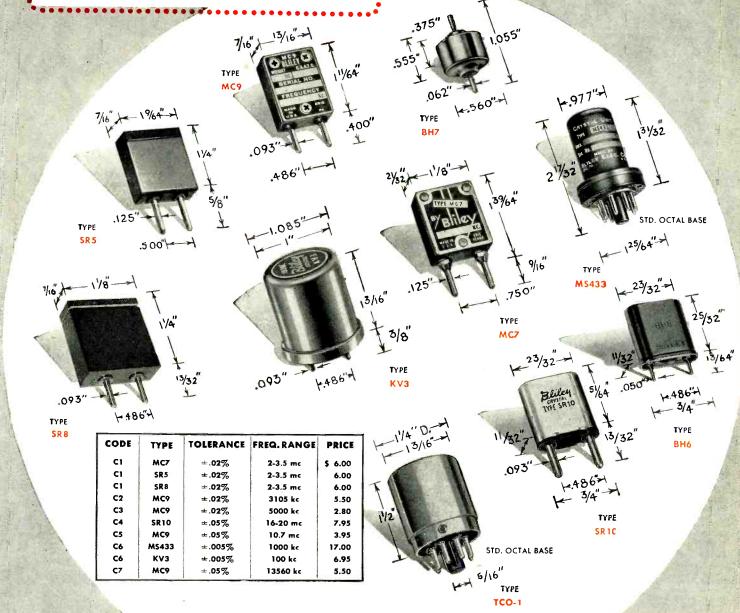
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RF GENERATORSdiathermy or industrial heating	; (C7)







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WILLIAM BRAND & COMPANY maintain an extensive research laboratory where all TURBO products are continuously tested for assurance of "as rated" characteristics. New materials, as they are developed, are subjected to series of accelerated breakdown tests against all known deteriorating agents before such materials are incorporated into TURBO manufacturing processes. WILLIAM BRAND & COMPANY invites users to submit their electrical insulation problems of any nature for study and recommendation.

TURBO VARNISHED INSULATED TURBOTHERM REL 16 A てびるづつ RADIO GRADE 4000 . AVAILABLE FOR 300 AND 600 V. NON-POROUS. NON-FRAYING BREAKDOWN • FREE STRIPPING INSULATION For Extra Dependability NON-DETERIORATING VINYL DIELECTRIC A·S·T·M TEST . WITHSTANDS POTTING TEMPERATURES • FLEXIBLE At No Extra Cost! TURBO Varnished Tubing is a ... now you need stock but <u>one</u> wire for braided cotton sleeve impregnated 11,23(1) every hook-up and lead requirement! with a fine insulating varnish. Ideal for general application, it features TURBO REL 16-A is a free-stripping insulated wire composed of high tensile strength, good flexibil-ity, non-peeling and non-cracking a tinned copper conductor (for rapid production) covered with a layer of non-deteriorating vinyl plastic (for permanent electrical qualities, low moisture absorption. protection), overlaid with a close-woven lacquered glass jacket (for oil and acid resistance plus mod-RDFAKDOWN top mechanical protection). THIS IS THE FIRST THERMO-PLASTIC WIRE TO EARN UNDERWRITERS' RECOG-NITION FOR 105°C CONTINUOUS OPERATION! erate cost. Perfect concentricity fa-A.S.T.M TEST cilitates wiring and a wide range of sizes meets all applications. TURBO PRODUCTS RBO SATURAT **+EXCLUSIVELY** PROCESSED FOR TURBO MICA SIZES -HIGHER TENSILE STRENGTH A GRADE FOR EVERY 41 sizes from .022" to 1.5" inside dia. ELECTRICAL GREATER FLEXIBILITY LENGTHS -**REQUIREMENT!** Standard bundles of 42" strands. Sizes 13 to 24 inclusive can be supplied in any length on spools. ABSOLUTE CONCENTRICITY MICA comprises a group of natural silicates distinguished by highly developed basal cleavage into thin, SLOW BURNING COMPOSITION

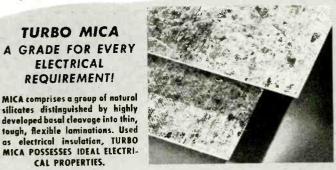
COLORS -Black, yellow, red, green, brown, blue. Standard up to size No. 12. Black and yellow on large sizes. Other colors special.

#### A low cost insulation tubing impregnated for maximum serviceability and extra long life!

LOW MOISTURE ABSORPTION

FREEDOM FROM PEELING

TURBO Saturated Sleeving is made from select cotton braid sleeving saturated with a special TURBO varnish that seals every pore without impairing flexibility. This low cost tubing is ideal for general wiring applications, for moderate temperature extremes and where electrical stress does not exceed 1200 V.



HEATER PLATE MICA—For direct contact with heat, 1000°F— 625 VPM. FLEXIBLE PLATE MICA—Plastic and moldable, 525 VPM. SEGMENT PLATE MICA-Soft edged to wear with commutator bars, 625 VPM. MOLDING PLATE MICA Becomes moldable at 284°F, 600 VPM on flat sheets. INDIA SEGMENT PLATE-Similar to segment plate but harder and has higher thermal characteristics. B-H-1 and 2 PLATE MICA-A built-up mica plate, high rigidity and temperature resistance (302°F). BLOCK MICA to rigid specifications, all standard sizes. MICA FILMS for mica condensers.

TURBO CAMBRICS, TAPES, CLOTHS AND PAPERS are treated with multiple coats of baked-on varnishes for excellent protection against voltage breakdown, oils, moisture and alkalies, under the most severe operating conditions. All standard types, sizes, lengths and colors are available.



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The part of the entire cost of an electrical product represented by its insulation is indeed small. However, the insulation is perhaps the most vital non-operating part of the product! For where failures do occur in electrical equipment, over 85% of them are due to faulty insulation! Evidently then, nothing but the finest in insulating materials must be used to assure top-most dependability. This is why most reputable manufacturers insist on BRAND TURBO insulations for their products.



Here is one of the finest electrical tubings made. It is ideal for service covering high temperatures or wide fluctuation, of temperature. Its homogeneous vinyl covering-forming a deterioration resisting dielectric barrier—is furnished to close tolerances for close fitting insulation. In 36 sizes up to 1.5" ID, continuous lengths and 7 colors plus transparent.





REL 16-A is the new TURBO tubing that features-

- EXTREME HEAT RESISTANCE, UL APPROVED FOR 105°C
- LOW MOISTURE ABSORPTION-LESS THAN 1%
- PERMANENT FLEXIBILITY-SMOOTH WALL FINISH
- NON-COMBUSTIBLE FOR POTTING AND SOLDERING • HIGH DIELECTRIC STRENGTH
- An expanded range of wall thicknesses provides a REL 16-A tubing for almost any tough wiring problem.



- EXTRUDED PLASTICS MARKERS
- SLEEVE OR TAB TYPE
- . CHOICE OF COLORS



#### TURBO WIRE MARKERS SPEED ELECTRICAL OPERATIONS!

TURBO Wire Markers are used to identify electrical conductors or, in fact, any tubing, wiring, rod, pipe, hose, cable or connection. Dimensioned to precise limits to insure snug fit, these markers cut assembly costs wherever a multiplicity of electrical operations must be effected with speed and accuracy. Printed legend may be applied longitudinally or circumferentially in any color of ink. The tab type is especially suitable for use on finer wires. Sizes as required.

SEND FOR FREE TURBO SAMPLE BOARD! Write on your company letterhead for this valuable insulation selector. Contains actual testing specimens of TURBO Sleevings and Tubings together with data and recommendations. In various sizes and colors,

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## ADC JACKS

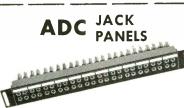


Approved, rigid, welded, boxtype construction. Non-aging, non-ferrous springs provide permanent, proper tension. Silver alloy contacts riveted thru blades. Standard dimensions.

Write for catalog.



ADC Plugs: precision made of finest materials. Assure utmost dependability. Interchangeable with standard plugs. ADC Patch Cords: finest stranded tinned copper, 2 conductor wire. Well shielded and insulated. Write for catalog.



Standard spacing for use with any double plug. Mounting holes fit all standard jacks. Hole pairs spaced to prevent crossing circuits. Solid plastic panels reinforced with steel and ready to mount on standard 19" relay rack. Improved designation strip makes it easy to remove or replace cards.

Write for catalog.



A quality built instrument complete with built-in filters that meets the American Standards Association's specification for sound level meters.



## **NEW ADC TRANSFORMERS**

**ADC** Engineering, quality control, and rigid production testing assure you trouble free **ADC** Transformers and Components for communications equipment.

Now ADC offers the intermediate series transformers, to broaden the *electronic industrial* applications for ADC quality.

A wide range of transformers is available in each of the following series:

Quality Plus Series, Yeoman Series, Industrial Series.

Units may be selected from one of these series to fit any requirement for longitudinal balance, low hum pickup, desired frequency response, open frame or enclosed construction.

Your transformer requirements for response, temperature rise or mounting can be filled either from our catalog of stock transformers, or with transformers developed especially to fit your need.

Write today for further information.



QUALITY PLUS

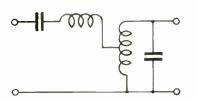


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### ADC FILTERS



**ADC** designs and builds all types of standard and special filters. Years of experience and the employment of trained research engineers qualify **ADC** to design filters meeting the most rigid requirements.A crystal control frequency standard enables us to manufacture filters to precise tolerances.

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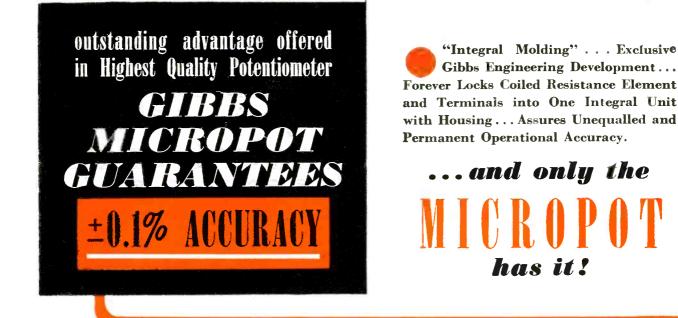
## ADC AMPLIFIER (71 Series)

An unusually versatile amplifier series for wide range frequency response with low distortion. The series provides input and output impedances suitable for broadcast stations, wired music installations, turntables and operation with quality tuners.

Write for full descriptive literature.



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The coiled resistance element is threaded on the molded core



Resistance element and terminals are one integral part of housing

#### **OTHER IMPORTANT FEATURES OF GIBBS TEN-TURN MICROPOT**

Write Today ! For engineering specifications and complete detail folder. Submit any problems to our engineering staff for recomm en d a tions. Units for immediate shipment. — 1,000 to 30,000 ohm range. Special resistance values made to order.

- Resistance output is directly proportional to shaft rotatation through a full 3,600 degrees within ±0.1%: this linearity is carried right to the counter clockwise stop. In the Gibbs MICROPOT such results are obtained by precision manufacturing and methods.
- Precision ground, stainless steel, double thread, lead screw guides the rotating contact, guarantees smooth action, low uniform torque

and accurate settings — permanently.

- Rotor assembly, supported on two bearings, assures long life and low torque.
- Ends of resistance element soldered to terminals before molding.
- Anti backlash spring in contact guide—assures you positive setting and resetting.
- The 431/2" length of resistance element gives you a finer resolution.



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June, 1949 — MID-MONTH — ELECTRONICS BUYERS' GUIDE

## You gain these advantages in RLSIMPC CUSTOM MADE TECHNICAL CERAMICS

These are the reasons for the consistent growth of American Lava Corporation:

**RESEARCH**. American Lava stands pre-emiment in its field in research. Here you are most apt to find the answer to any question involving technical ceramics.

ENGINEERING SERVICE. American Lava is long on engineering service. You will find one or more graduates of many leading engineering schools on our staff. Their specialized experience is freely available to you on selection and design of technical ceramics for your specific requirement.

EXCLUSIVE PROPERTIES. Constant development of special purpose ceramics has led to the production of many Alsimag compositions with advantages not found in any other material.

DEPENDABLE QUALITY. Our customers know that Alsimag components are always well within the physical characteristics specified. That is assured by alert Quality Control Supervisors and rigid final inspections.

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ADVANTAGEOUS DELIVERIES. Deliveries are not as good as we would like to have them-but, during the past year 84% of our deliveries were on time and a good percentage of the remainder followed rather closely. Factory expediting practices are being constantly impraved and we pledge further improvements toward increasing the already favorable percentage of deliveries on time.

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48TH YEAR

## UNIVERSAL WINDING COMPANY

#### P.O. BOX 1605, PROVIDENCE 1, R.I.

#### A Wide Range of Winding Machines for a Wide Range of Coils

We invite you to visit our Coil Winding Demonstration Room to view any of these machines in operation.

"LATTICE-TYPE" COILS	No. 84 Winding Machine					
Radio and Television	Model Wire Kange Max. Dia. Traverse RPM No. Coils HP Floor Space at Once					
	84 #19-42 5" 1/32"-1½" 400-800 1, 2, 3 or 4 ¼ 26" × 31"					
	"Gainer mechanism" and calibrated "strap-type" tensions insure accurate, uniform winding, also quick change-over. Simple design, rugged construction assure long life.					
LAYER-WOUND COILS	Nos. 96 and 103 Winding Machines					
Cotton-Interwoven or Non-Insulated	Model Wire Range Max. Dia. Traverse RPM No. Coils HP Floor Space at Once					
Min Min	96 #19 to 42, 6" 1/16"-31/4" 500-1800 1 or 2 1/4 30" x 26"					
	103 #19-38, 46 7 " $\frac{1}{2}$ "-8 " 200-120C 1 or 2 $\frac{1}{2}$ 40 " x 36 "					
	Wire and cotton mechanically guided. Automatic counter. Quick change-over. Adjustable for wide range of coil sizes.					
GUTTER-WOUND COILS	No. 98 Winding Machine					
for Heavy Duty	Model Wire Range Max. Dia. Traverse RPM No. Coils HP Floor Space at Once					
	98 #8-20,30 16½ ″ ¼ ″-12 ″ 35-135 1 or 2 ¾ 4′9 ″ x 3′ 10 ″					
A ST	Automatic guiding. Wire turns placed in grooves formed by preceding layers — for maximum density. Automatic stop at end of coil or end of each layer, as required.					
SPOOL-WOUND COILS	No. 102 Winding Machine					
No insulation between layers	Model Wire Range Max. Dia. Traverse RPM No. Coils HP Floor Space at Once					
	102 #19-46 3¼" 1/16"-3" 500-2500 1 or 2 ¼ 51"x 24" Per head (3 heads)					
	1, 2, or 3 individually operated winding heads. Output is synchronized on basis of handling time per coil. Wire-layer length quickly adjusted. Automatic stop.					
PAPER-INSULATED COILS	Nos. 104 and 105 Winding Machines					
Round and Rectangular	Model Wire Range Max. Dia. Traverse RPM No. Coils HP Floor Space at Once					
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$					
	Coils wound in stick form — 3 to 14 on No. 104; 10 to 28 on No. 105. Sensitive "strap-type" tensions insure smooth flow of finest wires. Paper automatically inserted. Uniform overlap at all diameters. Adjustable traverse mechanism. Automatic stop. Rapid transfer of wire turns.					
	238. 8.					
	FOR WINDING COILS IN QUANTITY					
LEESONA)	ACCURATELY AUTOMATICALLY					
X	USE UNIVERSAL WINDING MACHINES					
*REG, U.S. PAT. OFF						



## SELF-STARTING SYNCHRONOUS TIMING MOTOR

The Cramer Type SX Synchronous Motor is a permanent magnet type motor. By reason of careful design these motors are highly efficient and produce an exceptionally high torque for such small space and wattage

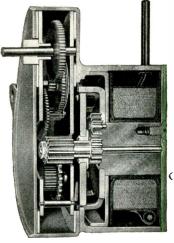
**APPLICATIONS**... Primarily intended for applications requiring constant speed at a given frequency, this motor is particularly suited for: Timing Devices – Recording Instruments – Communications Equipment – Traffic Controls – Advertising Displays – Clocks – Heating Controls – Signaling Systems.

IMPORTANT FEAT JRES ... Truly Synchronous: A truly synchronous type utilizing a strong permaneit magnet rotor which draws no energy from the A.C. field. Impossible for the n otor either to overspeed or underspeed. High Torque: 30 inch ounces at 1 RPM, 60 Cycles. High Efficiency: At least 5 times greater than a hysteresis shaded pole type motor of equivalent dimensions. Controlled Rotation: An exclus ve feature determines direction of rotation. Clockwise or counterclockwise motor can be supplied. Speed: 28 standard gear trains, ranging in requirements. They are self-starting, run at slow speed . . . 240 RPM at 60 Cycle . . . and operate in any position. They will operate at synchronous speed only and will start in 2 cycles and stop within 1/25 seconds.

speeds from 60 RPM to 1 revolution in 24 hours are available. Lubrication: A special high grade lubricant is sealed within the housing containing the rotor gear train and provides adequate lubrication for many years of service. Replaceable Coils: Coils are easily removable thereby facilitating changes in the voltage rating or in field servicing. One- or Two-Way Friction: The latter permits the drive shaft to be turned in either direction independent of the gear train or motor.

**CONSTRUCTION...** Iron circuit of the motor provides a cup for the motor coil and serves as a base to which gear housing is assembled. A complete, interchangeable gear train with a substantial oversize bearing snugly fits into the gear housing. Two substantial lugs extending from the gear housing provide convenient mounting means. For complete details ask for Bulletin 10A.





(Actual Size)





(A) INTERVAL AU OMATIC RESET TIMERS





(C) TIME DELAY RELAYS (D) TYPE TO







(H) MULTI-CONTACT





(I) RUNNING TIME N ETERS

## CRAMER SYNCHRONOUS ELECTRIC TIMERS

(A) INTERVAL TIMERS ... Manually set for each operation. Designed to automatically open or close a single circuit at the end of a definite time interval, or to automatically close one circuit and open second at end of a definite time interval. Ask for Bulletin 100F.

(B) AUTOMATIC RESET TIMERS ... To close or open a circuit after an adjustable pre-set time and instantly return to the starting position ready to repeat this cycle of operation upon reclosure of the starting button. Ask for Bulletin 500B.

(C) TIME DELAY RELAYS (Type TEC) ... Provides adjustable or fixed time delay between closing and opening of PERCENTAGE TIMERS a load circuit. Has automatic re-set feature which restores timer to its normal starting position when control circuit fails or is de-energized. Also available with reverse clutch which prevents re-set in case of power failure. Ask for Bulletin 800D.

> (D) TYPE TC . . . Inexpensive single and two pole time delay relay. Ask for Bulletin 900D.

> (E) TYPE TD5... One of many special types available with overtravel contacts to provide shock-resistance.

(F) PERCENTAGE TIMERS: Automatically controls the percentage of time at which circuit can be closed or opened out of a definite length of time. Distinctive feature: Utmost simplicity of design. Adjusted from the front, can be set from 5% to 97% of total cycle. Ask for Bulletin 2500C.

(G) MULTI-CONTACT TIMERS: Automatically controls a sequence of "on" and "off" operations of a single or multiple number of electrical circuits in accordance with a predetermined operating program. They can (1) repeat continuously, or (2) automatically stop after one complete operation. Ask for Bulletin 3000A.

(H) Simple Low Priced Single or Multi-Contact Cam Timers for builtin applications.

(1) RUNNING TIME METERS: Synchronous motor driven running time meters, automatically and cumulatively register the total operating time or idle time on any circuit, machine or system to which they are connected. Are available in table model also. Ask for Bulletin 3500B.

For Bulletins and complete data write to . . .



## Superior NICKEL ALLOY CATHODES

#### TYPES

Superior Tube Company is the World's leading manufacturer of nickel cathodes of the indirectly heated type for use with Barium-Strontium Oxide coatings in electron tubes, particularly receiving types. Such cathodes are available in Seamless, WELDRAWN\*, and Lockseam<sup>†</sup> form.

**SEAMLESS** cathodes are made from hot forged and pierced or extruded billets, subsequently cold drawn into tubing of the required diameter and wall thickness.

WELDRAWN<sup>\*</sup> cathodes are produced from nickel alloy strip which is formed and welded into tubing, and subsequently cold drawn. The finishing operations are similar to those for seamless material.

**LOCKSEAM**<sup>†</sup> cathodes are produced directly from thin strip stock by our patented machines, developed especially for the purpose.

Cathode base metals have been classified by the American Society for Testing Materials as "Active", "Normal", and "Passive". This classification is based upon the relative amounts of thermionic emissivity which the base metal produces in combination with the oxide coatings.

"Active" alloys produce a higher level of DC emission. The International Nickel Company's (INCO) 225 and 224 analyses are generally used for this purpose. Driver-Harris Company's (D-H) 799 analysis is intended to be interchangeable with the INCO 224.

"Normal" nickel is most widely used for small, low current drain tubes where seamless cathodes are required. The INCO 220 analysis, a refinement of INCO Grade "A" nickel, is the standard alloy for this purpose.

"Passive" material is usually employed when freedom from grid emission is necessary. Such alloys have a low rate of free-Barium yield, so that emitting materials do not deposit upon the hot grid wires. Frequently the primary emission from such cathodes is slightly lower than from more active alloys. However, life is excellent. The standard nickel alloys for this purpose are D-H 499 and 999.

Another D-H alloy, No. 599, which is widely used, is apparently intermediate between the "Normal" and "Active" grades. Since the exact amount of emission obtainable from any alloy is dependent in large measure upon the coating and its processing, it is reportedly possible to obtain as good emission from 599 alloy as from 225 alloy.

D-H 699 alloy is high in Mg content and is the closest American parallel to the alloys frequently employed in Europe. It is not used to any great extent in the United States, due to the rapid sublimation of Mg which is a cause of electrical leakage and noise inside the tube.

In general, for freedom from grid emission but with slow speed of activation and a relatively low emission level, D-H 499 or 999 is suggested.

For normal emission, with rapid activation, INCO 220 is usually employed.

For rapid activation, plus high level of DC emission, INCO 225, INCO 224, or D-H 599 are most frequently used.

\*Reg. U.S. Trade Mark, Superior Tube Co. † Manufactured under U.S. Patents, S.T. Co.

#### SELECTION

Superior's cathode nickel sleeves are universally used as the base metal for indirectly heated cathodes to be coated with Barium-Strontium Oxides. The cathode base metal serves as a mechanical support for the emitting coating and as a means for transferring heat energy to the coating. When selecting a cathode base metal, consideration must be given to the proper balance between the various "performance characteristics" and the chemical analyses. The principal "performance characteristics" are the following:

1—Speed at Which a Cathode can be Activated. This is of prime commercial importance, and to a great extent is controlled by the quantity of uncompounded reducing agents present in the nickel alloy. Some of these agents are Mg, Si, Ti, and C. Where the greatest speed of activation is desired, the use of "Active" cathodes is recommended.

-Rate of Sublimation of Volatile Minor Constituents. Cathode alloys are formulated and controlled to produce the least amount of volatile metallic materials. Therefore, cathode design, and operating and processing temperatures are extremely important in controlling the rate of sublimation. Certain elements, such as Mg, are quite volatile and for this reason, Mg content is generally limited.

3-Rate of Free-Barium Evolution. As noted above, a "Passive" cathode alloy is recommended where freedom from undesired grid emission is essential.

-Impedance of Core-Coating Interface. Cathode alloys depending upon Mg and C as coating reducing agents are usually favored for VHF and pulsed applications. The impedance of the interface is believed by some to be due to the resistance and capacitive effects of compounds formed by reactions of free base metal reducing agents with coating materials. Alloys with large amounts of Cr, Ti, and Si are believed to produce undesirable blocking layers. A compromise balance between the several reducing elements is generally necessary.

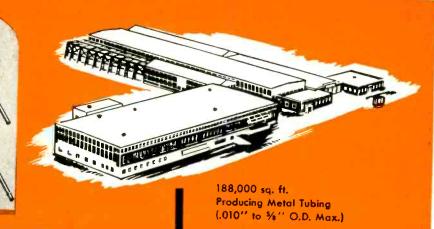
5—Effect of the Nickel Alloy upon Heater Cathode Leakage. This is of importance only when unusually low hum levels are required. There is some evidence that the "Passive" type of cathode is beneficial for this characteristic.

6—Effect of the Nickel Cathode Alloy upon Tube Life and Resistance of the Coating to Poisoning. This is the most complex cathode problem of all, since it is dependent upon a great number of coating and processing variables. Individual manufacturing techniques in the production of electron tubes determine the optimum choice of cathode material for this characteristic.



#### NICKEL CATHODE DATA for **Electronic Designers & Engineers**

Specification data sheets such as E.G.-1 on Methods of Testing Cathodes and E.M.-2 on Standard Tolerances will be sent upon request. You are invited to write for full information.



#### Chemical Analyses of Ni kel Alloys available in Cathodes from Superior Tube Co.

76 Cu	% Fe	% Mn	% C*	% Mg	% Si	% S	% T
on ent of t 00 in. this	hese allo kness whi	ys in the fo le seamle:	orm of Loc is tubing o	kseam slea averages s	eves aver lightly hig		,,,,,
0.20 max,	0.20 max,	0.20 max.	0.08 max.		0.05/	0.008	
0,20 max.	0,20 max.	0.20 max,	0.08	.01/	0.12/	0.008	0.02 max.
0.04	0.05	0.05	0,08	.01/	0.12/	0.005	0.02
0.20 max.	0.20 max.	0.20 mgx.	0.08		0.15/	0.008	niux,
0.04 max.	0.05	0.10 mgx.	0.08	.01	0.15/	0.005	
.04 max.	0.05	0.10	0.08	0.05/	0.05/	0.005	
0.04 max.	0.05 max,	0.02 max.	0,08 max.	0.01	0.15/	0.005	
0.20 max,	0.20 max.	0.20 max.	0,08 mgx.	0.01/	0.01/	0.008	
0.20 max,	0.20 max,	0.20 max,	0.08 Max.	0.01/	0.01/	0.008	
0,05 max.	0.05 max,	0.05 max.	0,05 max.	0.02 mgx.	0.02 mgx.	0.008	0.01
0,04 max,	0.05 max.	0.02 max.	0.05	0.01	0.01	0.005	
0.04 max.	0.15 max.	0.02 max.	0.05	0.01 max.	0,01 max.	0.005	
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       0.05         0.02         0.08         0.01/         0.01/           max.         max.</td><td>one mt of these alloys in the form of Lockscem sleeves averages in. thickness while seamless tubing averages slightly higher.         76 3           00         in. thickness while seamless tubing averages slightly higher.         0.20         0.20         0.20         max.         max.         0.25         max.           0.20         0.20         0.20         0.08         0.05/         0.008           max.         max.         max.         10         0.20         max.           0.20         0.20         0.20         0.08         0.1/         0.12/         0.005           max.         max.         max.         10         0.20         max.         max.           0.04         0.05         0.05         0.08         0.1/         0.12/         0.005           max.         max.         max.         max.         0.25         max.           0.04         0.05         0.10         0.08         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seamless tubing averages slightly higher.         76 3           00         in. thickness while seamless tubing averages slightly higher.         0.20         0.20         0.20         max.         max.         0.25         max.           0.20         0.20         0.20         0.08         0.05/         0.008           max.         max.         max.         10         0.20         max.           0.20         0.20         0.20         0.08         0.1/         0.12/         0.005           max.         max.         max.         10         0.20         max.         max.           0.04         0.05         0.05         0.08         0.1/         0.12/         0.005           max.         max.         max.         max.         0.25         max.           0.04         0.05         0.10         0.08         0.11         0.15/         0.005           max.         0.10         max.         max.         0.25         max.         0.25         max.           0.04         0.05         0.10         0.08         0.01/         0.15/         0.005           max.         0.10         max

#### Availability of Nickel Alloys in Cathode Form at SUPERIOR

Alloy	Activ Classifi		Availability						
			Seamless	Weldrawn	Lockseam	Disc Cathode Caps			
499	Pass	ve	X		X	XX			
999	Pass	¥e	XX		XX	XX			
220	Nori	at	Х		XX	XX			
224	Acti	e	XX	XX	XX	XX			
225	Acti	e	XX	X	X	XX			
399	Activ	e		XX	X	XX			
599	Activ	e		X	X	X			
699	Acti	e		X	XX	XX			
799	Acti	e			XX	X			

#### SUPERIOR CONTROLS FOR QUALITY

The melters, fabricators, and re-rollers of cathode nickel stock cooperate with the Superior Tube Company in controlling the quality of the material to a degree. Superior's laboratories check the chemical and metallurgical properties of each lot of metal. Most melts are checked for emission and some other "performance characteristics" through tests in diode tubes in our own Electronics Laboratory. Corroborative tests are conducted by our major customers. During processing every effort is made to mainta.n surface cleanliness through the use of lubricants free from sulphur and chlorides. All cathode tubing is carefully cleaned before each annealing operation. Furthermore, the draw bench tables are covered with plastic to avoid surface iron pick-up, and many other unusual precautions are taken against contamination of Superior's wide variety of cathodes.

#### Designations of Comparable Nickel Cathode Allovs

		11095		
Grade & Alloy:	Melte	rs Designations	Equivalent Designation	
	INCO	D-H	- congritations	
Passive Norma	220	499 & 999	N81 N18	
Active Active	224 225	799 699* 599 399	N34	
The Superior T Companyemplays melters' alloy de nations,	the	*This alloy is the Equivalent to Brin and German "C monly in use in E	"nickel com-	

Export Representatives DRIVER-HARRIS COMPANY Harrison, New Jersey and affiliated Europs an Companies.



2504 Germantown Ave. • Norristown, Pennsylvania





#### FOR RELIABLE HEATING **ELEMENTS and RESISTORS**

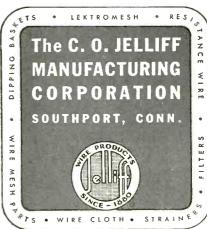
Even the devil himself could not withstand the extreme temperatures to which Jelliff resistance wires are subjected. Constant research, application study and controlled production assure you fine quality products of superior performance and long life.

Jelliff resistance alloys are used extensively for industrial, radio and electronic equipment; domestic appliances; instruments; transportation apparatus and materials handling equipment.



For specific engineering data applying to your problem, refer to the new and complete 56 page Jelliff Resistance Alloys Catalog.

#### Write Dept. 208 for Catalog No. 46





isolate vibration from all directions. Light in weight, small in size, they are widely used to mount electronic units.



Standard—isolate steady vibration. Stable, compact—easily installed. Loads  $\frac{1}{2}$  to 120 pounds per mount.

## A **LORD** VIBRATION CONTROL SYSTEM

There's an Answer to Every VIBRATION PROBLEM...

> Increased sales, improved product performance, and lengthened product life are the result when destructive vibration is isolated. Let Lord analyze your product and make recommendations for potential improvement.

> The Lord rubber-to-metal bonding processes, utilized in vibration control mountings, have naturally led to many other advantageous applications. Indicative of the wide range of practical uses are such mechanical components as friction drive wheels, valve seats, bearing seats, and other custom made parts.

#### TUBE FORM MOUNTINGS-

Standard—for steady vibration and severe shock. Have great radial stability. Loads from  $\frac{1}{2}$  to several thousand pounds.



isolate steady vibration ... cushion shock. Good for mobile equipment.

have exceptional torsional flexibil-

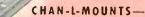
angular misalignment. Ratings from

. accommodate parallel and



PLATE FORM VERTICAL SNUBBING MOUNTHNGS---

isolate steady vibration plus severe shock. Loads up to £10 pounds per mount.



Ready to use—easy to install. Isolate steady vibrotion and occasional shock. Extremely soft ond sturdy, they give superior isolation.



protest small meters and instruments from destructive vibration. One piece construction, easily installed...many sizes far most commostly used models.



absorb shock energy emanating from punch presses, looms, printing presses, etc. Neoprene is bonded to  $\frac{3}{16}$ 's steel. Load ratings up to 7500 pounds per mount.



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I fiftieth to 1 hp.

#### M.H.P. FLEXIBLE COUPLINGS —

F.H.P.

FLEXIBLE

COUPLINGS -

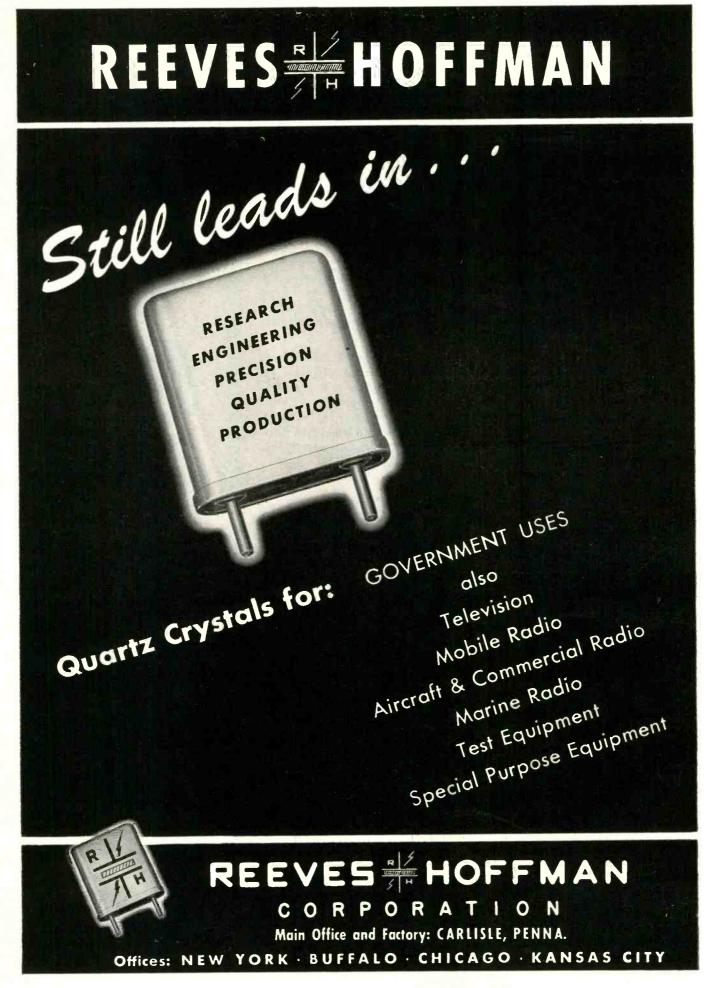
deflact under torsional load...isolate torsional vibration. Removable flexing elements allow couplings ta be installed without moving shaft. Ratings up to 100 hp 1750 RPM.



# with Vibration Control

#### LORD MANUFACTURING CO. · ERIE, PA.

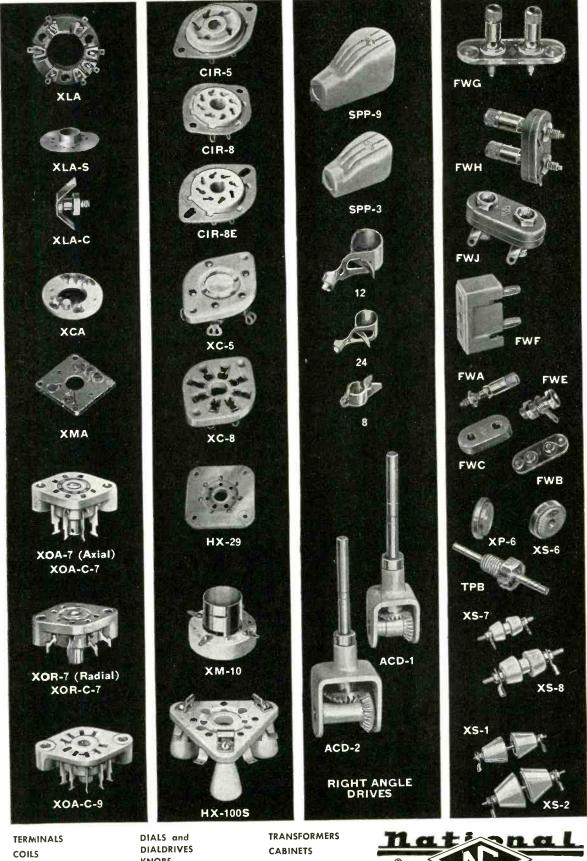
Field Offices: Detroit \* Chjcago \* New York \* Washington, D.C. \* Providence, R. I.





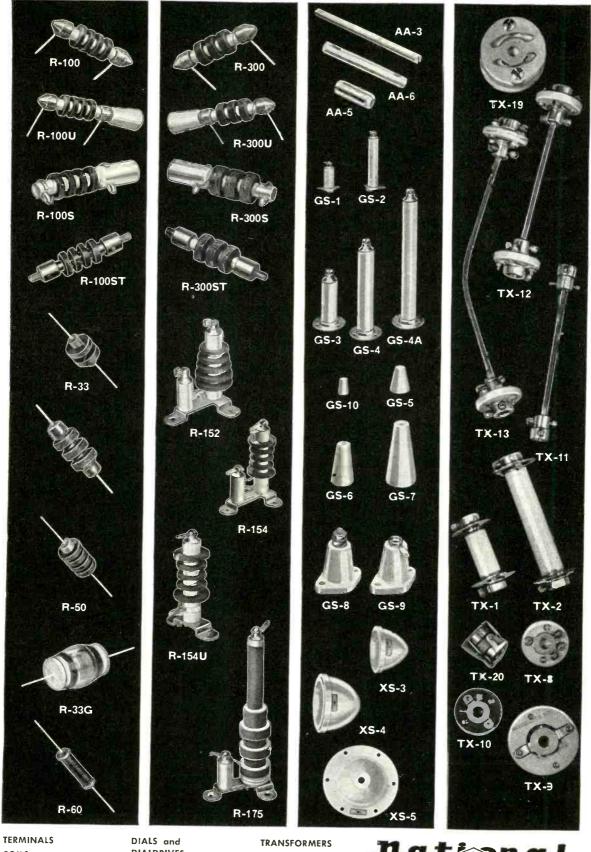
COILS COIL FORMS TUNING CONDENSERS CHOKES COUPLINGS DIALS and DIALDRIVES KNOBS MECHANISMS SOCKETS INSULATORS SHIELDS

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COILS COIL FORMS TUNING CONDENSERS CHOKES COUPLINGS DIALS and DIALDRIVES KNOBS MECHANISMS SOCKETS INSULATORS SHIELDS

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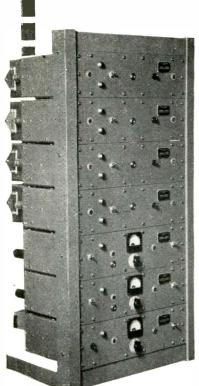


COILS COIL FORMS TUNING CONDENSERS CHOKES COUPLINGS

DIALS and DIALDRIVES KNOBS MECHANISMS SOCKETS INSULATORS SHIELDS

TRANSFORMERS CABINETS RECEIVERS TELEVISION TELEVISION KITS GRID GRIPS © EST. 1914 61 SHERMAN STREET MALDEN, MASS.

# FSDR



# FREQUENCY SHIFT DIVERSITY RECEIVING EQUIPMENT

The National FSDR equipment has been designed to incorporate all the latest advances in automatic radio telegraphy. It is made expressly for use by communication companies, government services, shipping companies, airports, and others requiring the latest, most efficient equipment for receiving radio signals and converting them into electrical impulses which, in turn, key automatic terminal equipment. The National FSDR is now extensively used by the far-flung network of the Tropical Radio Telegraph Company and the Civil Aeronautics administration and similar departments of other countries. All report excellent results. The FSDR equipment consists of an FSR Receiver, FSL Limiter, and an FSK Keyer. Use of multiple FSRs and FSLs makes possible space diversity, frequency diversity, or both. Operation is extremely simple requiring only throwing of AC power switches. All units have a self-contained power supply designed to operate from 115 to 230 volts, 50/60 cycle supplies. Our engineers will be glad to recommend specific installations to suit your requirements.

# SINGLE CHANNEL RECEIVER

S C R - 3

The SCR-3 is a single-channel superheterodyne receiver with a self-contained power supply which may be operated from either 115 or 230 volts 50/60 cycle AC supplies. It is designed to operate on frequencies from 1.8 — 25 mcs. Two tuned R. F. stages insure a favorable signal-to-image ratio varying from approximately 55 db at 25 mc. to 90 db at 1800 kc. Pre-tuned R. F. circuits, a crystal-controlled oscillator, carrier operated noise, suppression (C.O.N.S.), and automatic volume control allow the operator to devote his full time to message handling. For C. W. reception a special low-drift voltage regulated oscillator assures pröper tuning over long periods of time. Designed for standard

relay rack mounting, the SCR-3 uses a 19 x 51/4" panel and is 16" deep from the rear of the panel. The selectivity of the standard SCR-3 is 4 kc. at 6 db. down. If greater bandwith is desired, we can supply our SCR-3B model which incorporates a variable 1. F. having sharp, medium, and broad positions ranging from 4 to 8 kc. at 6 db down. The crystalcontrolled oscillator employs an oven-type or standard crystal dependent upon the severity of operating conditions. The SCR-3 Receiver is fungus-proofed to retard the harmful effects of humidity characteristic of tropical climate.



WRITE FOR GENERAL CATALOG Export Department invites foreign inquiries

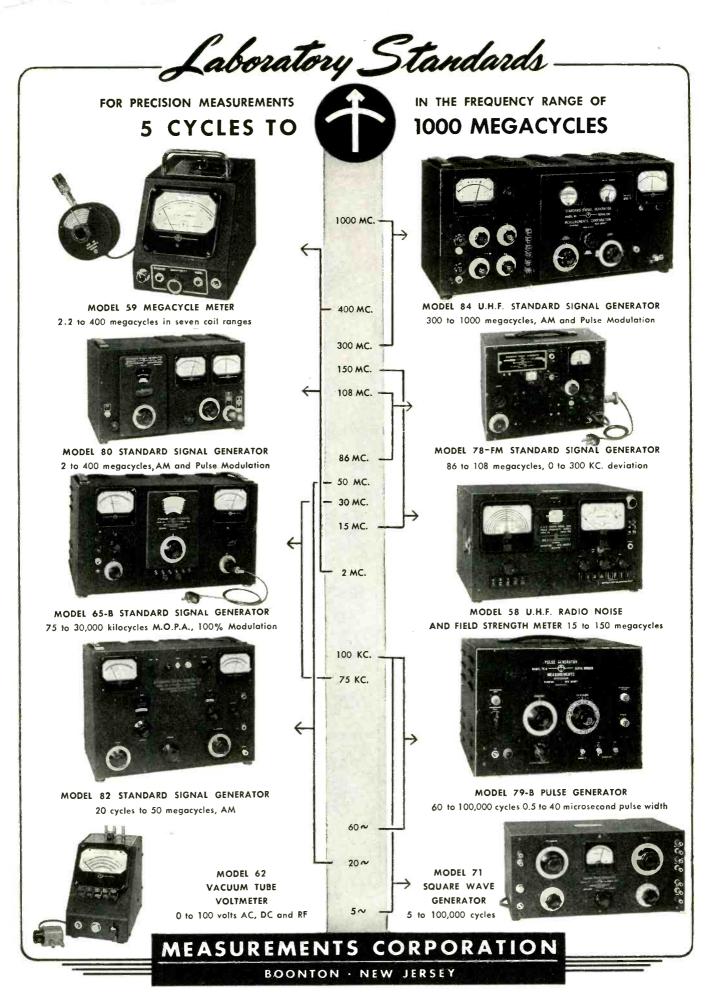
# NAC

#### NATIONAL VHF RECEIVER

The NAC Receiver has been designed to satisfy the needs of airlines, small private airports, and other interests requiring a compact tunable VHF rack mounted receiver. The NAC is a superheterodyne, superregenerative receiver utilizing a self-contained speaker. The receiver can be used separately or as a converter with any conventional superheterodyne tuning to 10.7 mcs. This, in addition to offering increased sensitivity, makes all features of the associated receiver usable on VHF. The standard model covers frequencies from 112-153 mcs. However, coil ranges covering specific frequencies between 27 and 250 mcs. are available on special order. The NAC operates from a National SPU-5886 power supply which is designed for 115/230 volt, 50/60 cycle supplies. If portable operation is desired, either the National 686S vibrator power unit (6 volt) can be supplied or a standard 6-volt battery and B batteries supplying 135 to 180 volts may be used.









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# PRECISION

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of DEPENDABILITY-EFFICIENCY-LONG-LIFE Engineered to reduce the production cost of good coils



# BOBBIN

Specify

Precision Bobbins make insulation strips unnecessary — allow closer windings, stronger magnetic fields. Cores can be any shape or length. Flanges die cut any size, shape, with combinations of slots or holes for terminal wiring. Embossed or recessed type to fit any mounting. Bobbin completely impregnated to form a seal between core and flange.



# PAPER TUBES

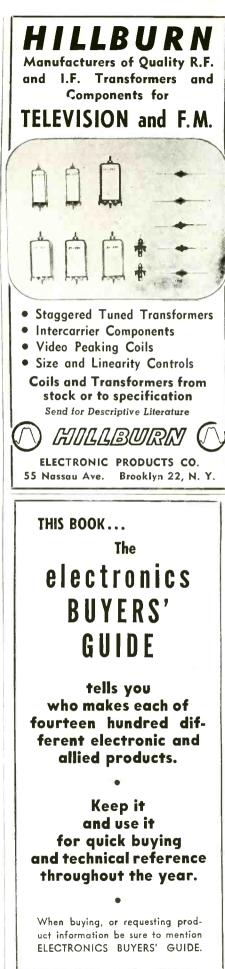
Spiral wound and heat treated for greatest strength. Most efficient insulation—lowest moisture absorption — lightest coil base made. Available in any ID, OD, thickness, or length. Round, rectangular, oval or square. DI-FORMED TUBES. No extra cost. Eliminates forming after winding. Permits automatic stacking. Saves wire.

Both PRECISION Paper Tubes and Bobbins are made from the finest dielectric Kraft, Fish Paper, Cellulose Acetate or combinations.

# PRECISION PAPER TUBE CO.

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# VARIACS for Smooth VOLTAGE CONTROL

THE VARIAC<sup>\*</sup> — the original continuously-adjustable autotransformer is the ideal device for controlling any a-c operated equipment. VARIACS not only supply substantially stepless control of voltage from zero, but in addition furnish output voltages 17% above line voltage.

The VARIAC has many advantages over any other manually operated control for alternating current use. Among its more important features are:

- **\* GOOD REGULATION** Output voltages are substantially independent of load.
- \* **SMOOTH CONTROL** The VARIAC can be set to any predetermined output voltage in increments of about  $\frac{1}{4}$  volt.
- **\* HIGH EFFICIENCY** Very low losses at both no load and at full power.
- \* SMALL SIZE --- VARIACS are smaller than any other type of control of equal power rating.
- \* LINEAR OUTPUT VOLTAGE Output voltages are continuously adjustable from zero to 17% above input voltage by a 320 degree rotation of the knob. Dials are calibrated to read directly in output voltage at rated line voltage.
- \* **OUTPUT VOLTAGES** All single unit VARIACS are supplied with reversible, direct-reading dials showing output voltages from zero to 17% above line voltage. Both sides are calibrated for clockwise rotation; one side for dial rotation, the other for use with a pointer and panel mounting.
- \* MODERATE TEMPERATURE RISE Less than 50 deg. C. for continuous duty.

# GENERAL SPECIFICATIONS

In the table, shown on the page at the right, the following terms apply for use on 50-60 cycle input:

KVA — at *rated* line voltage only; at other output voltages, the KVA rating will be less than is shown. Any unit will handle at lower voltages a constant impedance (resistive) load which draws rated KVA at line voltage.

**INPUT VOLTAGE** — The voltage that should be applied to the input terminals to obtain the range of output voltages shown in the table.

**OUTPUT VOLTAGE**—The range of voltage obtained at the output terminals by turning the knob.

RATED AMPERES — The current that can be obtained safely at all positions of the dial.

MAXIMUM AMPERES — The current that can be obtained safely at *rated* line voltage (115 or 230 volts) over 0 to 20 and 85-115 or 0-40 and 170-230 on the dial.

**CASE**—The case letter description (see illustrations) is as follows:

- CASE A: Panel mounting, terminals exposed.
- CASE B: Protective case around windings, terminals exposed.
- CASE C: Mounted, with terminal cover, convenience outlet, switch and line cord.
- CASE D: Protective case, terminal cover, BX outlets.
- CASE E: Protective case around terminals,  $1\frac{1}{4}$ " threaded hole for pipe.
- CASE F: 3-gang, top unit similar to B, others no case; 2-gang, both units inside mounting, no case around windings.
- CASE G: Same as above.
- CASE H: Top unit similar to E, others no case around windings.
- CASE I: 3-gang, top unit similar to D, others no case but terminal cover with BX outlets; 2-gang both units inside mounting, no case but terminal cover with BX outlets.

**DIALS SUPPLIED** — ALL VARIACS are supplied with a dial reading from 0 to 135 or 0 to 270 volts (for 115- or 230-volt input). If requested, dials reading from 0 to 115 or 0 to 230 volts will be supplied.

GENERAL RADIO COMPANY 275 Massachusetts Avenue

Cambridge 39, Massachusetts

\*The trade name VARIAC is registered at U. S. Pat. Off. VARIACS are patented under U. S. Pat. No. 2,009,013.

# THIS TABLE SHOWS THE WIDE VARIETY OF VARIACS

		OUTI	PUT		7			
INPUT VOLTS	KVA*	VOLTS	RATED AMPS.	MAX. AMPS.	TYPE	PRICE	CASE	DESCRIPTION
SINGLE					<u> </u>			
PHASE 115	.170	0-115	1.0	1.5	200-В	\$12.50	A	Cineta Ilata
			+		V-5	18.50	A	Single Unit
115	.862	0-115 0-135	5.0	7.5	V-5M V-5MT	20.50	В	Single Unit
				+	V-10	33.00	C A	Single Unit
115	1.72	0 115 0 135	10.0	15.0	V-10M V-10MT	35.50 40.00	BC	Single Unit
115	3.45	0-115 0-135	20.0	30.0	V-20	55.00		Single Unit
115	5.17	0-115 0-135	40.0	45.0	50-A	140.00	E	Single Unit
115	6.9	0-115	40.0	60.0	V-20G2	126,00		2-Gang. Windings in parallel. Requires 1 P-1 Choke -
		0-135	<u> </u>			120.00	-	\$10 additional
115	10.35	0-135	80.0	90.0	50-AG2	310.00	н	2-Gang. Windings in parallel. Requires 1 P-1 Choke — \$10 additional
115	10.35	0 115 0 135	60.0	90.0	V-20G3	182.00	1	3-Gang. Windings in parallel. Requires 1 P-1 Choke (\$10) and 1 P-2 Choke (\$12) additional
115	15.52	0 115 0 135	120.0	135.0	50-AG3	460.00	н	3-Gang. Windings in parallel. Requires 1 P-1 Choke
230	.575	0-230	2.0	2.5	V-5H		A	(\$10) and 1 P-2 Choke (\$12) additional Single Unit
(115)		$ \begin{array}{c} 0 - 270 \\ (0 - 200 \\ 0 - 270 \end{array} $	(1.0)	(2.5)	V-5HM V-5HM V-5HMT	21.00 23.00 27.50	В	Single Unit
230	1.15	0-230	4.0	5.0	V-10H	34,00	C	Single Unit Single Unit
(115)		$ \begin{pmatrix} 0 - 270 \\ 0 - 200 \\ 0 - 270 \end{pmatrix} $	(2.0)	(5.0)	V-10HM V-10HMT	36.50	В	Single Unit
230	1.72	0-230	5.0	7.5			с	Single Unit
(115)		$\begin{pmatrix} 0 - 270 \\ (0 - 200 \\ 0 - 270 \end{pmatrix}$	(2.5)	(7.5)	V-5G2	49.00	G	2-Gang. Windings in series. Cannot be used with grounded load
230	2.30	0 — 230 0 — 270	8.0	10.0				•
(115)		$\begin{pmatrix} 0 - 200 \\ 0 - 270 \end{pmatrix}$	(4.0)	(10.0)	V-20HM	55.00	D	Single Unit
230	3.45	0 230 0 270	10.0	15.0				2-Gang Windings in spring Connect be used with
(115)		$\begin{pmatrix} 0 - 200 \\ 0 - 270 \end{pmatrix}$	(5.0)	(15.0)	V-10G2	79.00	F	2-Gang. Windings in series. Cannot be used with grounded load
230	4.60	0 230 0 270	16.0	20.0				2-Gang. Windings in parallel. Requires 1 P-1 Choke —
(115)		$\begin{pmatrix} 0 - 200 \\ 0 - 270 \end{pmatrix}$	(8.0)	(20.0)	V-20HG2	126.00		\$10 additional
230	6.90	0 230 0 270	20.0	30.0	V-20G2	126.00	1	2-Gang. Windings in series. Cannot be used with
(115)		$\binom{0-200}{0-270}$	(10.0)	(30.0)		120.00		grounded load
230 (115)	7.13	0 230 0 270 (0 230)	- 20.0 (10.0)	31.0	50-B	140.00	E	Single Unit
230	14.26	0-230	40.0	(31.0) 62.0				O Come Wilediana in Role Devision 1 D 1 Old
(115)		0 270 (0 230)	(20.0)	(62.0)	50-BG2	310.00	н	2-Gang. Windings in parallel. Requires 1 P-1 Choke — \$10 additional
230	21.39	0 230 0 270	60.0	93.0	50-BG3	460.00	н	3-Gang. Windings in parallel. Requires additional 1 P-1
(115) THREE	┝───┼	(0 - 230)	(30.0)	(93.0)				Choke (\$10) and 1 P-2 Choke (\$12)
PHASE		0-115						
115	1.5	0-135	5.0	7.5	V-5G2	49.00	G	2-Gang. Open Delta
115	3.0	0 135	10.0	15.0	V-10G2	79.00	F	2-Gang. Open Delta
115	6.0	0-115 0-135	20.0	30.0	V-20G2	126.00		2-Gang. Open Delta
115	9.0	0 115 0 135 0 230	40.0	45.0	50-AG2	310.00	н	2-Gang. Open Delta
230 (115)	1.0	0-270	2.0	2.5	V-5HG2	54,00	G	2-Gang. Open Delta
230	2.0	0-270/	(1.0)	(2.5)				
(115)	2.0	$\begin{pmatrix} 0 - 270 \\ 0 - 200 \\ 0 - 270 \end{pmatrix}$	4.0	5.0	V-10HG2	81.00	F	2-Gang. Open Delta
230	3.0	0-230	5.0	7.5	V-5G3	68.50	G	3-Gang. Wye
230	4.0	0 230 0 270	8.0	10.0				
(115)		$\begin{pmatrix} 0 & -200 \\ 0 & -270 \end{pmatrix}$	(4.0)	(10.0)	V-20HG2	126.00	1	2-Gang. Open Delta
230	6.0	0-230	10.0	15.0	V-10G3	113.00	F	3-Gang. Wye
230	12.0	0-230	20.0	30.0	V-20G3	182.00	- 1	3-Gang. Wye
(115)	. 2.03	0 — 270 (0 — 230)	20.0 (10.0)	31.0 (31.0)	50-BG2	310.00	н	2-Gang. Open Delta
230	18.0	0 230 0 270	40.0	45.0	50-AG3	460.00	н	3-Gang. Wye
460	2.0	0 460	2.0	2.5	V-5HG3	76.00	G	3-Gang. Wye
460	<u>4.0</u> 8.0	0-460	4.0 8.0	5.0 10.0	V-10HG3	116.00	F	3-Gang. Wye
460	24,7	0 460	20.0	31.0	V-20HG3 50-BG3	182.00	H	3-Gang. Wye 3-Gang. Wye
* KVA, in this colur	nn is at rated line	voltage At other		4 1014				

\* KVA, in this column, is at rated line voltage. At other output voltages, the KVA rating is less than shown.

BRANCH ENGINEERING OFFICES:

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Modulation and Flate Transformers and Reactors—available in matched units for every size of transmitter.



"WSB" Filament Transformers—eliminate exposed secondary leads, save space and expense and simplify the rectifier circuit by incorporating the tube socket on the transformer lead bushing.



Hermetically Sealed Transformers—highly resistant to moisture, shock, pressure and temperature variations. Liquid-immersed or compound filled. Liquid-immersed type for high voltages reduces size and weight with lower corona effect.



Transtat Voltage Regulators — type TH — for radio, industrial and laboratory apparatus requiring a special voltage—continuously adjustable voltage—or a constant voltage from a fluctuating power source. Provide smooth, practically stepless control through their rated range.

# **AMERTRAN TRANSFORMERS**

They grew up together—AmerTran and the Science of Electronics. During that period, almost a half-century, the AmerTran label has been affixed to transformers and related equipment that represent only the best in research, design, materials, and construction. You cannot buy better transformer performance than you will find in the units bearing this label.

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FLEXIBLE INSULATION

# NATVAR FLEXIBLE ELECTRICAL INSULATING MATERIALS

STANDARDS Natvar insulations have excellent electrical and physical properties, and meet the requirements of ASTM, NEMA, and ather resistance, as determined by specified test procedure, protect the buyer against inferior materials. At the same time, they provide the buyer with a valid basis for comparison which should enable him to buy quality materials best suited to his needs. Full test reports on Natvar insulations are available

**PERFORMANCE** 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 canditions. As an example, Natvar toward embrittlement when immersed in hot oil for prolonged periods. From the standpoint of performance this is important, because it means that leads insulated and protected with Natvar 400 stay flexible after varnish baking.

UNIFORMITY Natvar insulations give extra protection because of their exceptional uniformity. This uniformity also means that Natvar insulatians can be depended upon to be the same, no matter when or where the order is placed.

CONTROL 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.

SERVICE 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 conditions, engineering service is available, without obligation. To expedite shipment, give complete detail with each order.

## VARNISHED CAMBRIC

Straight cut for application in regular smooth surfaces; bias for irregular surfaces. Supplied in all normal commercial sizes and thicknesses, in yellow or black, and in four finishes, greasy, tacky, dusty and dry. Physical and electrical properties comply with ASTM Specifications with ample safety factor.

# VARNISHED CAMBRIC TAPE

Supplied straight cut or seamless bias, in all normal widths and thicknesses, yellow or black, greasy, tacky, dusty or dry. Characteristics same as for VC. Accurately slit for use in taping heads.

# VARNISHED CANVAS AND DUCK

For use where greater mechanical protection is required. High strength fabrics 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 in addition to smoothness and minimum clearance.

# VARNISHED FIBERGLAS

Natvar Varnished Fiberglas is Class B insulation for equipment which operates at temperatures above normal safe working range of varnished cambric. Has great mechanical strength and excellent dielectric properties. Available in rolls, tape and full width sheets to 36".

# SILICONE COATED FIBERGLAS

For higher permissible temperatures. Available in tape, sheets and rolls 36" wide.

## SLOT INSULATION

Combination of Copaco 100% rag paper stock to which a layer of Natvar VC is firmly bonded. The high dielectric strength and moisture resistance of Natvar VC together with the toughness and abrasion resistance of 100% rag paper make a slot insulator which will withstand pounding and chafing without impairment of its electric properties. Rolls or sheets approximately 36" wide.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

### 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

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.

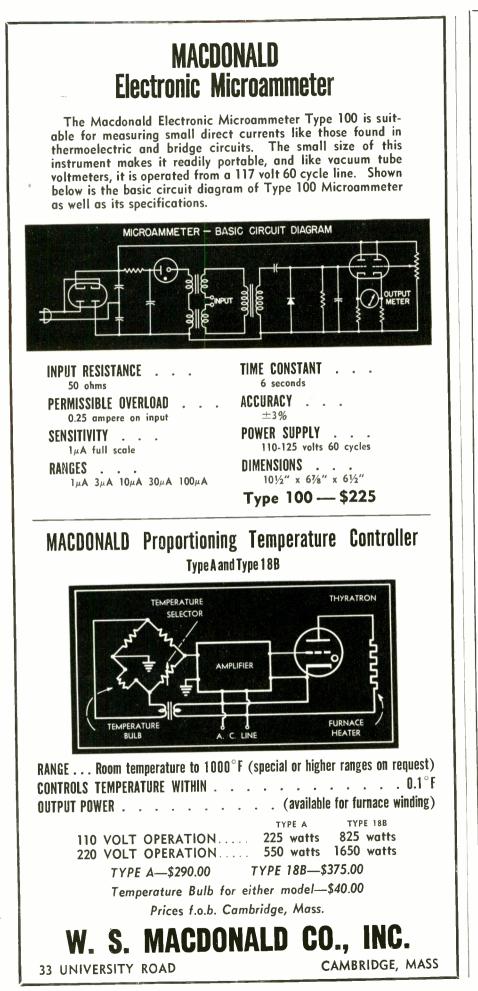
V.I.T. 200 is an all-purpose tubing with excellent flexibility through a temperature range of  $-40^{\circ}$ C. to  $+85^{\circ}$ C. Melts at high temperatures but will not support combustion. Shows no disintegration or flaking when immersed in oil. In general has the same inherent characteristics as 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 airplone 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.



MATERIALS SECTION of this issue of the electronics BUYERS' GUIDE In it you will find pertinent engineering information on ....

Don't Overlook the

- CERAMICS
- COATINGS
- FLUORESCENT COMPOUNDS
- GASES
- GLASS
- INSULATION
- MAGNETIC CORE MATERIALS
- METALS
- PERMANENT MAGNET
   MATERIALS
- PLASTICS
- POTTING COMPOUNDS
- RADIOACTIVE MATERIALS
- SEALING COMPOUNDS
- WAXES

used in the manufacture of electronic and allied products

> Comments and suggestions on this section of the Buyers' Guide will be appreciated.

high-strength plastics

DIAMOND Vulcanized Fibre

5

a C-D dielectric material

a laminated thermosetting plastic

CELORON a fabric-base molded plastic

MICABOND mica in most usable form

fabrication



Continental = Diamond

FIBRE COMPANY Established 1895 Manufacturers of Laminated Plastics since 1911 NEWARK • DELAWARE



DILECTO

DILECTO is made by impregnating paper, cotton or asbestos fabric, fiberglas, felted asbestos, nylon, or other base material with synthetic resin, then pressing these laminations together under heat and pressure. Standard finished forms are sheets, rods and tubes, all of which are readily fabricated. There is also a grade of DILECTO sheet which may, after pressing, be formed to permanent shape. This type of sheet is known as "POST FORMING" Dilecto and is made in grade CF, XF, and MEC-1F.

fabricated Dilecto parts



# ELECTRICAL AND MECHANICAL PROPERTIES OF DILECTO SHEET GRADES, APPROXIMATE AVERAGE VALUES

Nema	Continental- Diamond	ia.	Gravity	Absorptions hrs.	Hardness	Tensi Streng Thousa of p	gth ands	Flex Strer Thous of	igth ands	ssion , thousands .)	1, Ibs. (1)	No	(1 t Strer tched i r 1 ″ o	in ft. I	DS.	Diele Stren in V per	gth olts	(9 Pov Fac 10 <sup>6</sup> c /sec	ver tor	Diele (9 Cons 10 <sup>6</sup> c /sec	2) stant	() Fac 10 <sup>6</sup> د	oss 2) tor cycles onds
Grade	Grade (sheets)	Lbs./cu.	Specific	Water A %, 24 h	Rockwell	LW	cw	L₩	с₩	Compression Strength, thou psi (Fla.)	Bonding Strength,	Flatv L₩	vise CW	Edge LW	wise CW	Short Time	Step by Step	As Recd.	Wet	As Recd.	₩et	As Recd.	Wet
ĸ	X-13	.0487	1.35	2.0	110	15	12	30	22	42	1100	3.5	2.0	0.70	0.60	750	530	0.039		5,10		0.20	
>	XP-13	.0487	1.35	1.5	100	11	10	20	16	26	900			0.60	0.50	575	400	0.036	0.04	4.6	5.2	0.17	0.21
	XP-90	.0476	1,31	2.5	45	9.7	7.2	12	10	19				1.00	0.70	600	400	0.055		5.5		0.30	
ХХР	XXP-13	.0487	1.35	0.9	110	10	8	17	14	27	1000			0,50	0.45	750	530	0.030	0.034	4.3	4.5	0.13	0.15
XXXP	XXXP-13	.0487	1.35	0.5	110	9	7.5	16	13	27	1100			0.40	0.35	700	500	0.096	0.028		4,4	-	0.12
	XXXP-99	.0466	1.29	0.3	115	12	10.5	13.5	12	27.5				0.379	0.338		675		0.027				0.115
	XXS	.0487	1.35	1.5	100	12	10	19	17	34	950	1.1	1.0	0.50	0.45	700	500		0.045		5.4		0.23
xx	XX-13	.0487	1.35	0.9	110	12	10	19	17	34	950	1.1	1.0	0.50	0.45	700	500		0.039		5.3		0.21
XXX	XXX-13	.0487	1,35	0.7	115	11	10	19	16	36	1200	0.9	0.85	0.45	0.40	650	470	0.034	0.035	4.8	4.9	0.16	
	XXARC	.0487	1.35	3.0	100						-					600	450	0.03	3 0.034	9 4.7	4,8	0.16	0.19
	XXHV	.0487	1.35	1.3	110	10	8	17	15	27	950	-		-		300	450	0.03.	0.00			-	_
	св₩	.0487	1.35	1.9	100	12	10	19	18											_		_	
A	A-13	.0614	1.70	0.8	100	10	7	18	16	38	900	1.9	1.8	0.9	0.8	200	1 2 0	0.11	5	5.2		0.60	
AA	AA-13	.0560	1.55	0.7	110	10	6.5	19	15	40	1800	5.0	4.1	4.5	4.0	75	45	_		6.8		2.99	
	MAA	.0639	1.77	5,3	108	7.4	6.5	13	12	45	1 3 0 0	6.0		4.0		35	27		_	13.4	-	7.7	
	FA-72	.0578	3 1.60	0.7	115	21	17	38	27	48	1 400	5.0	4.0			70	_		_	_		0.90	
	MA	.065(	1.80	0 1.9	115	10	6	17	13	40	900	1.3	1.1	0.8	5 0.7	5 150	80	0.11	-	8.2		0.90	
	CF	.048	7 1.3	5 0.8	1 00	11.5	9.5	22	22	38.5				2.0	1.6	200	125	5				_	
c	C-81 3*	.048	7 1.3	5 1.0	0 110	11	9	21	19	40	2002	3.6	3.	5 2.4	¥ 2.1	200	120	0.06	5	6.0	>	0.36	_
	мс	.052	4 1.4	5 3.0	0 107	9.5	7.9	9 17	16.	6 39		_	_ 1	1.4	<b>۱</b>	300	200	0.07	0.17	7 8.4	4 15.	5 0.59	2.70
	۲V	.048	7 1.3	5 0.8	3 115	9	8	20	18	40	8800	2.4	1 2.	3 1.5	5 1.4	<u> </u>	_	_	_	_	_	_	
CE	CE-800	.048	7 1.3	5 0.1	8 11:	5 9	8	20	18	38	2200	2.4	4 2.:	3 1.	5 1.4	_		_	50 0.05				
L	L-400*	.043	7 1.3	5 0.9	9 110	) 12	9.5	5 23	18	39	190	0 3.3	3 3.	0 1.4	4 1.3			_	5 0.07				-
	ML	.052	4 1.4	5 2.0	0 110	) 13.5	5 9.1	22	15	39	_	_		0.		325	_			_		95 0.59	
LE	LE-13	.048	7 1.3	5 0.	7 11	5 10	8	21	17	40	200	0 2.5	5 2.	_			29	0 0.04	45 0.0	50 4.8	8 5.	2 0.2	2 0.20
	LDC	.048	7 1.3	5 0.	6 11	5 9	7.!	5 20	16	40	200	0 2.	5 2.	0 1.	5 1.1		_		_		_ _	_	_
	GB-112-M	1.061	1.6	9 3.	0 11	4 22	20			45		_	_	_	_	600	40	0.0	18	7.6	o	0.1	26
	GB-112-D	060. †	1.6	5 2.	5 11	0 33	30			38						900	70	0.0	18	5.6	o	0.0	
G5	GB-128-		_1		2 11		22	40	38	50	170	0 17.	5 16	. 5 14.	0 13.	50	33	0.0	13	7.		0.0	
G3	GB-128-0						15	21	19	44	1 50	0 10.	0 7.	0 8.	0 7.	0 60		0 0.0					3 0.21
	G2 GB-261-0				6 10	5 15	11	22	19	39	120	0 9.	0 5.	5 8.	0 5.	0 42		0.0					46 0.08
	Diamond Dilec				0 9	0 15	9	24	20	,38	100	0 7.	0 5.	5 1.	5 1.	4 60	0 39	0.0	_ _				3 0.52
	MEC-5		23 1.1		2 10	0 6.	7 5.	7 11	9	.5 48	85	0 5.	5 4.	.0 3.	0 2.	0 37	0 34	0.0	16	4.	43	0.0	71
	GB-112-5	5 .061	4 1.7	.1	5	19		27	_	31	96	0		7.	2 5.	5 32	5 30	0.0	02 .01	3 3.	9 4	.6 0.0	08 0.06
	GB-128-5	5 .061	4 1.7	.1	5	18	_	23		46	80	0		12	10	25	0	0.0	02	3.	.9	0.0	800
	GB-261-5	_		2. 01		22		24	-		99	0		9	.5 8.	0 15	0	0.0	201	3.	.9	0.0	008

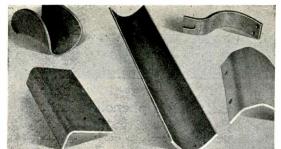
NOTES: All tests, except "blistering temperature," were conducted in accord-ance with American Society for Testing Materials Methods for Sheet Electrical Insulation.

\*These Grades approximate the physical properties of Celoron.

These grades are made principally in the thicknesses from .010" to .025". The data shown is for .025" thick sheet. (1) Flatwise impact test and bonding strength values are based on 1/2'' thick material. All other tests are based on  $1/8^{\prime\prime}$  thick material except the values for grade XXARC, which are based on  $1/32^{\prime\prime}$  thickness.

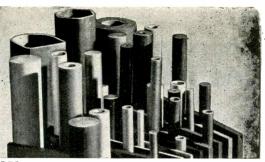
(2) Wet power factor, dielectric constant, and loss factor values are based on samples which had been immersed in fresh water for 24 hours at 25° ± 2°C.

(3) Insulation Resistance values were determined on samples conditioned for 96 hours at 90%  $\pm$  2% relative humidity at 35°  $\pm$  1° C.



post formed shapes

Ψ.



# STANDARD SIZES OF DILECTO SHEETS . . . TUBES . . . RODS

sheets

rods

tubes

1000

نې	<del>\</del> .	1		er						IU		. KUD		MOLDED RODS	:1
Temp.		tance	(E)	on under	Colors (4)	SHE	ETS		MOLD opprox. 18			ROLLE Approx, 1		Lengths Approx. 38" to 46"	Continenta
Blistering Temp.	Blistering Temp.	Arc Resis n Second	Insulation Resistance, Megohms (3)	Deformation Load in %	and Finish (5)	Thickness in Inches inclusive	Approxi- mate Size in Inches	Min. (7) Wall Thickness, Inches	I. D. in Inches Inclusive		Min. (7) Wall Thickness Inches	I, D,	O. D. in Inches	Diameter in Inches	Diamond Grade (sheets)
220	428	10	90		Black, Natural, Nat. core with Black surfaces	·		1/16	1/8-9	1/4-9-1/2	1/32 (6)	1/8-48		not made	X-13
240	464	10	100		Black, Natural, Nat. core	.010—1/4		not made		-	not made	-		not made	XP-13
240	464	7	35		with Choc. surfaces	010 1/4	38 x 96 39 x 46			-					
220	428	-	500		Bik., Nat. Choc., Nat.	.010-1/4	except	not made			not made	-		not made	XP-90
					core with Brown surfaces	1/64—1 ′4	nesses	not made			not made			not made	XXP-13
220	428	4	2000		Black, Natural	1/64-1/4	under 1/32″ made	not made			not made			not made	XXXP-13
240	464	9	9400		Natural	1/64-1/4		not made			not made	_		not made	XXXP-22
250	482	4			Black only	1/32-2	and 38 x 43	not made			not made			not made	XXS
250	482	4	500	0.77	Black, Natural	.010—2	sizes	1/16	1/8—9	1/4-9-1/2	1/32 (6)	1/8-48	3/16-50	1/8-2(9)	XX-13
240	464	4	800	0.65		1/642	38 x 38 and	1/16	1/8—9	1/4-9-1/2	1/32 (6)	1/8-48	3/16-50	1/8-2(9)	XXX-13
		10	159		Olive Green	1/64-1/4		not made			not made			not made	XXARC
		10	100		Black, Natural	1/64-2		not made			not made			not made	ХХНУ
					White core, Blk, surfaces; alternating Blk, and White layer or Blk, surfaces	1/32—1/4	38 x 38	not made			not made			not made	СВЖ
220	428	4			Natural	.025-2	38 x 38	1/16	3/16—9	5/16-9-1/2	1/16	3/16-48	5/16-50	1/4 to 2 (10)	A-13
270+	518+	4				1/16—2	and 38 x 43	1 /8	3/8-9	5/8-9-1/2	1/8	1-48	1-1/4-50	1/2 to 2	AA-13
300+	572+	75	.25	.90	Gray	1/16—2	except Grade A 36 x 38	1 /8	3/8-9	5/8-9-1/2	1/8	1-48	1/4-50	1/2-2	MAA
		4			Natural	.025—2	36 x 43	1/16	3/16-9	5/16-9-1/2	1/16	3/16-48	5/16-50	1/4 to 2 (9)	FA-72
230	446	80	5		Gray	.025-2	36 x 36	1/16	3/16-9	5/16-9-1/2	1 /16	3/16-48	5/16-48	1/4 to 2 (9) (10)	MA
200	392	4	10	1.3	Natural	1/32—3/8	38 x 38 38 x 43 39 x 46 39 x 70 46 x 70	not made			not made			not made	CF
230	446	4	25	1.3	ratulal	.025—10	38 x 38 38 x 43 39 x 46 39 x 70	1/16	1/4—9	3/8-9-1/2	1/16	3/8-48	1/2-50	1/4 to 4	C-813*
215	419	80	1.4	1.7	Gray	.025-2	38 x 43	1/16	1/4-9	3/8-9-1/2	1/16	3/8-48	1/2-50	1/4 to 4	мс
240	464	4				1/32-2	36 x 42	not made			not made			not made	CV
240	464	4	100	0.90	Black, Natural, except CV—Natural only	1/32-2	38 x 38 38 x 43	1/16	1/4-9	3/8-9-1/2	1/16	3/8-48	1/2-50	1/4-4	CE-800
220	428		25	1.3		.010—2	38 x 96 39 x 46	1 /32	1/8—9	3/16-9-1/2	1/32	3/16-48	1/4-50	3/16-4	L-400*
		95	9,7	1.4	Gray	.015—2									ML
	446	_4	100		Black, Natural	.015-2	38 x 38 38 x 43	1/32	1/8—9	3/16-9-1/2	1/32	3/16-48	1/4-50	3/16-4	LE-13
230	446				Natural	.015-2		1/32	1/8-9	3/16-9-1/2				3/16-4	LDC
270+		185	50	0.90	Brown	.010—.025	38 x 38 38 x 43								GB-112-M†
270+		4	20	0.50	Natural	.010025	38 x 38 38 x 43								GB-112-D†
270+	518 +	185	50		Brown	.015-2	20 20	1/16	1/4-9	3/8-9-1/2	1/16	1/2-48	5/8-50		GB-128-M
270 +	518+	4	25	0.30	Natural	.025-2	38 x 38 and	1/16	1/4-9	3/8-9-1/2	1/16	3/8-9	1/2-11		GB-128-D
270 +	518+	4	500	0.58		1 /32-2	38 x 43	1 /8	3/8-9	5/8-9-1/2	not made				GB-261-D
250+	482 +		10		Gray	1 /32-2	39 x 46	1/16	1/2-9	5/8-9-1/2	1/16	1-48	1-1/8-50		Diamoi d Dilecto
		7 1	0000	1.13	Natural	.010—1	38 x 38 38 x 43	1/32	1/8-4	3/16—5	not made				MEC-5
			3000		Nafural	.010—1/2	36 x 36 36 x 42								GB-112-S
		275	800		Natural	1 /32—1 /2	36 x 36 36 x 42								GB-128-S
		275													

(4) Natural Color varies from golden yellow to dark brown.
(5) Standard finishes are dull, semi-gloss or polished.
(6) The above specifications cover standard sizes regularly in production. Where your design requirements dictate, and our production facilities permit, other sizes can usually be made on special order.

(7) Maximum wall thickness is determined by inside diameter. Correspondence is invited on sizes where wall thickness is abnormally great.
(8) Lengths over 40 inches are available in a limited range of sizes.
(9) Diameters of 1" and over may have annular cracks.
(10) 36" lengths.

# **DIAMOND** Vulcanized Fibre

a light . : . tough . . . strong non-metallic material . . . readily cut, formed, machined, punched.

#### standard grades

"Bone Quality" . . . "Commercial Quality" . . , "Diamond Insulation" ... all three have good electrical insulating qualities.

"Bone Quality" - a very dense fibre with a specific gravity of about 1.40. Recommended for intricately machined parts where dimensional changes must be kept to a minimum. The best grade for making formed parts such as Railroad Track Insulation.

"Commercial Quality" - specific gravity ranges from .90 to 1.20 according to thickness. Used for average mechanical and electrical insulating applications. Available in a wide range of thick-nesses. (See NEMA specification.)

"Diamond Insulation" (Nema electrical insulation fibre) – Commonly called "fish paper." Made in thicknesses of from .004 in. to and including  $\frac{1}{6}$  in. An exceedingly tough fibre with high electrical insulating properties. Stands extreme bending without cracking. Has a hard, abrasive-resisting surface.

#### standard forms and sizes

Sheets . . . rods . . . tubes . . . readily fabricated or formed on standard wood and metalworking machinery.

#### sheets

	thickness, in.	approx. sizes, in.
"Bone Quality"	1/32 to 3/16 inc.	46 x 70
	Over 3/16 to 5/8	48 x 80
"Commercial Quality"	.004 to 2 incl.†	48 x 84
"Diamond Insulation"	.004 to ½ incl.*	48 x 84

\*Continuous rolls and ribbon rolls for automatic machines are furnished up to 1/32 in. thick. †In commercial grade up to .060 in. thick.

tubing - Approximate "Bone Quality" . . . is of dense structure ... has excellent machining, forming and spinning properties. Standard lengths approximately 22 to 36 in. (60 in. lengths [approximate] can be made with inside diameters 5% to 2 in. incl. on quantity orders). Inside diameters 1/8 to 438 in. Wall thicknesses 1/32 to 1/4 in. incl. ( $\frac{1}{4}$  to  $\frac{1}{2}$  in. incl. can be made by telescoping process).

**rods** – Turned from sheet stock. Supplied in "Bone Quality" in diameters to 1/2 in. incl.; in "Commercial Quality" to 2 in. incl. Random lengths 60 to 72 in., in diameters to 1 in.; 36 to 60 in., in diameters 1 to 2 in.

#### colors

Sheets and rods: "Bone Quality," gray only; "Commercial Quality," red, gray and black.

Tubing: red, gray and black.

"Diamond Insulation": natural dark gray only. For detailed specifications refer to the standard publication of National Electrical Manufacturers Association (NEMA Pub. No. 46-111 Feb. 1946) which will be furnished on request.



# a C-D electrical insulating material

SHEETS ... TUBES ... RODS ... PARTS ..

VULCOID should be classified as intermediate between vulcanized fibre and laminated phenolic plastics. It is approved by the Underwriters Laboratories for insulation of current-carrying parts in electrical equipment. Has excellent machining properties.

VULCOID is supplied in its natural color — a brownish gray. Made in standard size sheets, tubes and rods.

#### properties

The numerical values for some of the properties of VULCOID decrease as the thickness increases. For a given thickness there is a variation in all properties due to normal variation in manufacturing conditions and in the properties of the ingredients.

# CELORON

# a fabric-base molded phenolic plastic

CELORON molded plastic products are made from phenolic resin impregnated fabric. C-D has developed a technique for molding shapes from this material which makes available to designers and engineers parts molded to unusually close dimensions and requiring a minimum of machining.

An unusual combination of mechanical, electrical and chemical properties is provided in CELORON molded plastic parts. CELORON is for most practical purposes chemically inert, insoluble and infusible. It is little affected by moderate concentrations of acids. It is practically unaffected by water and is insoluble in ordinary solvents such as alcohol, benzene, turpentine.

CELORON has good electrical insulating properties. It is practically unaffected by rapid temperature changes. It may be used continuously at temperatures as high as 250°F. and intermittently at temperatures as high as 350°F.

In CELORON, designers find a combination of light weight (about half that of aluminum) and great strength that accounts for many of the uses made of CELORON parts to improve product performance or lengthen useful life.

CELORON molded plastic parts are made in two colors: black and natural. Natural is a golden brown—usually with a mottled effect.

# MICABOND

## mica in its most usable form

SHEETS • TUBES • TAPES • PARTS

MICABOND is a bonded mica product which makes available the highly desirable properties of natural Mica in the forms of sheets, tubes, rings, segments and specially designed parts.

Micabond Tapes - Used extensively for insulating armature coils, turbogenerator coils and all applications where a thin flexible insulation, having high electrical insulating properties and heat resistance, is required.

The special insulating binders used, together with the thin films of mica, provide uniform quality and pliable tapes which assure maximum protection against heat and electricity.

Grades of Micabond - Made in many grades to meet specific electrical insulating, heat resistance and moisture resistance problems. Micabond is also available in combination with insulating papers and cloths, cellophane, fish paper, etc. Write for the complete data bulletin M-48.

CONTINENTAL-DIAMOND FIBRE COMPANY

# **NEWARK 16, DELAWARE**

June, 1949 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

# CLARE New Type "J" Relay Provides Sure, Positive Action with Exclusive Twin-Contact Design

• Here, at last, is a twin-contact design in which the chance of contact failure is actually reduced to the practical limit.

Exclusive design of the CLARE Type "J" d.c. Relay allows the twin contacts to operate independently of each other so that one contact is sure to close even when the other may be blocked by presence of dirt or grit.

This sensational new relay combines the best features of the conventional telephone-type relay with the small size and light weight developed during the war for military aircraft use.

Weighing little more than two ounces, slightly over two inches in length, it has the sturdy construction, large contact spring capacity, extreme sensitivity, and adaptability to a wide range of specifications for which CLARE Relays are noted.

Modern designers, working to develop close-coupled, compact equipment to meet today's streamlined standards, welcome this highly efficient combination of capacity and small size.

CLARE Relays are especially designed for jobs where ordinary relays won't do. If you have such a relay problem, Clare Sales Engineers are located in principal cities to help you work out a Clare "Custom-Built" Relay that will just fit your needs. Write: C. P. Clare & Co., 4719 West Sunnyside Avenue, Chicago 30, Illinois. Cable Address: CLARELAY. In Canada: Canadian Line Materials, Ltd., Toronto 13, Ontario.



#### All These Features . . . and More . . . Provided By CLARE Type "J" Relay

Independent Spring Contacts. Dome shaped contacts on movable springs; flat discs on fixed springs.

High Current-Carrying Capacity. Twin contact paints of palladium. Rated current-carrying capacity: 4 amperes, 150 watts.

New Design Large Armature Bearing Area. Hinge type armature has new design bearing providing largest passible bearing surface. Pivat pin turns in cylinder af different metal which is full width of heelpiece.

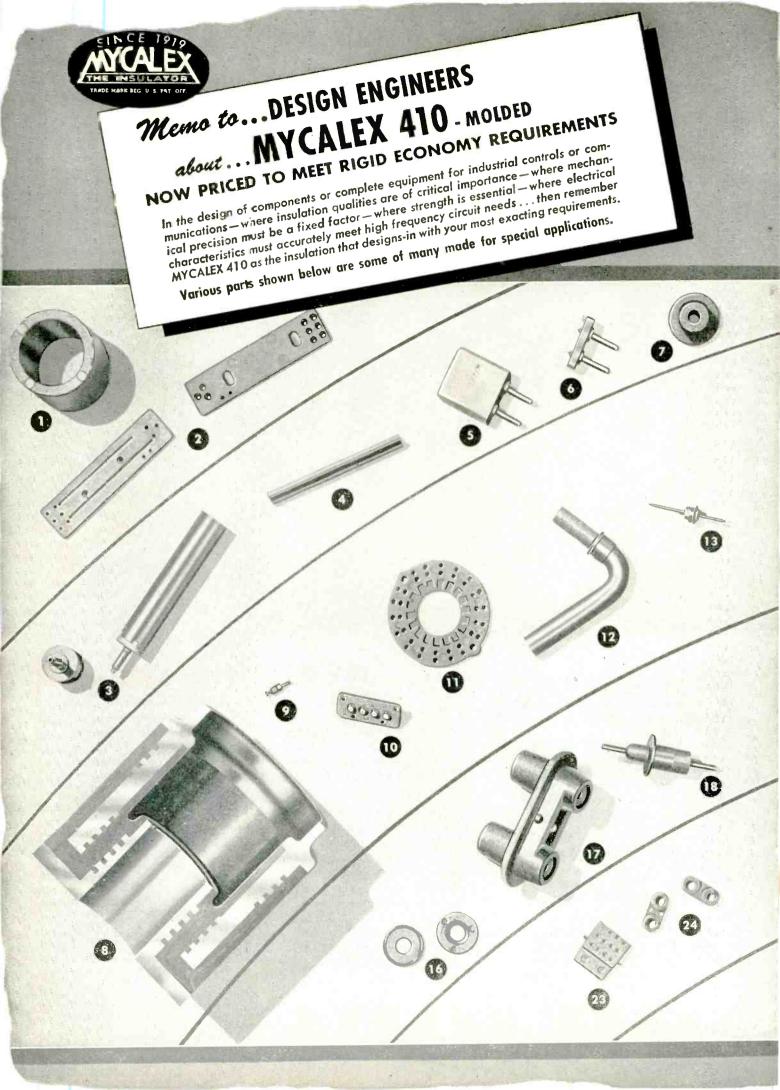
Sensitive, Efficient Magnetic Structure. Heelpiece and other magnetic iron parts are exceptionally heavy far size of relay ... provide highly sensitive and efficient magnetic path.

High Operating Speed. Designed for extremely fast operation . . . a minimum of ane to two millisecands.

Permits Handling Large Spring Loads. Power and sensitivity permit handling of large spring loads. Both single and double-arm relays available. Maximum of 10 springs an single-arm relay . . . 20 springs (10 in each pileup) an dauble-arm relay.



"Custom-Built" Multiple Contact Relays for Electrical and Industrial Use



MYCALEX is today's improved insulation — designed to meet the exacting demands of all types of high-frequency circuits. MYCALEX is unusual in that it possesses a combination of peculiar characteristics that make it ideally suited for insulation in all types of electronic circuits. In tomorrow's designs for communications and industrial control equipment, MYCALEX 410 will be specified more than ever

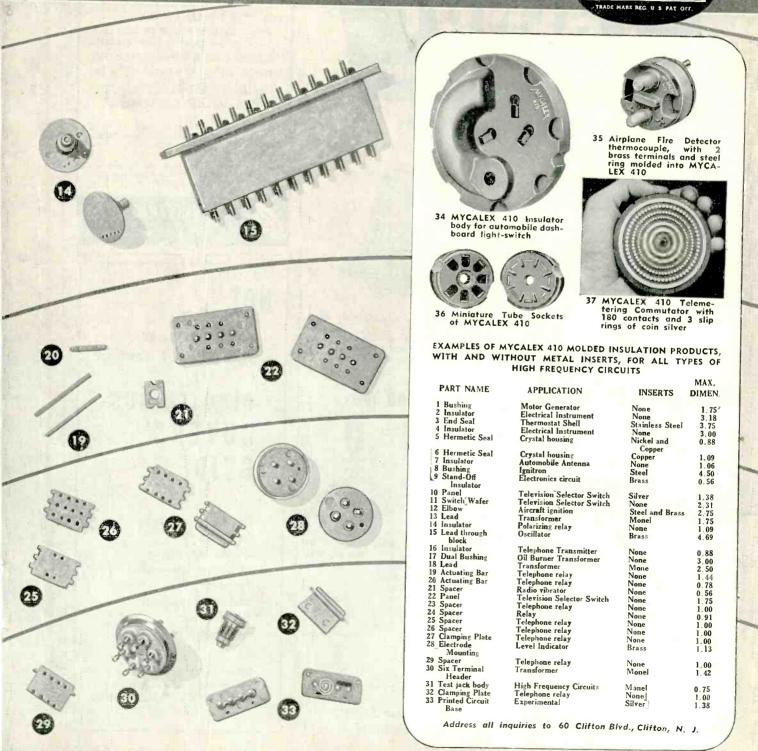
before because of its...Low dielectric loss · High dielectric strength · High arc resistance · Dimensional stability over wide humidity and temperature changes · Resistance to high temperatures · Mechanical precision · Mechanical strength · Ability to mold metal inserts in place. If you have any insulation problems, our engineers will be glad to help you in their solutions.

# MYCALEX CORP. OF AMERICA

"Owners of 'MYCALEX' Patents"

Plant and General Offices: Clifton, N. J. Executive Offices: 30 Rockefelier Plaza, New York 20, N.Y.







77 Cordier Street, Irvington 11, N. J.

# BETA HIGH VOLTAGE POWER SUPPLIES

200 to 200,000 VOLTS DC 10 µa to 10 AMPERES REGULATED OR UNREGULATED

Special features as required

Standard products include: KILOVOLTMETERS:

Up to 50 KV at 50,000 ohms per volt. 20  $_{\mu\alpha}$  drain. Higher drains up to 150 KV.

**PORTABLE POWER SUPPLIES:** 

Adjustable from 0 to 30 KV DC. Regulated or unregulated units available. PORTABLE PROJECTION OSCILLOSCOPES: Case-19" x 16" x 13"; Picture-16" x 12".

AND OTHER ELECTRONIC MEASURING EQUIPMENT

Send for product literature, and our High Voltage DC Power Supply specification booklet for your special High Voltage Power Supply requirements.

Field Engineers throughout the country are at your service to discuss our products more thoroughly with you.

BETA ELECTRIC CORP. 1762 Third Ave., New York 29

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until next year will you get another

electronics BUYERS' GUIDE

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THE PALNUT COMPANY



#### BH EXTRA FLEXIBLE FIBERGLAS SLEEVING Remarkably flexible because no hardening

varnish is used. Cuts without fraying and is non-combustible. Available in all colors. Basic sleeving withstands heat to 1200°F. Color unaffected up to 300°F.

BENTLEY, HARRIS MFG. CO., CONSHOHOCKEN, PA.

#### BH SPECIAL TREATED FIBERGLAS SLEEVING

#### Heat resistant to 1200°F. Cuts cleanly without fraying and is tubular for ease of installation. Maximum flexibility. Unsaturated. Can be furnished double-braided or extra heavy wall to meet special conditions. Supplied in natural color.

BEN HAR SPECIAL TREATED FIBERGLAS TUBING Available in Grade A - 7000V. and Grade B - 4000V. Flexibility combined with toughness. You can knot it, twist it, or pound it with a rawhide mallet. There's no loss of dielectric strength. Non-fogging. Non-corrosive.

#### OTHER BH PRODUCTS

Tubing: Magneto Varnished Tubing Grade "A"; Magneto Fiberglas Tubing Grade "A"; Flexible Varnished Tubing Grade "B", Sleeving: Saturated Sleeving Grades C-1, C-2, C-3; Saturated Fiberglas Sleeving Grades C-1, C-2, C-3; Ben-Har Sleeving.



\*BH Non-Fraying Fiberglas Sleevings are made by an exclusive Bentley, Harris process (U. S. Pat. No. 2393530). "Fiberglas" is Reg. TM of Owens-Corning Fiberglas Corp.

Bentley, Harris Mfg. Co., Dept. E-33, Conshohocken, Pa. I am interested in BH Non-Fraving Fiberglas Sleeving

for an interested in Dri ixon-rraying ribergias sleevingfor
(size or I.D.)
operating at temperatures of°F. at volts. Send samples
so I can see how BH Fiberglas Sleeving stays flexible as string, will not crack when bent.
NAMECOMPANY

Send samples, pamphlet and prices on other BH Products as follows:

Cotton or Rayon-base Sleeving and Tubing

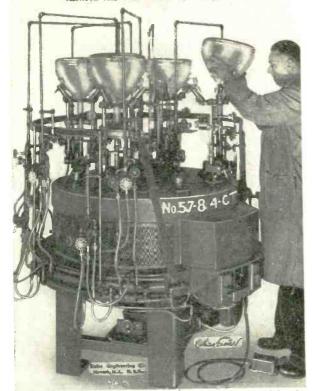
Ben-Har Special Treated Fiberglas Tubing

ADDRESS

# THE NEW EISLER GLASS FORMING MACHINES for the automatic manufacture of Cathode Ray Tubes and Vacuum Flasks

CATHODE RAY TUBE EFALING MACHINE.

24 HEAD AUTOMATIC TUBULATING MACHINE FOR VACUUM FLASKS

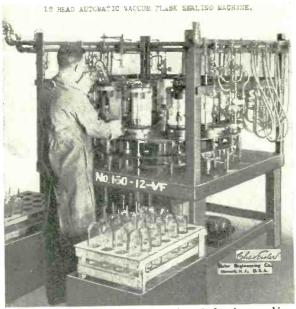


Cathode Ray tube sealing machine. Available in 4 to 12 heads.

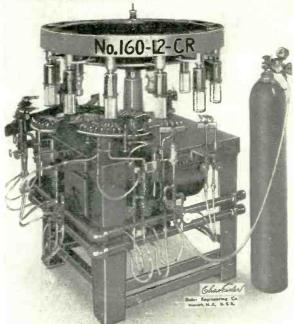


Automatic Piercing and tubulating machine for vacuum flasks.

IT HEAD ANTONATIC CRACKING-OFF BACHINE FOR VACUUM FLASKS.



Automatic vacuum flask sealing and neck forming machine.



Automatic cracking-off, glazing and flaring machine for vacuum flasks.

Eisler Engineering Co., Inc., is internationally recognized, today, as one of the largest manufacturers of automatic machines for volume production of INCAN-DESCENT lamps, neon signs, radio and electronic tubes.

EISLER ENGINEERING CO.

746 So. 13th St., Newark 3, N. J.

# Federal's complete broadcast systems

# AN EXTRA MARGIN OF PERFORMANCE AND OPERATING ECONOMY

is an in-built feature of Federal's Broadcast Equipment. Whether it's TV, FM or AM, there is a Federal complete system or specific component that will give you this added assurance of outstanding service.



FEDERAL'S TV Transmitter Control Console – Complete transmitter control and monitoring facilities built into one console. No extra units required.



FEDERAL'S FM Transmitters – outstanding fidelity with economy, accessibility and dependable performance. Standard ratings of 1, 3 and 10 KW. Higher powers upon request.

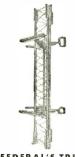


FEDERAL'S TV and FM Microwave links-For studio-transmitter, intercity and portable remote pick-up links. Designed for simple installation and dependable, unattended operation.



FEDERAL'S Square Loop FM Antenna highest gain in the field. Stackable in multiples of 2 up to 12 elements.

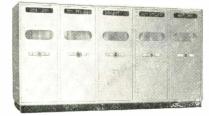




FEDERAL'S TV Transmitters – For high band and low band operation — advanced design features include –

• Complete Air Cooling • Mid-Level Modulation • All Proven Standard Tubes • Flexibility Federal also has available Ultra High Frequency TV Transmitting Equipment. Write for details.

FEDERAL'S TRI-ANGULAR LOOP TV ANTENNA-A single-feed, highgain antenna providing more efficient and effective power radiation at reduced initial cost.



FEDERAL'S Standard AM Transmitters – Available in ratings of 5 to 50 KW. Conservatively rated circuits engineered for maximum dependability, performance and economy of operation.

# FEDERAL ELECTRONIC TUBES FOR BROADCAST AND INDUSTRY

video signals.

FEDERAL'S TV Monitor

-Complete facilities for precision testing and checking of audio and

With a background of nearly 40 years of research, development and manufacture in the high powered vacuum tube field, the Federal line of transmitting, rectifier and industrial tubes, shown in part below, has earned a reputation for consistent performance and long service life.

#### FOR AM FOR FM 9C28 and 9C30 9C29 and 9C31 3X2500-A3 7C26 8002R Water Cooled **Forced Air Cooled Triodes for 50 KW Transmitters** Forced Air Cooled Triode for 10 KW Transmitters Forced Air Cooled Triodes for 3 KW Transmitters FOR INDUSTRIAL APPLICATIONS WRITE FOR COMPLETE DATA ON FEDERAL LINE OF TRANSMITT-ING, RECTIFIER AND INDUSTRIAL TUBES 9C23-25 KW 5666-10 KW 5667-10 KW Water Cooled Water Cooled **Forced Air Cooled Power Triode** Power Triode **Power Triode** 7C25-2.5 KW Forced Air Cooled Power Triode

Federal Telephone and Radio Corporation

100 KINGSLAND ROAD, CLIFTON, NEW JERSEY In Canada : Federal Electric Manufacturing Company, Ltd., Montreal, P. Q. Export Distributors : International Standard Electric Corp., 67 Broad St., N. Y.



# HI-QUALITY CORES

**RAD-A-COR** 

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For Audio and AM Frequency For FM and TV Frequency

You can *Reduce* costs You can *Improve* performance with Magnetic Core Corporation POWDERED IRON CORES

All types and materials from 1000 c.p.s. to 400 megacycles

# MAGNETIC CORE CORPORATION

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# PICKERING PICK-UP CARTRIDGES

PICKERING & COMPANY

Oceanside, New York

• For the utmost in record playing pleasure

- For the greatest length of satisfactory service
- For those who want and demand the highest quality record reproduction, with all of the original modulation/ realism and brilliance
- For minimum record wear
- For minimum extraneous and annoying sounds

120 SERIES	for transcriptions and lacquer discs
	for phonograph records
140 SERIES	for microgroove records

All Pickering Pick-up Cartridges are available with either a Diamond on Sapphire Stylus.... Diamond Styli are good for thousands of playings whereas Sapphire Styli require replacement after a few hundred playings... Pickering also manufactures Pick-Up Arms, Preamplifiers, Equalizer - Amplifiers and Equalizers.





Installation of these inexpensive PAMARCO tensions lowers winding costs because each machine will accommodate more coils at higher winding speeds. In addition to increased production, PAMARCO tensions raise production quality. Free-running action practically eliminates wire breakage and shorted turns. Simple thumb screw setting quickly adjusts for any wire gauge. No tools or special skill are needed for operation. For

complete data call or write.



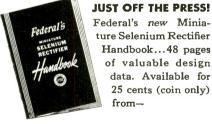
# Federal SELENIUM RECTIFIERS



Federal has cooperated with a host of engineers and designers in the development of a complete line of Selenium Rectifiers, ranging from tiny Miniatures to huge Stacks. There is a Federal Selenium Rectifier which will meet practically any power conversion need.

Wherever used, Federal Selenium Rectifiers bring important advantages of dependable power handling ... instant starting ... silent, efficient operation ... long service life.

These typical applications may suggest a new use in your own product. A Federal Selenium Rectifier could be the solution to your own power conversion problem. Bring any question to Federal-America's oldest and largest manufacturer of Selenium Rectifiers. Direct your inquiries to Department F-314.

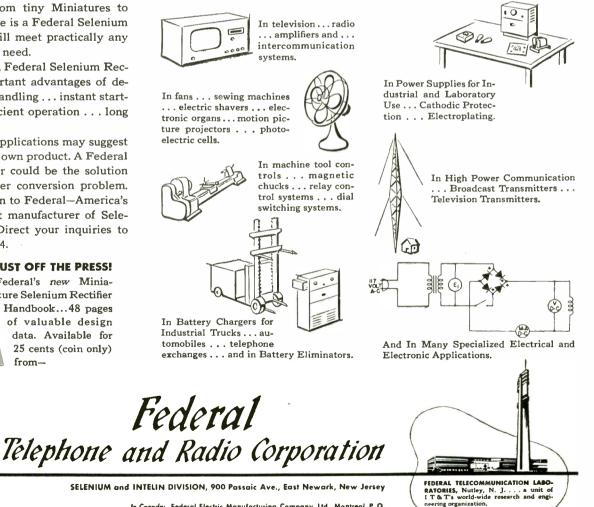


An IT&T Associate

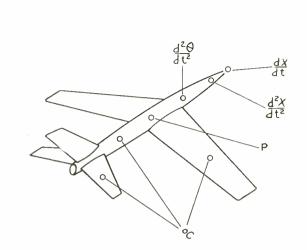
Federal's new Miniature Selenium Rectifier Handbook...48 pages of valuable design data. Available for 25 cents (coin only) from-



# more efficiently and economically than ever before!



In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q. Export Distributors: International Standard Electric Carp., 67 Broad St., N.Y.



# AIRBORNE INSTRUMENTATION

Engineers and Manufacturers of Precision End Instruments for use in Telemetering, Recording, and Remote Indication.

# TRANS-SONICS, INC.

BEDFORD AIRPORT Tel. LExington 9-2508 BEDFORD, MASS.





June, 1949 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

# FEDERAL STANDARD DOWER SUPPLIES... now in stock and ready for quick delivery

 ${
m T}_{
m hese}$  Federal standard D-C Power Supplies are now available to meet a wide range of industrial and laboratory requirements for both filtered and unfiltered D-C power. All Federal D-C Power Supplies are powered by Federal longlife Selenium Rectifiers with no expendable parts that demand frequent replacement. Operation is dependable and economical. Federal D-C Power Supplies are conservatively rated. Heavy duty Selenium Rectifiers are able to withstand momentary overloads ... provide D-C power immediately without heat-up period . . . operate guietly and efficiently with practically no maintenance. For prices and information on other Federal standard D-C Power Supplies, write Department E-414.

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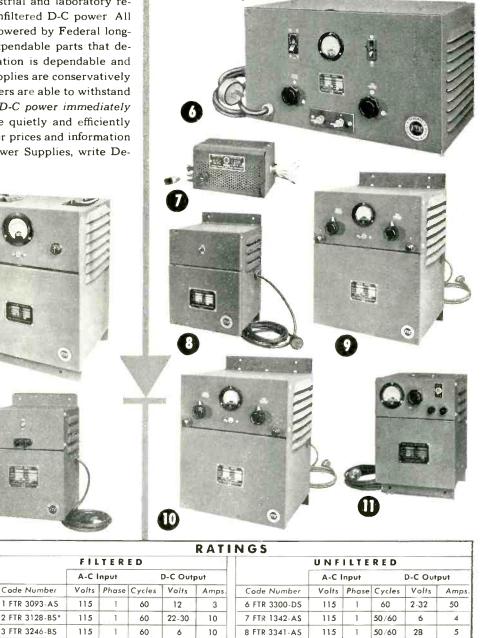
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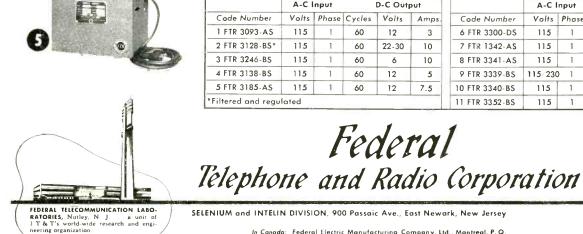
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3

# **UN-FILTERED**





In Canada: Federal Electric Manufacturing Company, Ltd., Mantreal, P. Q.

Export Distributors: International Standard Electric Corp., 67 Broad St., N.Y



50/60

50/60

50/60

115

115

1

6-24

5.70

5/10

18

12

20/10

An IT&T Associate

# BALLANTINE ELECTRONIC VOLTMETERS





The INDICATING METER used on all BALLANTINE VOLTMETERS features a single logarithmic voltage scale and uniform decibel scale. Makes readings especially easy. Accuracy of indication is 2% at any point on the scale.

### MODEL 300 ELECTRONIC VOLTMETER.

For the precise measurement of AC voltages from 1 millivolt to 100 volts over a frequency range of 10 cycles to 150,000 cycles. Accuracy of voltage readings is within 2%. Output jack and output control provided so that instrument can be used as highly stable amplifier, with 70 DB gain, flat within 2% over entire frequency range. Input impedance is ½ megohm. Special circuits insure permanent and highly accurate calibration, not affected by variation in line voltage or tube replacement. A high quality instrument for laboratory use—note the several accessories listed below which further increase utility of voltmeter.







## MODEL 304 R.F. VOLTMETER.

This instrument measures AC voltages over a range of 1 millivolt to 100 volts from 30 cycles to 5.5 megacycles. Probe type input connector attached by a flexible cable provides true indication of voltages at point of origin in circuits. Accuracy of voltmeter readings are within 5%. Input impedance is 1 megohm shunted by 9 mmfds. Can be used as wide-band amplifier. Especially useful for reading millivolts in television and FM intermediate frequency amplifier circuits, RF heating apparatus, carrier current systems and in particular for extending useful frequency range of ordinary oscilloscopes to beyond 5 megacycles.

# MODEL 402A (x 10) and MODEL 402B (x 100) MULTIPLIERS.

Accessories for use with Models 300 and 302 Voltmeters. Model 402A extends upper range of voltmeters from 100 to 1,000 volts. Also increases input impedance of voltmeters to 4 megohms.

Model 402B extends upper range of voltmeters from 100 to 10,000 volts. Also increases input impedance of voltmeters to 40 megohms.

#### MODEL 305 PEAK TO PEAK ELECTRONIC VOLTMETER.

The outstanding characteristic of this instrument is its ability to provide absolute indication of transient or pulse voltages of short duration. Reliable indication of pulses a few microseconds wide repeated only 10 times per second is readily obtained with this instrument. The Voltmeter is pre-calibrated, compact, easy to operate and observe. Positive and negative peaks are registered over the range of .001 volt to 1000 volts, peak to peak. Decade ranges and a logarithmic scale output meter are characteristic features, along with a separately available high gain, wide-band amplifier.



#### MODEL 302 PORTABLE ELECTRONIC VOLTMETER.

This Sensitive Electronic Voltmeter is portable and operates from lightweight batteries contained within carrying case. Reads AC voltages from 1 millivolt to 100 volts over frequency range of 5 cycles to 150,000 cycles. Accuracy 2% at any point on scale. Can be used as highly stable amplifier. Input impedance ½ megohm. Especially useful for making measurements on ungrounded or symmetrical circuits. Uses standard Eveready or Burgess batteries. Battery life over 150 hours.



MODEL 220 DECADE AMPLIFIER.

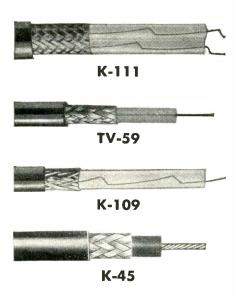
An accessory designed for use with Model 300 and Model 302 Voltmeters to permit the measurement of AC voltages below one millivolt. A highly stable amplifier giving accurately standardized gains of 10x or 100x over a frequency range of 10 to 100,000 cycles. When used with Ballantine Voltmeters, AC voltages down to 0.00001 volt (10 microvolts) can be measured. Calibrated gain is independent of battery voltage, circuit constants and tubes, within 2%. Operates from standard Eveready or Burgess batteries contained within its case. Average battery life over 150 hours.

TECHNICAL BULLETIN IS AVAILABLE COMPLETELY DESCRIBING ABOVE INSTRUMENTS



# 

# It's FEDERAL









# K-12



K-14



 $\ensuremath{\mathsf{FEDERAL-America's}}$  largest manufacturer of solid dielectric high frequency cables.

Production facilities are only a part of the story behind that reputation. A continuing program of research, development and improvement-close cooperation between manufacturer and user-rigid quality control-efficient production with resultant price advantage-all these and more play an important part in maintaining Federal's leadership in the field of HF transmission.

You can rely on these Federal standards of superiority to give you a better cable for every application. They include—

- **HF and VHF Transmitting and Receiving Cables**—for broadcast; communications; radar; experimental; amateur.
- **Special Application Cables** delay lines; pulse cables; low capacitance cables; high-power cables; precisely balanced cables.
- Aviation Cables aircraft static precipitation antenna cable; armored and other aircraft cables.
- Radio and Television Lead-In Cables Federal K-111 shielded, 300ohm TV lead-in; TV-59 low-cost, low-loss FM and TV 72-ohm lead-in; K-1046 300-ohm unshielded ribbon-type lead-in; KT-51 balanced line for TV network extension.

Federal cable engineers will assist you in selecting the proper cable from Federal's many types to meet your requirement. Write to Dept. D-214.

#### CHARACTERISTICS OF A FEW TYPICAL FEDERAL CABLES

Type Number	Application	Charac- teristic Impedance	Capaci- tance MMF	D	Attenuatio B per 100 fe QUENCY ir	Outer Diameter	
		Ohms	per foot	30	100	300	Inches
к-111	TV Lead-in Shielded	300	4.0	2.0	3.5	6.1	.490 x .300
TV-59	TV Lead-in Coaxial	72	22	2.0	4.0	7.0	.250
K-109	Auto Antenna Lead-in	150	8.0	5.2	8.3	12.5	.282
K-45 (RG8/u)	H-F Coaxial	52	29	1.0	2.1	4.2	.415
<b>K-49</b> (RG11/υ)	H-F Coaxial	75	20	.90	1.9	3.8	,415
K-12 (RG17/υ)	R-F Power Cable	52	29	.42	.83	1.7	.885
K-14	R-F Power Cable	71	21	.46	.93	1.9	.885





SELENIUM and INTELIN DIVISION, 900 Passaic Ave., East Newark, New Jersey

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q. Export Distributors: International Standard Electric Corp., 67 Broad St., N.Y.



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# PRECISION FRACTIONAL HORSE POWER INSTRUMENT - TYPE MOTORS AND **GENERATORS DESIGNED AND MANUFACTURED TO YOUR SPECIFICATIONS**

Electric Indicator Co.

can fill your needs . . . if you require units

designed to your own specifications.

There are over 400 models of high-precision

physically to meet your needs ...., or we will design an entirely new model. Write for literature,

instrument-type Elinco motors and generators, from 1/6 to 1/1200 H.P. A basic unit may fit your requirements, or can be varied, electrically or

or submit blueprints for our recommendations and quotation. Remember, all Elinco units are specially designed; they are precision

instruments-not low-cost

mass production types.

CB FRAME

ALP FRAME

ALC FRAME

G.J FRAME

MODEL FSP

B & F FRAME

**FB FRAME** 



GS FRAME

# THREE - SPEED SYNCHRONOUS

# MODEL GH371 HYSTERESIS TYPE

Operation is switch-controlled (or can be relay-controlled) providing for Clockwise or Counter-Clock-wise rotation; not only reversible while running, but can also change from one speed forward ta a different speed reverse. Rated at 1/100, 1/60, and 1/40 h.p., re-spectively, at 900, 1800, and 3600 c.y., single-phase A.C. Ruggelly constructed, finished in liaht blue mottletone. Dimensions of motor are 4-5/8" in diameter and 5-7/8" in length, excluding shaft. Price: Model GH 371, complete unit, in-cluding motor, control box, line cord, wired and ready to use, \$80. Operation is switch-controlled (or

# COMPLETE LITERATURE AVAILABLE:

CATALOG NO. 43: Describes A.C. Voltage and Sine-Wave Generators in BS, FS and FB frames; D.C. Motors and Voltage Generators in B, F, CB and FB frames; Drag-Cup Motors and Induction Generators in B and F frames; Self-Synchronous Induction Generators in B and Units in B, F, FB and J frames.

BULLETIN NO. 45: Describes Midget Induction and Synchro-nous units (not including Hysteresis types) in BS, FS and FBS frames. Ratings range from 1/200 to 1/1000 H.P.

BULLETIN NO. 46: Describes A.C. and Sine-Wave Generators in ASP and ALP frames; D.C. Motors and Generators, series, shunt, separately-excited and permanent-magnet fields in ASC and ALC frames; Induction and Synchronous Motors (not including Hysteresis types) from 1/20 to 1/250 H.P. in ASP, ALP, ASPS or ALPS frames ... single-value capacitor, split-phase, two and three-phase units; Governor-Controlled Constant-Speed Motors in D.C. shunt, series, or permanent-magnet field, and A.C. or Universal series Motors.

BULLETIN NO. 47: Describes Induction and Synchronous Motors (not including Hysteresis types) from 1/6 to 1/90 H.P. in G frame; Single-, two-, and three-phase A.C. Generators, pi-polar or multi-polar with permanent-magnet fields in G frame.

CATALOG "FB": Describes units in FB frame: Permanent-Magnet A.C. and D.C. Generators and D.C. motors; Shunt and Series Wound Motors and Generators; Split-Field Series Motors for A.C. and D.C.; Split-Field Separately-Excited Motors for servo applications; Universal Motors.

BULLETIN NO. 49A: Describes Hysteresis Motors, Synchronous, Sub-Synchronous, and Dual-Speed Synchronous, as well as Model GH-371 Three-Speed Hysteresis Motor. Total of 20 basic units are described, in AH, GH, FSH and BSH frames; ratings from 1/13 to 1/1200 H.P.

# ELECTRIC INDICATOR COMPANY

# PARKER AVENUE STAMFORD, CONNECTICUT, U. S. A.

June, 1949 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

# **Insulation Manufacturers Corporation** ELECTRICAL INSULATION SERVICE AND MATERIALS

\*CHICAGO 6: 565 W. Washington Blvd.

\*CLEVELAND 14: 1231 Superior Ave., N.E.

\*Local stocks and fabricating facilities are available in Chicago and Cleveland

#### INDEX OF PRODUCTS

Acetate, Cellulose

- Sheets, rolls, and slit coils, Kodapak Adhesive Tapes
  - (with adhesive on one side) Permacel 20 cloth electrical tapes (formerly Jonflex)
  - Permacel 24 acetate cloth electrical tapes
  - Permacel 25 acetate film electrical tapes
  - (Cellophane) transparent Texcel adhesive tapes
  - Vartex varnished cambric adhesive tapes
- Asbestos
- Asbestos woven listing tapes and sleevings, Imcor; papers and paper electrical tapes, Incor Bakelite, Laminated, Phenolite Paper, linen and canvas base lami-
- nated sheets
- Woven glass and asbestos base laminated sheets Laminated Bakelite rods and tubes
- Fabricated parts made from sheets, rods, tubes
- Compounds, Pedigree Insulating
- Impregnating, sealing, and filling compounds
- Cotton Tapes, Sleevings, and Twines
- Untreated cotton tapes, staybindings, webbings and tying tapes, Imcor
- Untreated cotton sleevings, all standard colors, Imcor Varnished cambric tapes (bias and straight cut), Vartex Varnished and saturated tubings and sleevings, Dieflex Cotton armature twines, Imcor
- End Laminations, Automotive, Inmanco
- Fibre and Fishpaper
  - Fishpaper and hard fibre sheets, rolls and slit coils Hard fibre rods, tubes, and formed fibre wedges Rogers fibre Rofico boards

Fabricated parts made from fibre sheets, rods, tubes Friction and Rubber Tapes

- Glass Textile Products
  - Untreated and treated woven glass tapes, sleevings and tying cords Varnished woven glass cloth and tapes, Vartex
  - Varnished braided glass tubings and saturated sleevings, Dieflex
  - Mica-glass combination slot insulations, Macallen
  - Mica-glass flexible sheets and tapes, Macallen
  - Woven-glass base laminated sheet Bakelite
  - Silicone-coated woven glass cloth
- Mica Products, Macallen Compressed Sheet
  - Moulding and segment mica plates for commutators
  - Flexible mica plate for cold forming or moulding
  - Mica tubes, bushings and sleeves Punched and moulded mica seg-ments, V-rings, and slot cells
  - Mica cloth, paper, Cellophane and other mica combinations
  - Mica tapes with silk, paper, rayon, Cellophane, braided glass, and other backings
  - Glass-mica combinations in sheets, rolls, or tapes

- ELECTRICAL
- PRODUCTS PLUS ENGINEERING AND FABRICATING SERVICE

Insulation Manufacturers Corporation is the distributor in the industrial Midwest for products of the manufacturers listed below. A staff of insula-tion specialists will be glad to help you apply these materials efficiently to solve your insulation problems. Com-plete fabricating facilities are available to aid in adapting insulation materials to your own design and production requirements. Write or phone your nearest I.M.C. representative for more information.

Distributors for THE FOLLOWING

MANUFACTURERS:

MANUFACTURERS: THE MACALLEN COMPANY Compressed Sheet Mica Products NEW JERSEY WOOD FINISHING COMPANY, INC. Varnished Cambric Cloth Tapes Varnished Fiberglas Products Vartex Silicone Resin Coated Fiberglas Extruded Tubing, Resinous Products, etc. OWENS-CORNING FIBERGLAS CORP. Woven Glass Electrical Textile Products DOW-CORNING CORPORATION Silicone Insulating Varnishes THE P. D. GEORGE CO. Pedigree Insulating Varnishes and Compounds JOHN A. MANNING PAPER COMPANY, INC. Manning Insulating Papers and Pressboards INSULATION MANUFACTURERS CORP. Dieflex Varnished Tubings and Saturated Sleevings Inmanco Hard Maple Wood Wedges and Formed Fibre Wedges Fabricated Slot Insulation and Other Specialties NATIONAL VULCANIZED FIBRE

Fabricated Slot Insulation and Other Specialties NATIONAL VULCANIZED FIBRE COMPANY Hard Vulcanized Sheet Fibre, Rods, Tubes Phenolite Laminated Bakelite Sheets, Rods, and Tubes HOLLINGSWORTH & VOSE COMPANY Groton Tan (Imcor Tan) and other Insulating Papers

Insulating Papers

AND OTHER OUTSTANDING MANUFACTURERS

Varnished papers, Vartex

- Resinous Products, Plastic
- Extruded plastic tubings, Vartex Resinous tapes and sheets, Vartex
- Ethocel sheeting
- Silicones, Dow-Corning
- Silicone—resin insulating varnishes
- Silicone-Treated Varnished Tubings and Sleevings, Dieflex Silks and Silk Replacements
  - Untreated silk, rayon, Nylon, and silk replacement tapes.
  - Imcor
  - Silk- and rayon-backed mica tapes, Macallen
  - Varnished silk and rayon cloth, tapes, and fabricated parts Vartex type 128 varnished cloth (silk replacement)

DAYTON 2: 120 W. Second St.

DETROIT 2: 15 Lawrence Ave.

PEORIA 5: 101 Heinz Court

specialties

coils

paper

boards

acetate

Manning

Papers and Pressboards

MILWAUKEE 2: 312 E. Wisconsin Ave.

MINNEAPOLIS 3: 1208 Harmon Place

Mica heater plate and pure mica parts for heating appliances Silicone-bonded flexible mica

Pure raw mica washers, discs, and

In sheets, cut strips, rolls, and slit

Manning 300 and 100 all-rag high-

density insulating papers Manning 200 and 50 part-rag high-

Imcor tan woodpulp insulating paper, plain and gummed Imcor Type 565 all-rope insulating

Red insulating paper and crepe paper tapes, Imcor

Paper combinations with cellulose

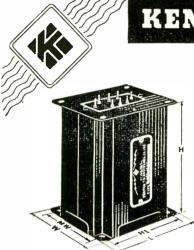
Cuffed and fabricated slot insulation

and other specialties

pressboards and fuller-

density insulating papers

- Twines-Cotton, Linen, and Braided Glass Armature
- Varnishes, Pedigree Insulating
  - Baking, air-drying, sticking, and finishing varnishes
    - Varnished Products and Combinations, Vartex
      - Varnished cambric cloths and tapes (bias and straight cut) Varslot combination slot insulations
      - (varnished cloth and insulating Daper)
      - Varnished silk, rayon and canvas duck
      - Vartex type 128 varnished cloth (silk replacement)
      - Vartex varnished asbestos cloth Varnished woven glass cloth and
      - tapes Varnished papers
    - Silicone-coated woven glass cloth Varnished Tubings and Saturated
      - Sleevings, Dieflex Flexible varnished tubings and sat-
      - urated sleevings Woven glass flexible varnished tub-
      - ings and saturated sleevings Ignition markers and other var-
      - nished tubing specialties
    - Wedges, Slot
    - Inmanco hard maple wood wedges Fibre wedges and formed fibre wedges, Inmanco and Peerless Woven glass laminated Bakelite
    - wedges and Other Products to Provide a
    - **Compete Insulation Service**



# **KENYON "T" LINE TRANSFORMERS**

# DIMENSIONS OF "T" LINE TRANSFORMERS

MOUNTING DIMENSION	NS	OVERALL DIMENSIONS					
$\begin{array}{c c} Case No. & ML \\ 1A & 21 \\ 2A & 2/3 \\ 3A & 2/5 \\ 4A & 3/8 \\ 5A & 4/6 \\ 5/2A & 4/6 \\ 6A & 4/6 \\ 7A & 5/2A \\ 8A & 5/2 \\ 8A & 5$	M W on 11223364 States 12333 4 4 4 5 7	Length (L) $2\frac{1}{16}$ $2\frac{1}{16}$ $3\frac{1}{16}$ $4\frac{1}{16}$ 5 5 $6\frac{1}{16}$ $6\frac{1}{16}$ $7\frac{1}{16}$ $9\frac{1}{12}$	$\begin{array}{c} \text{Width (W)} \\ 2\\ 2\frac{3}{6}\\ 2\frac{16}{16}\\ 3\frac{1}{16}\\ 4\frac{1}{16}\\ 5\frac{1}{16}\\ 5\frac{1}{16}\\ 5\frac{1}{16}\\ 6\frac{1}{16}\\ 8\frac{1}{4}\\ 8\frac{1}{4} \end{array}$	Height (H) $2\frac{7}{8}$ $3\frac{3}{7}$ $3\frac{5}{8}$ 5 5 $6\frac{8}{6}$ $7\frac{3}{7}$ $10\frac{5}{8}$			

## LOW IMPEDANCE SOURCE TO GRID TRANSFORMERS

Type No.	From	Primary Ohms	Secondary Ohms	Case No.	Weight	List Price
T-2 (Hum bucking type)	Any line	<b>500-333-250-200-125-5</b> 0	80,000 Single Grid	1A	1 lb. 1 oz.	\$9.20
T-3 (Hum bucking type)	Any line	<b>500-333-250-200-125-5</b> 0	80,000 P. P. Grids	1A	1 lb. 1 oz.	9.50

## LINE-TRANSFORMERS-LINE TO LINE AND LINE TO VOICE COIL

Type No.	Primary Ohms	Secondary Ohms	Maximum Level	Case No.	Weight	List Price
T-26 (Hum bucking type)	500-333-250-200-125-50	500-333-250-200-125-50	+24 D.B.	1A	1 lb. 1 oz.	\$8.40
T-28	500-200	15-8-4	30 watts	4A	5 lbs. 10 ozs.	13.95

## **KEN-O-TAP UNIVERSAL DRIVER TRANSFORMERS**

Туре	Pe	ower Rating	Case No.	W	eight	List Price \$11.25 14.80	
T-261 T-262		7 Watts 18 Watts	3A 4A		. 12 oz. . 4 oz.		
ine or Sing	le or Push-Pull Plates	to Class B Grids		Primary to 1/2 Secon	dary Ratio Variable f	rom 7.0:1 to	
Туре	Audio Rating	Case Size	Max. Pri. D.C.	Max. Sec. D.C.	Weight	List Pric	
T-264 T-263	7 Watts 18 Watts	3A 4A	100 MA 200 MA	100 MA 200 MA	2 lbs. 12 oz. 5 lbs. 12 oz.	\$11.40 17.10	

# PREAMPLIFIER OUTPUT TRANSFORMERS

Type No.	From	Secondary Ohms	Case No.	Weight	List Price
T-101	Single 56, 76, 6C5	200-500	1A	1 lb. 4 ozs.	\$6.55
T-102	P.P. 56, 76, 6C5	200-500	1A	1 lb. 4 ozs.	7.00

#### OUTPUT TRANSFORMERS TO 500-200 OR 15-8-4 OHMS

Type No.	From	Primary Ohms	Case No.	Weight	List Price
T-104	Single 2A5, 6F6, 42, 47, 89	7,000	2A	1 lb. 14 ozs.	\$8.80
T-105	Class "A," P.P. 2A5's, 6F6's, 42's, 47's, 89's	14,000	2A	2 lbs.	9.55
T-317	Class "AB" P.P. 6L6's	6,600 or 3,800	4A	5 lbs. 6 ozs.	15.70
T-319	Class "AB2" P.P. 6L6's	6,000 or 3,800	5A	8 lbs. 7 ozs.	19.90
T-301	Class "A," P.P. 6L6's, Class AB 45's, 2A3's	5,000 or 3,000	4A	4 lbs. 5 ozs.	14.10

# KEN-O-DYNE UNIVERSAL OUTPUT TRANSFORMERS

Type No.		Case No.	Weight	List Price	
T-108	15 watts	3A	2 lbs, 13 ozs.	\$10.80	Will match any set of Push-Pull or Push-Pull Parallel or a single
T-109	30 watts	4A	5 lbs, 2 ozs.	15.20	plate to 500-200 or speaker voice-coils. Low impedance con-
T-110	60 watts	5A	10 lbs, 1 oz.	20.40	nection for speaker voice coils range from .5 to 25 ohms.

# KEN-O-TAP MODULATION TRANFORMERS

Type_No.	Audio Watte	Class C W. Sec.	Max. Pri. D.C.	Max. Sec. D.C.	Max. D.C. Volatge	Primary Range Ohms	Secondary Range Ohms	Case No.	Weight	List Price
T-489 T-493 T-494 T-441 T-495 T-495 T-496 T-442	15     40     75     125     125     300     600	$     \begin{array}{r}       30 \\       80 \\       150 \\       250 \\       250 \\       600 \\       1200     \end{array} $	120     250     250     250     200     250     400     400	120 250 300 250 250 300 400	$\begin{array}{r} 600 \\ 750 \\ 1250 \\ 1500 \\ 2000 \\ 2500 \\ 3000 \end{array}$	2000-20000 2000-20000 2000-20000 2000-20000 500-18000 500-18000 500-18000	200-20000 200-20000 200-20000 200-20000 200-19000 200-19000 200-19000	3A 4A 5A 6A 7A 8A 9A	2 lbs. 13 oz. 5 lbs. 10 oz. 9 lbs. 15 lbs. 8 oz. 19 lbs. 2 oz. 26 lbs. 4 oz. 45 lbs.	\$10.30 14.95 20.30 28.20 54.20 63.00 70.50

# PLATE TRANSFORMERS DESIGNED FOR INTERMITTENT DUTY ONLY

	(55°C	2. RISE-15 Minutes Or	n, 15 Minutes Off)			
Type No.	Secondary Voltage	D.C. Volts	D.C., M A	Case No.	Weight	List Price
T-668 T-669 T-670 T-671	1000/750-0-750/1000 1460/1180-0-1180/1460 2360/2080/1760-0-1760/2080/2360 1460/1180-0-1180/1460	600/800 1000/1250 1500/1750/2000 1000/1250	250 300 270 450	5½A 7A 8A 8A	12 lbs., 6 oz. 19 lbs., 2 oz. 31 lbs., 9 oz. 31 lbs., 9 oz.	\$24.40 36.50 51.90 50.25

# PLATE TRANSFORMERS DESIGNED FOR BOTH CONTINUOUS AND INTERMITTENT DUTY

Type No.	Primary Conn.	Seco D.C.	Voltage ondary No. 1 A.C.	55°C. Rise MA Cont.	55°C. Rise 15 Min. On 15 Min. Off MA Int.	Case No.	Weight	List Price
Т-664		600	740-0-740	150				
			740-0-740	100	200	5A	10 lbs., 10 oz.	\$19.55
T-655	High Low	$\frac{450}{350}$	575-0-575 460-0-460	250	$\begin{array}{c} 340\\ 375\end{array}$	5A	10 lbs., 1 oz.	20.60
Т-656	High Low	750 600	925-0-925 740-0-740	270	320 360	6A	15 lbs., 9 oz.	31.60
T-665	High Low	1 <b>25</b> 0 1000	1470-0-1470 1180-0-1180	200	270 300	7A	23 lbs., 4 oz.	47.50
T-663		2000	2360-0-2360	350	500	10A	82 lbs.	117.00
Т-673	High Low	3000 2500	3400-0-3400 2840-0-2840	425	400 500	10 <b>A</b>	82 lbs.	121.00
Т-674	High Low	3000 2500	<b>3400-0-3400</b> 2840-0-2840	850	<b>800</b> 1000	Spec.	135 lbs.	170.00

4

# FILTER REACTORS

Type No.	Induct- ance At Rated D.C.	Rated D.C. MA	D.C. Resist- ance	Insula- tion test R.M.S.	Case No.	Weight	List Price
<b>T-157</b> <b>T-153</b> <b>T-154</b> <b>T-151</b> <b>T-152</b> <b>T-166</b> <b>T-165</b> <b>T-160</b> <b>T-176</b> <b>T-177</b>	$ \begin{array}{c} 10\\ 20\\ 12.5\\ 7.5\\ 7\\ 10\\ 10\\ 11\\ 10\\ 11\\ 10\\ 11\\ \end{array} $	$50 \\ 90 \\ 165 \\ 250 \\ 200 \\ 300 \\ 150 \\ 300 \\ 300 \\ 500 \\$	200 360 220 100 140 120 260 120 103 90	$\begin{array}{c} 1500\\ 1500\\ 1500\\ 1500\\ 1500\\ 1500\\ 3000\\ 3000\\ 5000\\ 5000\\ 5000\\ \end{array}$	1A 3A 3A 4A 3A 5A 3A 5A 5A 7A	1 lb., 4 oz. 2 lbs., 12 oz. 3 lbs., 2 oz. 5 lbs., 10 oz. 2 lbs., 13 oz. 10 lbs., 1 oz. 3 lbs., 2 oz. 10 lbs., 1 oz. 10 lbs., 1 oz.	\$5.15 7.55 8.60 11.80 8.15 17.40 8.60 17.40 19.30 37.40

### SWINGING REACTORS

Type No.	Induct- ance At Rated D.C.	Rated D.C. MA	D.C. Resist- ance	Insula- tion test R.M.S	Case No.		List Price
T-506	4/16	200/30	140	1500	3A	2 lbs., 13 oz.	\$8.15
T-501	5/15	250/30	100	1500	4A	5 lbs., 10 oz.	11.80
T-510	6/20	300/30	120	1500	5A	10 lbs., 1 oz.	17.40
T-512	6/22	300/30	103	5000	5A	10 lbs., 1 oz.	17.40
T-521	6/26	500/60	90	5000	7A	21 lbs., 1 oz.	37.40
T-516	6/22	400/50	70	3000	6A	15 lbs., 9 oz.	26.50

# PLATE AND FILAMENT TRANSFORMERS

Type No.	High Voltage Volts	MA.	Filament Volts	No. 1 Amps	Filament Volts	No. 2 Amps.	Filament Volts	No. 3 Amps	Filament Volts	No. 4 Amps	Case No.	Weight	List Price
T-245* T-205* T-222*	320-0-320 350-0-350 250-0-250	40 75 50	5 5 5	2 2 2	6.3 C.T. 6.3 C.T. 6.3 C.T.	3					3A 4A 3A	2 lbs. 13 ozs. 5 lbs. 10 ozs. 2 lbs. 13 ozs.	\$11.20 15.60 10.70
T-206* T-212 T-244* T-213 T-216 T-246 T-223	$\begin{array}{r} 325-0-325\\ 420-0-420\\ 425-0-425\\ 520-110-0-520\\ 520-85-0-520\\ 625-0-625\\ 600-0-600 \end{array}$	100 125 165 180 250 250 300	5 5 5 5 5 5 5 5 5 5	<b>333333</b> 36	6.3 C.T. 6.3 C.T. 2.5 2.5 C.T. 6.3 C.T. 6.3 C.T. 6.3 C.T.	3 8 3 3 3	6.3 C.T. 2.5 C.T. 6.3 C.T. 6.3 C.T. 6.3 C.T. 6.3 C.T. 6.3 C.T.	433333	6.3 C.T. 6.3 C.T.		5A 5A 6A 6A 6A 6A 6A	9 lbs. 9 lbs. 2 ozs. 13 lbs. 11 ozs. 10 lbs. 6 ozs. 15 lbs. 9 ozs. 15 lbs. 9 ozs. 15 lbs. 9 ozs.	21.20 21.30 27.10 25.10 32.00 30.60 31.00

\*Indicates unit designed for condenser input. All other units should be used choke input. If used with condenser input, the D.C. current rating of these items should be reduced to 70% of that specified.

## POWER LINE AUTO TRANSFORMERS

Type No.	Input	Output	Capacity Volt-Amperes	Case No.	Weight	List Price
<b>T-219</b>	88 to 130 volts	115 volts	500	5A	10 lbs. 1 oz.	\$23.50
110 VOL, 20	cycle operation, aud 007	d for 115 volt, 50 to 60 cycle of % to list prices. For any other standard 115 volt, 50 to 60 cycl	voltage 25 cycle operation add 100 e operation.	0 to 60 cycle oper % to list prices.	ation add 25% to lis Case sizes for 25 cyc	t prices. For le application
Type'No.	FILAMENT	TRANSFORMERS-S	INGLE WINDING	Case No.	Weight	List Price
T-388 T-379 T-352 T-360 T-389 T-390 T-382 T-351 T-378 T-387 T-361 T-385		2.5, 5, 6.3 V3A 2.5 V5 A. CT. 2.5 V10 A. CT. 2.5 V10 A. CT. 2.5 V10 A. CT. 2.5 V10 A. CT. 5 V20 A. CT. 5 V20 A. CT. 6.3 V3 A. CT. 6.3, 7.5 V7 A. CT. 6.3, 6.45, 6.6 V8 A. CT. 10 V8 A. CT. 10, 10.5, 11 V10 A. CT.	1000 V. Test 2000 V. Test 2000 V. Test 5000 V. Test 9000 V. Test 2000 V. Test 2000 V. Test 2000 V. Test 2000 V. Test 2000 V. Test 2000 V. Test 5000 V. Test 2000 V. Test	$\begin{array}{c} 1 A \\ 1 A \\ 2 A \\ 3 A \\ 4 A \\ 5 \sqrt[3]{2} A \\ 4 A \\ 2 A \\ 3 A \\ 3 A \\ 3 A \\ 4 A \\ 5 A \end{array}$	1 lb. 7 ozs. 1 lb. 6 ozs. 1 lb. 14 ozs. 2 lbs. 13 ozs. 4 lbs. 14 ozs. 11 lbs. 9 ozs. 5 lbs. 10 ozs. 1 lbs. 14 ozs. 2 lbs. 13 ozs. 2 lbs. 13 ozs. 5 lbs. 10 ozs. 5 lbs. 10 ozs.	\$6.85 6.25 7.50 9.20 13.15 21.20 14.80 7.15 9.50 9.85 14.10 19.30
		TWO WINDING	GS			
T-386	6.3 V3 A. CT.	2000 V. Test	5 V4 A. CT. 2000 V. Test	3A	2 lbs. 13 ozs.	\$10.30

We have a great number of other transformers, not listed herein. Write for Our Complete Catalog. Address Dept. BG



PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



# The Arnold Engineering Company offers to the trade a complete line of <u>Magnetic Materials</u>

# PERMANENT MAGNET MATERIALS

• Cast Magnets, Alnico I, II, III, IV, Y, VI, XII, X-900

• Sintered Magnets, Alnico II, IV, Y, VI, X-900, Remalloy\*

• Vicalloy\* • Remalloy\* (Comol)

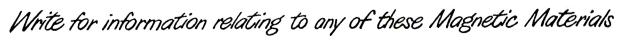
• Cunico • Cunife • Cast Cobalt Magnet Steel

# HIGH PERMEABILITY MATERIALS

• Deltamax Toroidal Cores • Supermalloy\* Toroidal Cores

• Powdered Molybdenum Permalloy\* Toroidal Cores • Permendur\*

\*Manufactured under licensing arrangements with WESTERN ELECTRIC COMPANY

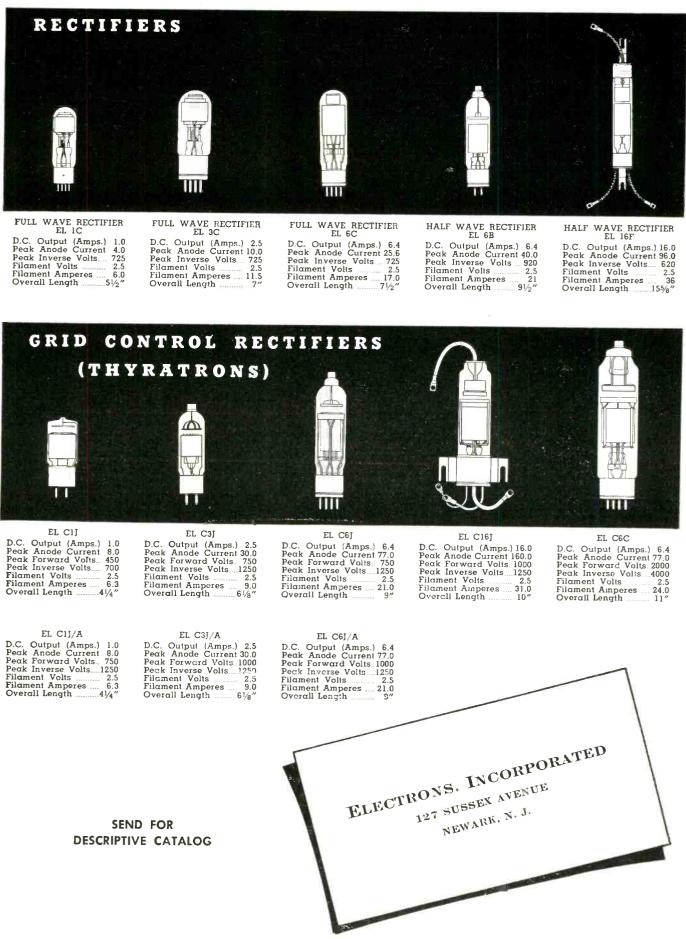




THE ARNOLD ENGINEERING COMPANY SUBSIDIARY OF ALLEGHENY LUDLUM STEEL CORPORATION

147 EAST ONTARIO STREET, CHICAGO 11, ILLINOIS

# "EL" XENON GAS-FILLED TUBES





**PROTECT THE INVESTMENT IN YOUR** EQUIPMENT Recent advances in the electrical field have made more critical the need for precise voltage control equip-

ment designed to protect and to operate highly sensitive and expensive apparatus. Whether the application involves the control of light, heat, sound, power or electronic equipment, there's a POWERSTAT variable transformer to suit every requirement.

Output

Voltage

Line

Single Phase

Voltage

STANDARD POWERSTAT VARIABLE TRANSFORMERS Maximum Output

Amperes

Output

KVA

Frequency

Type



**TYPE 116** 



TYPE 20



TYPE 2PF1126





**TYPE 116U** 



**POWERSTAT** Variable Transformers

are auto-transformers of toroidal core design, with a movable brush-tap which rotates to deliver a continuously-adjustable output voltage from a-c power lines. Into each POWERSTAT are incorporated superior qualities of top electrical performance, rugged mechanical construction, compact design and durability. POWERSTATS feature zero waveform distortion, excellent regulation, conservative ratings, standard mountings, smooth control and high efficiency. POWERSTATS are available with motor drives for pushbutton remote control, or for use with automatic controllers. A variety of motor speeds is offered.

	115	0-135 0-135 0-135 0-135 0-135 0-135 0-135 0-135 0-135 0-135 0-135 0-270 0-270 0-270	3.0 7.5 15.0 30.0 45.0 90.0 135.0 180.0 270.0 3.0 9.0 28.0	0.4 1.0 2.0 4.0 6.1 12.1 18.2 24.3 36.4 0.35 1.05 3.27	*60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60	20 116 1126 1126-2P 1156 1156-2P 1156-3P 1156-4P 1156-6P 216 1226 1226
-	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 0-540 0-540	28.0 3.0 7.5 9.0 15.0 28.0 45.0 56.0 84.0 112.0 168.0 3.0 9.0 28.0	0.81 2.0 2.4 4.0 7.5 12.1 15.1 22.7 30.2 45.0 0.7 2.1 6.5	50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60 50/60	216 116-25 1226 1126-25 1256-25 1256-2F 1256-3P 1256-4P 1256-6P 216-25 1266-25
-	440	0-515 0-515 0-515 0-515 0-515	3.0 9.0 28.0 56.0 84.0	1.5 4.6 14.4 28.8 43.2	50/60 50/60 50/60 50/60 50/60	216-25 1226-25 1256-25 1256-4PS 1256-6PS
1	Three Pho	ose 0-135	3.0	0.7	*60	20-2D
	115	0-135 0-135 0-135 0-135 0-135 0-270 0-270 0-270	3.0 7.5 15.0 45.0 90.0 135.0 3.0 9.0 28.0	1.8 3.5 10.5 21.0 31.6 0.6 1.8 5.7	50/60 50/60 50/60 50/60 50/60 50/60 50/60	116-2D 1126-2D 1156-2D 1156-4D 1156-6D 216-2D 1226-2D 1226-2D
	230	0-230 0-270 0-270 0-270 0-270 0-270	3.0 3.0 7.5 9.0 15.0 28.0	1.2 1.4 3.5 4.2 7.0 13.1	*60 50/60 *60 50/60 *60 50/60	20L-3Y 216-2D 116-3Y 1226-2D 1126-3Y 1256-2D
	230	0-230 0-270 0-270 0-230 0-540 0-540 0-540	45.0 56.0 84.0 90.0 3.0 9.0 28.0	17.9 26.2 39.3 35.8 1.2 3.6 11.3	50/60 50/60 50/60 50/60 *60 *60 *60	1156L-3Y 1256-4D 1256-6D 1156L-6Y 216-3Y 1226-3Y 1256-3Y
	440	0-270 0-270 0-230 0-540 0-540	45.0 56.0 84.0 90.0 3.0 9.0	17.9 26.2 39.3 35.8 1.2 3.6	50/60 50/60 50/60 50/60 *60 *60	1156L-3Y 1256-4D 1256-6D 1156L-6Y 216-3Y 1226-3Y
		0-270 0-270 0-230 0-540 0-540 0-540 0-515 0-515 0-515 0-515	45.0 56.0 84.0 90.0 3.0 9.0 28.0 3.0 9.0 28.0	17.9 26.2 39.3 35.8 1.2 3.6 11.3 2.7 8.0 25.0 50.0	50/60 50/60 50/60 *60 *60 *60 *60 *60 *60	1156L-3Y 1256-4D 1256-6D 1156L-6Y 216-3Y 1226-3Y 1256-3Y 216-3Y 1226-3Y 1226-3Y
		0-270 0-270 0-230 0-540 0-540 0-540 0-515 0-515 0-515 0-515	45.0 56.0 84.0 90.0 3.0 9.0 28.0 3.0 9.0 28.0 56.0	17.9 26.2 39.3 35.8 1.2 3.6 11.3 2.7 8.0 25.0 50.0	50/60 50/60 50/60 50/60 *60 *60 *60 *60 *60 *60 *60 *60	1156L-3Y 1256-4D 1156L-6Y 216-3Y 1256-3Y 1256-3Y 1256-3Y 1256-3Y 1256-3Y 1256-6Y
	440	0-270 0-270 0-230 0-540 0-540 0-540 0-515 0-515 0-515 0-515 0-515	45.0 56.0 84.0 90.0 3.0 9.0 28.0 3.0 9.0 28.0 56.0 56.0 <b>COOLED</b> 15.0	17.9 26.2 39.3 35.8 1.2 3.6 11.3 2.7 8.0 25.0 50.0 <b>POW</b> 2.0	50/60 50/60 50/60 50/60 *60 *60 *60 *60 *60 *60 *60 *60 *60 *	1156L-3Y 1256-4D 1256-4D 1156L-6Y 216-3Y 1226-3Y 1256-3Y 1256-3Y 1256-3Y 1256-6Y

\*When these POWERSTATS are "L" connected so that output does not exceed applied voltage, frequency range is 50/60 cycles.

WRITE FOR COMPLETE INFORMATION 4000 MEADOW STREET **BRISTOL, CONNECTICUT** 



POWERSTAT VARIABLE TRANSFORMERS . VOLTBOX A-C POWER SUPPLIES . STABILINE VOLTAGE REGULATORS

### **STABILINE** A U T O M A T I C VOLTAGE REGULATORS DELIVER CONSTANT OUTPUT VOLTAGE REGARDLESS OF VARIATIONS IN INPUT VOLTAGE OR LOAD CURRENT

Two types of automatic voltage regulators are built by The Superior Electric Company. Type EM (electromechanical) is designed to maintain constant output voltage to large loads or as a means of obtaining a constant output voltage with zero waveform distortion. Type IE (instantaneous electronic) gives instant correction; has no moving parts and is completely electronic in operation.

portable or rack-mounting models.

Output

Input Voltage

INSTANTANEOUS ELECTRONIC STABILINES



Ł.



### TYPE EM4102

Because of differences in basic design, it's possible to order a STABILINE voltage regulator to meet the requirements of any problem in voltage regulation. If you have a particular problem, write The Superior Electric Company. Our staff of voltage control engineers is available for consultation - at no obligation to you. It's through this engineering service that we can best serve you; that we can design and build voltage control equipment second to none in the electrical industry.

Voltage Range	Voltage Range	in Cycles	in Amperes	Factor Range	Output KVA	Туре
95-135	110-120	60 ± 10 ° /	0-2.2		0.25	IE51002
95-135	110-120	$60 \pm 10\%$	0-4.4	.5 lagging	0.5	IE51005
95-135	110-120	$60 \pm 10^{\prime}$	0-8.5		1.0	IE5101
95-135	110-120	$60 \pm 10\%$	0-43.5	to	5.0	1E5105
195-255	220-240	$60 \pm 10\%$	0-11.0		2.5	IE5202
95-135	110-120	$50 \pm 10\%$	0-8.5	.9 leading	1.0	IEL5101
195-255	220-240	$50 \pm 10\%$	0-4.5	-	1.0	IEL5201
		ICAL STAE		controlling		
POWERST	AT variab	le transform	ior circuit ier. Feature	s: zero wav	eform di	stortion,
insensitivit	y to magni	itude and po	ower factor	of load, no	effect o	n system
power fact	or, no cru	tical adjustn	nents, high	efficiency, a	idjustable	e output
voltage.		R	ATINGS			
Nominal	Input	Output	Outp	ut		

Completely electronic voltage regulators, instantaneous in action; no moving parts; waveform distortion *never* exceeds 3%; output voltage is stable within  $\pm$  1 of 1% for wide line variations. Available in cabinet,

Load Power

Rated

RATINGS Frequency Load Range

		KAII	NGS		
Nominal Output Voltage	Input Voltage Range	Output Voltage Range	Output Current (Amperes)	Output KVA	Туре
Single Phase			17.5	2.0	EM4102
115	95-135	110-120	52.0 130.0	6.0 15.0	EM4106 EM4115
208	180-230	200-215	32.5 120.0	6.7 25.0	EM8207 EM8228
230	195-255	220-240	32.5 120.0	7.5 27.5	EM4207 EM4228
440	380-500	420-460	15.0 40.0	6.6 17.6	EM4407 EM4418
Three Phase 208	180-230	200-215	25.0 38.0 50.0 113.0 145.0	9.0 13.5 18.0 40.0 52.0	EM8210Y EM8215Y EM8220Y EM8245Y EM8258Y
230	195-255	220-240	25.0 38.0 50.0 113.0 145.0	10.0 15.0 20.0 45.0 58.0	EM6210Y EM6215Y EM6220Y EM6245Y EM6258Y
440	380-500	420-460	16.0 22.0 33.0 66.0 100.0	12.0 17.0 25.0 50.0 75.0	EM6412Y EM6417Y EM6425Y EM6450Y EM6475Y
	400-480	420-460	131.0	100.0	EM64100Y

VOLTBOX



WRITE FOR COMPLETE **INFORMATION** 4000 MEADOW STREET **BRISTOL, CONNECTICUT** 

A-C POWER SUPPLIES: Compact, portable sources of variable a-c voltage for use in laboratory, inspection and maintenance sections and in transmitter workrooms. Two types available: ucim - 115V, 50/60 cycle, 1 phase, output 0-135V, 7.5 amps, 1KVA, UC2M-230V, 50/60 cycle, 1 phase, output 0-270V, 3.0 amps. 810VA.

### NEW 5-WAY BINDING POST

5 methods of connection. Complete insulation, 30 amp. current capacity, 1000V working volt-age. Captive head for convenience. Red or black color. 5 connections:

1. PERMANENT CLAMPING. 2. SPADE LUG. 3. PLUG-IN FOR BANANA PLUG. 4. LOOPING AND CLAMPING. 5. CLIP-LEAD.





POWERSTAT VARIABLE TRANSFORMERS • VOLTBOX A-C POWER SUPPLIES • STABILINE VOLTAGE REGULATORS

THIS WILL BE TRUE WHEN

Let Coils be the least Lyour Worries

## COTO-COIL

### FABRICATES THEM FOR YOUR PRODUCT

Our plant is modern and we keep our equipment modern to make sure that we produce the best for the least.

Thirty-one years of coil winding experience is yours for the asking, and our technical resources are such that we can co-operate on new or redesign work with your engineering department. When it's coils you need, call COTO-COIL.

BOBBINS ACETATE INTERLEAVE (Coalesced under W.E. Pats.) PAPER INTERLEAVE COTTON INTERWEAVE TAPED FORM WOUND UNIVERSAL SINGLE OR

MULTI-PIE CROSS WOUND



### **DIAMOND STYLI**

for Manufacturers of

- ★ RADIO PHONOGRAPH COMB.
- ★ PICKUPS
- ★ RADIO PHONOGRAPH TELEVISION COMB.
- **TRANSCRIPTIONS**

Our research and development permit us to offer manufacturers genuine diamond styli now so much in demand.

Radius and angle are positive gem finish, insuring gem contact in record groove.

These diamond styli are obtainable in any radius and angle desired, including one-mil radius for the new micro-groove records.

Our diamond styli may be inserted in any spring or similar assembly with a minimum of mass.

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## Sensitive Relays



### SERIES 4

SPDT GENERAL PURPOSE SENSITIVE D. C. SPDT GENERAL FURFORE Statements resists RELAY of moderate cost. Balanced armature resists vibration suitably for most aircraft applications at  $\frac{50}{500}$ milliwatt adjustment. Adequate sensitivity for most vacuum tube operated relay circuits; can be set to operate down to 10 milliwatts. Precision adjustments for pull on and drop out. Journal Pivots, high permereliability nickel iron, and beryllium copper springs assure reliability. Nominal contact rating <u>2 amperes</u>. Coil resistance up to 14000 ohms.



SERIES 5

SPDT VERY SENSITIVE D. C. RELAY of exceptional design and construction quality. Balanced arma-ture and magnetic efficiency sufficient to permit aircraft <u>vibration resistant adjustment for inputs as low as 5</u> <u>milliwatts</u> (less than 1 milliwatt for less exacting service). <u>Basic relay</u> withstands <u>500g shock</u> without damage. Precision adjustments, conical pivots, high permeability nickel iron, beryllium copper springs. Nominal contact rating 2 amperes. Coil resistance up to 16000 ohms. <u>Special adaptations</u>:—Separate connection to each of two coils for differential operation — Built-in instru-ment rectifiers for A. C. coil operation — Bimetallic compensation for constant voltage operation at variable



### SERIES 41

ambient temperature

SPDT SÉNSITIVE RELAY - A. C. - D. C. - KEY-ING - featuring low cost and unusual characteristics.

D. C. Sensitivity comparable with Series 4, but less adjustment flexibility. Exceptionally long life rocking pivot and availability of bounce-free contacts (Normally Open only) suit it for <u>high speed counting</u> and keying. Mechanical life over <u>10<sup>9</sup> operations</u>. Also well suited for any plate circuit use requiring moderate precision and vibration immunity. Contacts can be rated at 5 amps sometimes more. Coil resistance up to 14000 ohms.

<u>A. C. Sensitivity better than 0.1 V. A.</u> Impedance as high as 130,000 ohms at 90 volts 60 cps. Supplied for frequencies from 16 to 400 cps. Shunt or series coils available. Excellent for protection of delicate thermostat or instrument contacts. Operates over wide range of variable input (e.g. 90-250v A. C.).

# by SIGMA

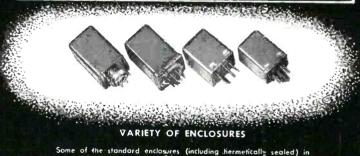
### IT'S TO YOUR ADVANTAGE TO CONSULT SIGMA

If You need a ready selection from a large group of standard variations of the basic relay types described herein.

- If Your relay problem presents on unusual combination of performance, environental and economic requirements, necessitating a highly engineered product.
- You require a solution not likely to be found in a catalogued tem, and demanding an unusual amount of cooperative engineering.
  - When Your engineering is in its arliest stages, befare the design of associated equipment has progressed so far as to narrow the relay problem to the difficult or the impossible!

#### MILITARY SERVICE REQUIREMENTS

General Statements about a broad line, and its compliance with all environmental specifications are either impossible, ar at the least misleading. Sigma, however, offers substantial experience in effecting a balance between difficult performance requirements on the one hand and difficult environment on the other. This is another area in which consultation before the release of drawings often pays dividends in saved time.



which most Sigma relays are available.



### SERIES 6

MULTICIRCUIT POLARIZED SENSITIVE RELAY - with single or double (differential) windings, resistance up to 25000 ohms total, and contacts up to 4PDT, 5 AMP nominal rating. Fully balanced armature Strongly resistant to vibration. <u>Form X</u> — Null Seeking — For automatic positioning or two-way

process control. Armature normally held at center by positive detent but operable either right or left by coil power of appropriate polarity and magnitude. Sensitivity depending on contact complexity from 10 to 100 milliwatts

Form Y - Biased (Spring Return) - For use as amordinary sensitive relay where a complex contact combination is required. Often combines the function of pilot relay and contactor. Sensitivity range same as

the function of phot reary and contactor. Sensitivity range same as Form X. Responsive only to D. C. of proper polarity. Armature returns to normal position when coil power is removed, closing N. C. contacts. Form Z — Latching (Permanent Magnetic) — As a replacement for mechanical latch electrical reset relays where longer life and greater resistance to vibration is required. When these features are stressed scretilities from 100 to 250 millionatta sensitivity is from 100 to 250 milliwatts.



### SERIES 7

SPDT SENSITIVE HIGH SPEED POLARIZED RELAY. Single or multiple windings up to 14000 ohms (single). Fully balanced armature. Nominal contact rating 2 amps. Especially designed for <u>repeating</u> <u>telegraphic signals</u> at speeds up to <u>250 words per minute</u>. Exceptionally free from distortion and chatter, small size and weight, hermetically scaled (cover removed in cut). Mechanical life over <u>10<sup>6</sup> operations</u>. Life under representative scatter to hermetical up to <u>10<sup>6</sup></u> under representative severe telegraphy service 10<sup>8</sup> operations.

Forms X, Y, and Z are available in the Series 7 giving same modes of operation as in the Series 6 above. Sensitivities range from less than 1 to 10 milliwatts depending on form and requirements. The Form X is useful as the detecting element in positioning bridge circuits and the like because of fairly high sensitivity plus the s-abilizing advan-tages of detent centering of the armature in the balanced bridge condition.

Sigma Instruments, isc.

ensitive RELAYS

80 CEYLON ST., BOSTON 21, MASS.

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In this space we have highlighted general characteristics of the Sigma line and saliens features of individual members. This advertisement may serve as a preface to our general catalog which is yours for the asking. Your specific inquir, on an actual p ablem will receive prompt attention.



## QUALITY TESTING INSTRUMENTS

### THE POCKETSCOPE MODEL S • 11 • A



Industrial and television oscilloscope for radio and industrial electronic servicing as well as for educational applications COMPACT ... 7" high ... 5" wide ... 11" deep—LIGHT ... only 8¾ lbs... COMPLETE ... measures AC and DC with sensitivity better than 100 mv RMS/inch with fidelity within ... 2 db from 0 to 200 kc; linear sweep from 3 cycles to 50 kc; blanking of return trace; intensity amplifier ... direct connection to plates ... low input isolated from case—retractable light shield ... leather handle ... detachable graph screen.

### RAYONIC CATHODE RAY TUBE 3 M P 1

A 3" cathode ray tube for oscilloscope applications. P1 medium persistence screen, only 8" long. Zero first-anode current gun with high voltage accelerator electrode. Deflecting plates to separate terminals on duo-decal socket. Operation on voltages from 500 to 2500 volts. Accessories as sockets, magnetic shields, and detachable graph screens are available.



WATERMAN PRODUCTS CO., INC. PHILADELPHIA 25, PENNA., U.S.A.



### FLEXAGUIDE

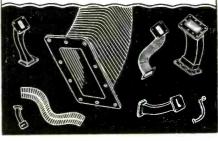
A flexible waveguide with an electrically continuous FLEXIBLE CONVOLUTED bellows innercore protected by a specially LOW TEMPERATURE flexible molded jacket. It is PRESSURE tight and electrically correct for all conditions of bending and flexing. Standing Wave Ratio is equivalent to standard rigid waveguide assembly throughout the flexing cycle and has excellent attenuation characteristics.

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## MACHLETT ELECTRON TUBES

### TRANSMITTING TUBES

	TRANSMITTING TOBES								
	CAT	HODE		MA	X. ANO	DE RATI	NG	FULL	
TYPE	VOLTS	AMPS	MU	VOLTS	AMPS	INPUT WATTS	DISS. WATTS	FREQ. MCS.	COOLING
ML-2C39	6.3	1.1	85	1000	0.1	100	100	500	Forced-Air
ML-6C24	11.0	12.1	30	3000	0.5	1500	600	160	Forced-Air
ML-7C24	12.6	29	29	5000	1.4	5000	2000	110	Forced-Air
ML-9C21	19.5	415	36	17000	9.0	150000	40000	15	Water
ML-9C22	19.5	415	36	17000	8.0	100000	20000	5	Forced-Air
ML-9C25	6.0	285	32	11500	4.0	40000	17500	30	Forced-Air
ML-207	22.0	51	20	15000	2.0	30000	10000	1.6	Water
ML-805	10.0	3.25	Var.	1500	0.21	315	125	30	Convection
ML-810	10.0	4.5	36	2500	0.3	750	175	30	Convection
ML-HF200	10.5	4.0	18	2500	0.2	500	150	30	Convection
ML-HF300	11.5	4.0	23	3000	0.28	750	200	20	Convection
ML-450TH	7.5	12.0	38	6000	0.5	2500	450	40	Convection
ML-813	10.0	5.0	8.5	2250	0.225	500	125	30	Convection
ML-826	7.5	4.0	31	1250	0.140	175	75	250	Air
ML-828	10.0	3.25		1500	0.180	270	80	30	Convection
ML-829B	12.6	1.25	9	750	0.240	150	8	200	Air
ML-832A	12.6	0.8	7	750	0.090	36	15	200	Convection
ML-833A	10.0	10.0	35	4000	0.50	2000	450	20	Forced-Air
ML-846	11.0	51	40	7500	1.0	7500	2500	50	Water
ML-849	11.0	5.0	19	2500	0.35	875	400	3	Convection
ML-880	12.6	315	20	10500	6.0	60000	20000	25	Water
ML-889A	11.0	120	21	8500	2.0	16000	5000	50	Water
ML-889RA	11.0	120	21	8500	2.0	16000	5000	30 40	Water Forced-Air
ML-891	22.0	60	8.5	12000	2.0	18000	6000	1.6	Water
ML-891R	22.0	60	8.5	10000	2.0	15000	4000	1.6	Forced-Air
ML-892	22.0	60	50	15000	2.0	30000	10000	1.6	Water
ML-892R	22.0	60	50	12500	2.0	18000	4000	1.6	Forced-Air
ML-893A	20.0	183	35	20000	4.0	70000	20000	5	Water
ML-893AR		183	35	20000	4.0	70000	20000	5	Forced-Air
ML-895	19.0	138*	37	17000	9.0	140000	40000	6	Water
ML-895R	19.0	138*	37	17000	9.0	110000	20000	6	Forced-Air
ML-5530	5.0	55	26	5000	1.75	8750	3000	110	Forced-Air
ML-5541	7.5	57	26	8500	2.75	23000	10000	110	Forced-Air
ML-5588	63	2.5	16	1000	0.30	25000	200	1200	Forced-Air
ML-5592	11.0	412	32	11500	4.5	50000	17500	50	Forced-Air
ML-5506	22.0	60	50	15000	2.0	30000	10000	1.6	Woter
ML-5658	12.0	290	20.5	12500	5.0	60000	20000	20	Water
ML-5650 ML-5671	11.0	285	39	15000	8.0	100000	25000	10	water Forced-Air
ML-5671 ML-5736	6.0	60	22	5000	1.4	5000	2500	60	Forced-Air Forced-Air
ML-5730 ML-5762	12.6	29.0	29	5250	1.4	5500	2500	110	Forced-Air Forced-Air
ML-5762 ML-5771	7.5	170	20	12500	6.0	60000	22500	25	Porcea-Air Water
ML-3771 ML-8000	10.0	4.5	16.5	2500	0.300	750	175	30	water Convection
ML-8000	10.0	3.25	20	1500	0.200	300	85	60	Convection
ML-8005 ML-8025A	6.3	1.92	18	1000	0.080	50	30	500	Air
ML-OUIJA	U.J	1.74	10	1000	0.000	0.	30	100	All

\* Filament current is per phase of three-phase

	CATH	ODÈ		MAX. ANODE RATING				FULL	
TYPE	VOLTS	AMPS	ми	VOLTS	AMPS	INPUT WATTS	DISS. WATTS	FREQ. MCS.	COOLING
ML-5604	11.0	176	19.5	12500	3.0	32500	10000	22.5	Forced-Air
ML-5619	11.0	176	19.5	12500	3.0	32500	20000	22.5	Water
ML-5658	12.0	290	20.5	12500	5.0	60000	20000	20	Water
ML-5666	11.0	120	21	10000	2.0	20000	12500	22.5	Water
ML-5667	11.0	120	21	10000	2.0	20000	7500	22.5	Forced-Ai
ML-5668	22.0	60	50	14000	2.0	28000	20000	5	Water
ML-5669	22.0	60	50	14000	2.0	28000	10000	5	Forced-Ai



HIGH-VOLTAGE RECTIFIERS							
	CAT	CATHODE		E RATINGS			
TYPE	VOLTS	AMPS	INV. PKV	PEAK AMPS	TYPE OF	TYPE OF COOLING	
ML-102	20.0	19.0	75	0.750	Air	Convection	
ML-103	10	11.5	125	0.078	Oit	Convection	
ML-106	n	19.0	140	0.157	Oil	Convection	
ML-108	13	12.5	140	0.200	Oil	Convection	
ML-110	10	11.5	140	0.078	Air	Convection	
ML-115	10	11.5	125	0.100	Air	Convection	
ML-120	13	12.5	140	0.200	Air	Convection	
ML-121	10	11.5	140	0.100	Oil	Convectio	
ML-126	13	12.5	150	0.200	Air	Convection	
ML-170	13	12.5	200	0.200	Air	Convection	
ML-180	13	12.5	200	0.200	Oit	Convection	
ML-199	12.0	23.0	110	10.0	Air	Forced-Ai	
ML-5575/100	20	24	150	1.0	Aic	Convection	
ML-5576/200	20	32	150	2.5	Air	Convection	

MERCURY VAPOR RECTIFIERS								
	CATH	IODE	TUBE			ANODE RATINGS		
		1	VOLT.	FILA.		INV.	PEAK	AV.
TYPE	VOLTS	AMPS	DROP	EXCIT.	COOLING	PKV	AMPS	AMPS
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-260C	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	Quad.	Convection	12.5	8.0	2.0
ML-575A	5.0	10	10	In-Ph.	Convection	15	6.0	1.5
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	0.25
ML-869B	5.0	19	15	Quad.	Forced-Air	15	20.0	5.0
ML-872A/872	5.0	7.5	10	In-Ph	Convection	10	5.0	1.25
ML-8008	5.0	7.5	10	In-Ph.	Convection	10	5.0	1.25

Machlett Electron Tubes are now distributed by Graybar Electric Company, 420 Lexington Avenue, New York, N. Y., with offices and warehouses in more than a hundred principal

cities in the United States

Note: For additional technical data or prices contact your local Graybar office or write to Machlett Laboratories, Inc., Springdale, Conn



OVER 50 YEARS OF ELECTRON TUBE EXPERIENCE

MA





"556" SUPER-CARDIOID (For Broadcast)



MODEL "51" SONODYNE



MODEL ''520" **GREEN BULLET** 



## **NEW** SHURE LINE OF MICROPHONES AND **PICKUPS OFFERS OUTSTANDING FEATURES**

### SHURE SUPER-CARDIOID DYNAMIC MICROPHONES

The new Shure Super-Cardioid Dynamic Microphones are Multi-Impedance Microphones i ne new Snure Super-Cardiola Dynamic Microphones are Multi-Impedance Microphones-giving you three microphones in one. Reduces your inventory, increases your sales through rapid turn-over. Model "556" is specially designed for Broadcasting. Held within extremely close tolerances in frequency response. Features internally isolated cartridge and external vibration absorbing unit. Model "55" is a "General Purpose," high-quality dynamic. It has the same mechanical properties as "556" with the exception of the external vibration absorbing unit. Following is technical data covering both models:

Reduces reflections and reverberation—decreases random noise pickup by 73%. Smooth re-sponse from 40 to 10,000 cycles over wide angle at front—dead at rear. Single unit construc-tion accomplished through Shure "Uniphase" principle (Patented). Floating moving coil system. Swivel head. Standard % ~-27 thread. Convenient terminals for attaching longer length cables. Case 4¼ high, 3¼ wide, 3½ deep.

MODEL	CABLE	SHPG. WEIGHT	CODE	LIST PRICE
556	7 ft.	4½ lbs.	RUMUB	\$92.50
55	25 ft.	4½ lbs.	RUMUL	\$67.50

### "SONODYNE" MULTI-IMPEDANCE DYNAMIC

Features a Multi-Impedance switch for Low, Medium, or High Impedance. High-output of 53 db below 1 volt per dyne per sq. cm. Wide-range frequency response (60-10,000 c. p. s.) and semi-directional pickup. Moving coil unit. Satin-Chrome case. Ideal for general purpose use. Ship-ping weight 4% lbs. 20 ft. cable.

Model "51" Code: RUSON List Price: \$39.75

### "GREEN BULLET" CONTROLLED RELUCTANCE

This new magnetic microphone is designed to provide quality music and speech repro-duction at moderate cost. Features high sensitivity, impedance flexibility without a transformer. Output level -52 db, frequency response 100 to 7,000 cycles. Immune to high temperatures and humidity. Available in high impedance. Special green metallic finish. Cable length 15'. Shipping weight 2½ pounds.

Model "520" Code: RUDAL List Price: \$16.50

### SHURE "VERTICAL DRIVE" CRYSTAL PHONOGRAPH PICKUPS

SHURE "VERTICAL DRIVE" CRYSIAL PHONOGRAPH PICKUPS The Shure "Vertical Drive" Crystal Pickups are ideal for the reproduction of the new fine-groove vinylite and high quality standard groove recordings (33½ RPM, 45 RPM, Standard 78 RPM records). They provide the high needle compliance and the maximum fidelity needed to reproduce the full frequency range of the better records. The "Vertical Drive" also features high output, low tracking force, and finger-tip needle replacement. The 901D "All-Purpose" Pickup is provided with .0027' Osmium and .001' Sapphire point "Muted Stylus" needles. The high needle com-pliance of the Model 901D eliminates the need for shifting of weight or needle force when playing both fine-groove and standard records with one cartridge, such as required with most other turn-over pickups. over pickups

MODEL	OUTPUT at 1000 CPS.	RESPONSE TO	NEEDLE SCREW	SHIP. WT.	CODE	LIST PRICE
901D	(MG) .65 (STD) 1.1	6,000 CPS	KNURLED NUT	12 oz.	RUZEL	\$16.25
901MG	.65	10,000 CPS	KNURLEDNUT	12 oz.	RUZUG	12.75

### SHURE REPLACEMENT CARTRIDGES-"9-OUT-OF-10" PACK

Below is technical data on three Shure lever type cartridges—the standardized replacement line that will handle nine out of ten Crystal Cartridge replacements. A copy of the Shure Replacement Chart is in each carton. These cartridges feature low needle force, high needle compliance, crystal shock immunity, pin-tip terminals. These cartridges are not merely adequate re-placements—they are acoustic advancements. MODEL: W50B CODE: RUPAL LIST PRICE \$18.50

MODEL	REPLACES SHURE	REPLACES	MIN. NEEDLE FORCE	OUTPUT VOLTAGE	SHIP. WT.	CODE	LIST PRICE
W57A	P87, P90D, P93S, P94, P94B	Any Standard	<sup>8</sup> /4 oz.	1.6	¾ oz.	RUGLA	\$5.55
W58A	P87S, P90S, P92B, P93S, W42A	Flat-Type Cartridge	1 oz.	1.6	<sup>8</sup> /4 oz.	RUGLU	5.55
*W60B	P30 Series, W57AN	of Equal Output	1 oz.	1.6	¾ oz.	RUSID	7.50
*With Osmium Point Needle							

Shure Microphones and Pickups Manufactured Under Shure Patents Issued and Pending-Crystal Produ ucts Licensed Under Patents of the Brush D



### Multi-Impedance Switch on Models "55" and "556"

IMPEDANCE TABLE	OUTPUT LEVEL
L35-50 ohms	56.1 db below 1 Milliwatt per 10 bar signal
M-150-250 ohms	56.8 db below 1 Milliwatt for 10 bar signal
H-High	57.5 db below 1 volt per bar

### "MONOPLEX"

SUPER-CARDIOID CRYSTAL Same phase-shifting network as used in Shure "Broadcast" microphones. Reduces Same phase-shifting network as used in Shure "Broadcast" microphones. Reduces feedback 73%! Ideal for high quality public address, recording, etc. Frequency response 60 to 10,000 c. p. s. Output level -53 db. Special metal-seal crystal for long life in humid areas. Built-in cable connector. Satin chrome finish. Shipping weight 4 lbs. Sup-plied with 20' cable. Model "737A" Code: RUMON List Price: \$39.75

### "HERCULES"

CONTROLLED RELUCTANCE MICROPHONE A rugged hand-held magnetic unit. Provides the clear reproduction and high output long the clear reproduction and high output long needed for public address, communications and recording at an amazingly low price! Ideal for general-purpose use in humid areas. High impedance obtained without the use of a transformer. Frequency response 100 to 7,000 c.p.s. Furnished with 7' fabric covered cable cable.

Model "510 C" Code: RUTUF List Price: \$12.95 Model "5105" (With Switch) Code: RUTUS List Price: \$14.95 Also available as a low-cost crystal microphone, the new Shure "Rex". See catalog 159.



"UNIDYNE" SUPER-

CARDIOID DYNAMIC

(For General Purpose)

'510" SERIES HERCULES

"TROPI - PAC"-FOR HUMID OR ARID REGIONS

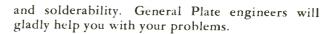
The new Shure "Tropi-Pac" is a crystal cartridge replacement package for Southern States and humid Southern States and humid areas in sub-tropical coun-tries. Contains W58HS and W60HS "Humi-Seal" Ro-chelle Salt crystal car-tridges that last longer and tridges that last longer and operate with greater effici-ency than any other Ro-chelleSaltcrystalcartridges of comparable output. The crystals in both cartridges are encased in a special plastic and metal wrap-for long life. These cartridges are Rochelle Salt Crystal Cartridges—do not confuse with PN-type cartridges. No circuit compensation is necessary! Model: "W50T" Code: RUPAT List Price; \$15.00

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General Plate Laminated Metals are available in strips, sheets, bars, tubing or wire in various sizes and thicknesses. Made by permanently bonding precious metals, such as silver, gold, platinum to base metals, these laminated metals give solid precious metal performance at a fraction of the cost of solid precious metal. The precious metal provides specific performance requirements such as electrical con-

ductivity and corrosion resistance while the base metal reduces costs, provides workability, strength





**LAMINATED CONTACT MATERIAL** Permanently bonded silver to base metal is available in the following stock—overlay, single and double edgelay, single and double inlay, toplay, ready for you to fabricate into contacts.



SILVER ON BERYLLIUM COPPER Laminated silver on beryllium copper is available with the copper covered with silver on one side or both and silver inlay.



**LAMINATED CONTACTS** General Plate can supply all types of fabricated-laminated contacts, buttons, rivets, screws made to customer's specifications. These contacts give high electrical conductivity at reduced costs.



ALCUPLATE COPPER ON ALUMINUM This laminated metal makes aluminum solderable. The copper provides excellent conductivity, the aluminum light weight. Alsiplate (silver on aluminum) is available.



SILVER SOLDER General Plate manufactures all grades of silver solder, solder filled, flushed, burred, etc., with various flow points for all types of electronic applications.



**TRUFLEX METALS** These thermostat metals are manufactured in a wide variety of types, each with a different reaction to temperature. Write for information and engineering assistance.

## **GENERAL PLATE DIVISION** of Metals and Controls Corporation

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application of soft solder alloys and soldering fluxes. Get your copy now.

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## 688 Quick Solutions

### to as many resistor problems

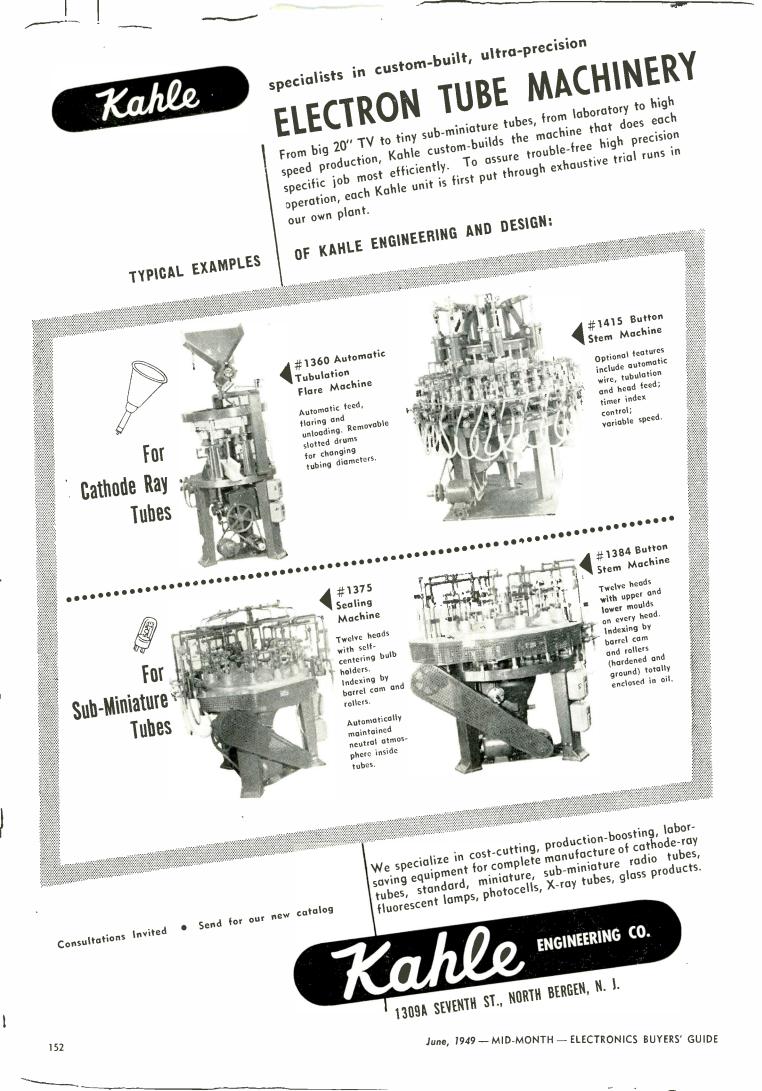
You can get immediate delivery on Ward Leonard Vitrohm wire-wound resistors—both adjustable and fixed—in watt ratings from 5 to 200 and resistance values from 1 to 150,000 ohms.

Resistive element embedded in Ward Leonard's exclusive crazeless vitreous enamel, gives these resistors consistent accuracy and stability even under the most prolonged adverse operating conditions.

Write for Resistor Catalog D130. Ward Leonard Electric Co., 23 South Street, Mount Vernon, N. Y. Offices in principal cities of U. S. and Canada.







### Northern Radio Company



### A COMPLETE LINE OF HIGH OUALITY COMMUNICATIONS EQUIPMENT

**Radio Multiplex Systems** Multi Channel Tone Systems Diversity Receivers Standard Frequency Shift Keyers Low Frequency Shift Keyers **Frequency Shift Converters** 

**Tone Filters** Tone Keyers Demodulators Line Amplifiers Master Oscillators Monitors

ENGINEERING SERVICE FOR FREQUENCY SHIFT

The Northern Radio Company, recognizing the need in industry for an organization concentrating exclusively on design and production of quality communication equipment, particularly frequency shift, has built an organization which possesses a wealth of knowledge and experience in this field. This group includes some of the pioneers in the development of frequency shift and communication equipment. We are in a position to design and equip for your specific needs, complete systems for transmission and reception, by FS or CW; Morse, radio tele-printer, radio-photo, facsimile or voice.

These systems can be furnished complete, including all terminal equipment, line channelizing systems, transmitters, receivers and antennas, designed specifically for point-to-point communications. We solicit your inquiries regarding this service.

Each unit in the Northern Radio Company line was designed, in co-operation with government and commercial operating agencies, to fill the needs of the communications industry. All enjoy worldwide acceptance and application as outstanding performers in the field.

MASTER VARIABLE OSCILLATOR



TYPE 115 MODEL 1

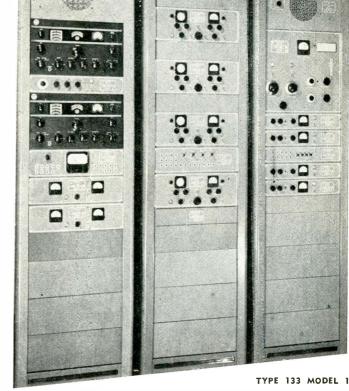
Principally used in diversity reception to supply local common oscillator injection voltage to receivers. Crystal oscillator for BFO. The Variable High Frequency section gives stabliity equivalent to that of non-temperature controlled crystal oscillators. It is also equipped with three crystal controlled frequencies for operation of receivers on a fixed frequency basis. The variable high fre-quency oscillator is provided with local crystal oscillator for spot

REMOTE CONTROL SYSTEM FOR SPECIFIC APPLICATIONS

This Remote Control System provides operations of a multiplicity of transmitters, all of which operations are accomplished by the use of one telephone line per simultaneous service.

Remote control equipment can be furnished for any particular transmitter functions required. Specifically, the type MW Model 1 is designed to function into a transmitter system consisting of one common power supply, four RF (High Frequency) channels having one selective Moduconnected Modulator. The remote control equipment performs the following functions: 1. Starts and stops the transmitter main HV unit. 2. Selects for operation any one of the five R.F. Units for any one of three different types of emission, controlled simultaneously from any one of five remote operating sites. 3. Provides line amplification lator Unit, and one RF (Low Frequency) channel having one permanently

- Provides line amplification.
- Provides input terminals for manual key, tele-printer and microphone.
   Indicates the R.F. Units being operated, and the types of emission selected.



### 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 left are the complete receiving units; right, the transmitter terminal and exciter facilities. The system may be adjusted for band widths of 3 to 10 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 normal frequency shift operation. Simple operation of key switches will insert as many channels as the conditions permit. These switches automatically maintain the pre-set bandwidth regardless of the number of channels in use. The system also provides front panel switching 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.



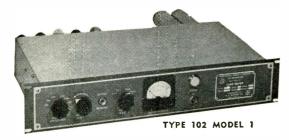
TYPE MW MODEL 1

### Northern Radio Company =





TYPE 107 MODEL 2





CHANNEL TONE FILTER. Designed for use in multichannel carrier telegraph systems, where its function is generally to separate into single frequencies the complex voltage transmitted by the system. Consists of six band pass filter networks with a common input and separate outputs, one output for each standard frequency.

Frequency Range	425, 765, 1105,	1445, 1785	and 2125 cps.
Keying Speed	.,200 w.p.m.		
Impedance	600 ohms input	and output	
Input Level	+6 db max.		
Output Loval	4 db for max	input	-



A high stability radio frequency oscillator whose output frequency may be shifted in accordance with the variation of a pulse or audio signal for F.S. Transmission of teletype, telegraph, FM Telephone, facsimile or tele-printer.

Frequency Range	
Frequency Shift	Linear to 1000 CPS
Output Power	Adjustable to 2 w
Keying Speed	600 w.p.m.
Stability	$\ldots$ . Better than $\pm4$
	cps for 50° C.
	change in ambient

FREQUENCY SHIFT CONVERTER. 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 a 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 it the outstanding performer in its field.

		Output
	rrequency shiff.	1. Polar DC pulses. 60 ma in 1800 ohm ex- ternal load. One side grounded.
	set at 2975 cps.	2 Noutral DC subset to a trace i
CW-ICW input Keying Speed		3. May be operated into any impedance from 100 to 100,000 ohms.

**TONE KEYER.** A complete, compact, flexible and versatile tone keyer. Provided with a stable RC oscillator which generates standard tones of 425, 765, 1105, 1445, 1785 and 2125 cps. A balanced output stage provides for various types of keying of any one of the above tones or of an injected external tone.

Keying Input....1. Relay contacts. 2. Amplitude modula-ted (keyed) tone 300 to 10,000 cps. 3. DC pulses, positive or negative, polar or negative, polar or

neutral.

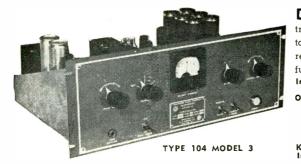
Input	2.	Audio—0 db. DC: ± 10 v. DC current pulses, ± 30 ma or 0 to 60
		m (1

Keying Speed ... 1000 w.p.m.

Output Impedance 600 ohms balanced H pad.



TYPE 103 MODEL 1
LINE AMPLIFIER. A general purpose line ampli- fier for communications work, featuring flat frequency
response, low noise and distortion. Input and Output Impedance 600 ohms balanced;
150 ohms unbalanced Input Level
Distortion Less than 1% at rated output level Noise Level
Frequency Response±1 db 100 to 10,000 cps. Transmission Gain



DEMODULATOR, Used in communication systems where intelligence is transmitted by means of amplitude modulated tones. It converts these tones to DC pulses and its output is capable of operating a tele-printer, tape recorder, or other DC operated device. Consists of a tone amplifier driving a full wave rectifier, operating into a pair of DC amplifiers.

Input Tone	Any single amplitude modulated tone (keyed) between 400
	and 10,000 cps.
	<ol> <li>DC pulses of 60 ma in 1800 ohm external load, one side grounded.</li> </ol>
	<ol> <li>DC pulses: of ± 30 ma in 1800 ohm external load, center grounded.</li> </ol>
	<ol><li>May be operated into any impedance from 100 to 100,000 ohms.</li></ol>
Keying Speed	Up to 600 w.p.m.
Input Level	20 to +30 VU.

June, 1949 --- MID-MONTH --- ELECTRONICS BUYERS' GUIDE

### Northern Radio Company

**FREQUENCY AND SHIFT MONITOR.** This equipment 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 (F.S.) signal, either when setting up for traffic or under normal keying conditions. The unit consists of a highly stable temperature controlled crystal oscillator with provision for selecting any one of eight crystals, a harmonic generator, a detector and an audio amplifier. The audio output trequency is read on an external audio frequency meter, Type 127 Model 1.

**LOW FREQUENCY SHIFT KEYER.** Designed to meet requirements of a simple, flexible, yet highly stable, Frequency Shift Keyer, to operate in the 50 to 500 Kc region. Low output frequencies are derived by first generating a basic 2 MC frequency from a 1.8 MC crystal oscillator, and a 200 KC reactance tube oscillator. The 2MC basic frequency is heterodyned with a frequency determining crystal oscillator in the range of 2050 to 2500 Kc to produce the output frequency of 50 to 500 KC. One feature is the absence of circuit tuning controls. Changing frequency requires simply changing the selector switch to the crystal for the desired frequency. All subsequent circuits are low pass and require no adjustment.



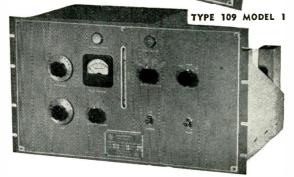
TYPE 108 MODEL 1

**MASTER CRYSTAL OSCILLATOR.** This unit replaces, with common crystal controlled signals, the high frequency and beat frequency oscillators of single or diversity receivers. Any one of four crystals may be selected in the high frequency oscillator, and either of two crystals in the IF oscillator. The high frequency oscillator is followed by a tuned buffer stage, and all RF outputs from the unit are on low impedance coaxial lines. A front panel control permits varying the output of the HF oscillator at least  $\pm 50$  cycles for alignment with the incoming signal.

**INTERMEDIATE FREQUENCY MONITOR** used with diversity reception to sample the Intermediate Frequency of each individual receiver. It is particularly useful in tuning each receiver accurately to CW, ICW or phone signals when no receiver BFO is used.

It consists of an IF oscillator which is heterodyned with the sample from the receiver to produce a beat tone. The beat is amplified to headphone level for monitoring purposes.





### DUAL DIVERSITY RECEIVER



TYPE 110 MODEL 2

Used for dual spaced diversity reception in high speed radio teleprinter, 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 crystal 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, Master Crystal 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 pages.





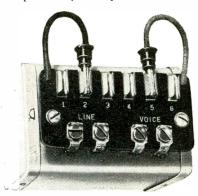


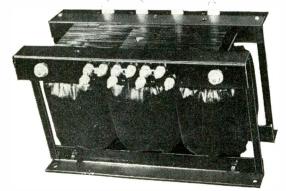
Above: Special DC power supply unit, input 115 volts 60 cycles—output 2500 volts filtered DC at 5 MA.

Right: A high quality speaker line auto transformer, used in multiple speaker installations to adjust volume and impedance for each individual speaker.

## TO MEET UNUSUAL

The manufacture of "tailor-made", oneof-a-kind transformers, and small runs of custom-made specialty units, are important features of NYT service. A staff of engineering and production experts will translate your most exacting specifications into the components you require.





The transformers illustrated show only three of the many which have been developed or manufactured by New York Transformer Company for special applications in radio, television and electronics. No matter how unusual your specifications, NYT will build transformers to Left: A three phase high voltage plate transformer, weighing over 300 pounds. Rectifier output is 11 KVA DC (7000 volts at 1.5 amps).

meet them! Special facilities also include the manufacture of hermetically sealed units to meet current JAN T-27 and other government specifications; and specially treated, lightweight, uncased units for airborne equipment.

Let us know about your specifications and development problems. NYT experts and engineers are at your service.



### This Mark of Quality



Identifies

Custom Made CATHODE-RAY PICTURE TUBES

> Featuring the new all-glass 16" tube

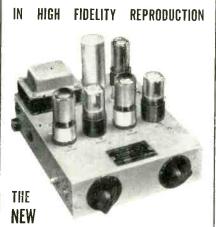
THOMAS ELECTRONICS, INC. 118 Ninth St., Passaic, N. J. Passaic 3-6359

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THE LAST LINK

## SOMERSET NOISE SUPPRESSOR PREAMPLIFIER

Also supplied in combination with a high quality power amplifier for custom and commercial installations.

The Somerset Noise Suppressor is the practical answer to noise and needle scratch. Natural brilliance, realism and essential overtones are reproduced at all volume levels with noise reduced to the vanishing point. No unnatural tonal qualities are introduced in the reproduction.

The Somerset unit can be used with most record players and FM or AM Tuners.

SPECIFICATIONS: POWER SUPPLY

115 volts, 50-60 cycles, A.C. FREQUENCY RANGE

40 to 15,000 c.p.s.

GAIN

.01 volts input produces .8 volts output to volume control of .25 to 1 megohm. INPUT SOURCES

magnetic or crystal pickups, and FM or AM detector output.

TUBE COMPLEMENT 2-6SL7GT, 1-6SK7GT, 1-6SJ7GT, 1-5Y3GT.

SIZE OF CHASSIS

7" x 9" x 2"

Installation and operation require no technical skill. Models with additional features for broadcast, recording and other professional uses are available.

This is the device which permits the most effective use of associated high fidelity equipment. Pickup-amplifier-speaker.





## **ROTARY SNAP SWITCHES** For every control and transfer purpose

No matter

- how intricate the circuit
- what switching sequence is desired
- what equipment is to be controlled

A suitable ESCO rotary snap switch is available, or can be built, to meet your requirements.

### TYPE JR

UL listed at 10 amperes, 125 volts a-c, 5 amperes, 125 volts d-c. The versatility of type JR rotary switches simplifies control of the most complex electrical and electronic circuits and apparatus. A single type JR switch can replace a number of conventional switches and often eliminates the need for relays. While serving diverse functions, type JR switches are uniform in appearance, methods of mounting, parts assembly, and operating principle.

- Features
- Compactness Less than 8 square inches of panel space, regardless of the number of poles (up to 80-pole).
- Ease of installation base or panel mounting; screw terminals take terminal lugs.
- Ease of Operation Molded phenolic handles afford firm grasp.

Unique ESCO detent mechanism establishes accurate positioning and positive contact.

### TYPE P

10, 30, 60, 100, 200 amperes; 250 volts d-c, 500 volts a-c.

Type P offers high current interrupting capacity with any number of poles, single, double, triple, or four-throw, and the general construction ad-vantages of the type JR. The snap "make" and "break" action of type P is driven by a powerful coiled spring mechanism. Rotor-contacts "float" on the shaft and are self-aligning with the knife blade fixed contacts.

The three standard mounting styles in which type P is available meet most installation requirements: style I, for flat surface mounting; style II for panel mounting, side connection; style III for panel mounting, with terminal studs providing back connection.

### FUSED ROTARY SWITCHES

For efficient utilization of panel space and easy accessibility, Type EL-1 Fuse Holder, provided in the 15-200 ampere ratings, consists of the base, extending behind the panel, and plug which contains the fuse and is screwed into it from the front. Incorporates neon-lamp fuse signal.

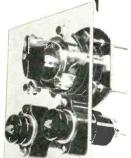


### **EXPLOSION-PROOF SWITCHES**

Explosion-proof cases are available for type P switch installation in hazardous locations. The switches are assembled in Crouse-Hinds cast-metal housings which are explosion-proof, vapor-tight, weatherproof, dust-tight. Standard conduit connections are provided.

Bulletins giving complete specification data and circuit information on ESCO switches are available on request.









## FIXED and VARIABLE HIGH VOLTAGE VACUUM CAPACITORS

### S P E C I F I C A T I O N S

1	1	sz		ā. I	1	DIMEN	SIONS		
	FIGURES	JENNINOERS TYPE NUMBERS	CAPACITIES	KV. PEAK TEST	PEAK	Overall Length	Maximum O.D.	Ferrule Diameter	
	18	VC	6, 12, 25, 50, 75, 100, 150	20-30	15-20	6 <sup>1</sup> / <sub>2</sub> "	$2\frac{1}{4}''$	13" 16	57 "
	8	VC	200, 250	20-30	15-20	61 "	$2\frac{11}{16}''$	13" 16	57 "
		W	6, 12, 25, 50, 100	20	15	$4\frac{3}{16}''$	$2\frac{1}{4}$ "	$\frac{11}{32}''$	378"
ê l	9	X	5, 10, 15, 20, 25	17	10	$3\frac{1}{4}''$	$1\frac{1}{4}''$	$\frac{11}{32}''$	27 "
VAC. FIXED NICKEL	(9	Y	1, 2, 3, 4, 5,	17	10	34″	7 #	$\frac{11}{32}''$	2 <sup>7</sup> / <sub>8</sub> "
¥ Z	6	Μ	500, 750, 1000	10-15	30	8 <u>3</u> ″	5″	2″	6 <sup>1</sup> / <sub>4</sub> "
-	6	ML	500, 750, 1000	20-30	30	91 "	<mark>5″</mark>	2″	71″
	6	MH	200 or less	35-50	30	81"	5″	2″	6 <u>7</u> ″
	1	K	50	35-50	15-20	81/2 "	3″	<u>3</u> ∦ 4	7 <sup>3</sup> / <sub>4</sub> "
2	/ 5	JC-1	25 or less	15-25	40	41/2"	13"	1 "	35"
	5	JC-2	25, 50, 100	15-25	60	34"	3 <u>1</u> ″	<u>51</u> "	3 <sup>1</sup> / <sub>8</sub> "
	3	JC-3	20, 40, 50, 60	35-50	200	81"	41"	2"	6 <sup>1</sup> / <sub>2</sub> "
VAC. FIXED COPPER	3	JC-4	100 or ·125	35-50	200	91″	5″	3 <sup>1</sup> / <sub>8</sub> "	7″
AC. FIXE COPPER	( 10	JCS	75, 100, 250	7.5-12	60	35 "	2 <sup>5</sup> / <sub>8</sub> "	55 # 64	3 <sup>1</sup> / <sub>8</sub> "
A A O	) 8	VCC	6, 12, 25, 50, 75, 100, 150	20-30	60	6 <sup>1</sup> / <sub>2</sub> "	$2\frac{1}{4}$ "	13″ 16″	57"
•	8	VCC	200, 250	20-30	60	6 <sup>1</sup> / <sub>2</sub> "	$2\frac{11}{16}$ "	13 " 16	57 "
	6	MC	500, 750, 1000	10-15	85	8 <sup>3</sup> / <sub>8</sub> "	5″	2″	6 <sup>1</sup> / <sub>4</sub> "
	6	MHC	200 or less	35-50	85	81/2	5″	2″	$6\frac{7}{16}$ "
1	17	Т	5-25	20	15	61 "	2 <u>1</u> ″	1/2	4 ″
	7	TR	2-8	17	15	6 <sup>1</sup> / <sub>2</sub> "	21 "	$\frac{11}{32}''$	4"
318,	4	AT	10-50	20-30	15	61 "	3"	1/1/2	$4\frac{3}{16}$ "
ARI.≜ KEL	2	U	50-250	10-15	30	$11\frac{7}{16}$ "	5″	2″	6 <sup>1</sup> / <sub>2</sub> "
VARIJ	) 2	UH	10-75, 75-150	35-50	30	$11\frac{7}{16}''$	5″	2″	6 <sup>1</sup> / <sub>2</sub> "
VAC. VARIABLÉ NICKEL	1 1	UX	40-560	10-15	30	14 "	5″	3 <sup>1</sup> / <sub>8</sub> "	778"
	1_1	UXH	25-150	35-50	30	$14\frac{1}{2}$ "	5″	3 <sup>1</sup> / <sub>8</sub> "	81/
	1 2	VM	50-1000	10-15	30	$14\frac{5}{16}$ "	7″	3 <sup>1</sup> / <sub>8</sub> "	7 3 "
7	(7	TC	5-25	20	30	64 "	21"	<u>1</u> "	4 "
щ	1	UXC	40-560	10-15	85	14"	5"	31 "	7 <sup>7</sup> / <sub>8</sub> "
IABI R	11	UCS	5-200, 10-300	5-10	60	8 <u>9</u> "	25 "	$2'' x \frac{55}{64}''$	4 9 "
C. VARIA COPPER	2	UC	50-250	35-50	85	$11\frac{7}{16}$ "	5″	2"	61''
VAC. VARIABLE COPPER	2	UHC	10-75, 75-150	35-50	85	$11\frac{7}{16}''$	5″	2″	6 <sup>1</sup> / <sub>2</sub> "
<b>^</b> ≯	1	UXHC	15-100	35-50	85	14″	5″	3 <sup>1</sup> / <sub>8</sub> "	778"
	( 1	UXHC	25-150	35-50	85	141"	5″	3 <sup>1</sup> / <sub>8</sub> "	81/
CUR	RENT	RATINGS	MAY BE INCREASED	BY FOR	CED CO	DLING – W		QUATE M	

JENNINGS RADIO MANUFACTURING COMPANY + 1098 E. WILLIAM ST. + SAN JOSE 12, CALIFORNIA



ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH



#### INSL-X CODE APPLICATION OVERALL VARNISH (Air Dry) P-27-45-54 E-28-0B-SA OVERALL LACQUER HOOKUP WIRE D-25x-54 WAX SOLUTION SN-15-OB-SA **OVERALL VARNISH** (Bake) U-95-0B WAX CONCENTRATE I-1-T LEATHER & FABRIC TREATMENT SN-3-T

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INSL-X fungicidal coatings effectively inhibit organic attack; prevent moisture infiltration. Years of research and improvement have made these products the finest available for protecting electronic equipment, wiring and components against the deteriorating effects of moisture, mildew and corrosion.

INSL-X coatings are available in many types, each of which offers the maximum protection for a specific group of requirements-impregnation, surface coating, high dielectric strength, low loss characteristics, etc. All of the coatings are easy to apply, biologically effective, non-toxic to humans and noncorrosive. Chemical and thermal stabilities are excellent and insure long term protection in every application. INSL-X fungicidal coatings meet rigid government specifications.

Write for complete specifications and application data on all INSL-X insulating coatings and compounds-fungicidal and regular; no obligation.

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MATERIALS SECTION

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### **Only \$975**

Never before a value like this 31/2 KW bombarder or high frequency induction heater . . . for saving time and money in surface hardening, brazing, soldering, annealing and many other heat treating operations, Is

> Portable . . . mounted on four rubber coasters. Width 141/2"; depth 27"; height 421/2"; weight 300#.

Operates from 220 volt line. Complete with foot switch and one heating coil made to customer's requirements. Send samples of work wanted. We will advise time cycle required for your particular job. Cost, complete, only \$975. Immediate delivery.

Scientific Electric Electronic Heaters are made in the following ranges of power: 1-2-3-5-71/2-10-121/2-15-18-25-40-60-80-100-250 KW.



Division of "S" CORRUGATED QUENCHED GAP CO. 105 - 119 Monroe St., Garfield, N. J.

### • FOO H - B U

### MASTER PUSH-BUTTON SWITCH MPB

Modern design calls for push-button switching . . . placing at your finger-tips incomparable ease and versatility of control . . . with accurate selection and ever-visible indication of each selected function. Model MPB switches offer many advantages to the manufacturer who desires the modern features of push-button switching. Furnished in from two to a maximum of twelve positions. Standard frames are: (1) locking, (2) non-locking, (3) release-lock, and (4) accumulative locking with single-button release. Pure silver contacts, phosphor bronze springs. Rating: 5 amps., 125 volts a-c (non-ind.).

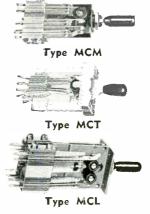


### CAM-LEVER SWITCHES

Compact lightweight switches designed for long life and troublefree service under heavy-duty requirements. Added features include shielding between contact sections, mounting provisions for single hole and standard mounting centers plus availability of all popular as well as special build-up variations.

Quotations will be given promptly on your switch problems. Common types are in stock for immediate shipment.

Type	Amps.	* Hish	I	Wide	Long†
мст	1	1-1/2	•	3/4"	2 21/32"
мсм	5	1-1/4	,	1-1/4"	2-25/32"
MCL	10	1-3,/41	,	1-3,18"	3-15/16*
* At 125 † Distance	volts, 60 c e from back	ycles, non-indu panel to end	ctive lo of termi	ad. nals.	
	Complete	Switch with	Four	SPDT Sec	tions
	Type			Net Price	e, 1-9
	MĈM			\$5.08	3
	MCL			7.0	3



### FOOTSWITCHES

Models to meet every need. Type MI has large, inclined treadle for foot operation. Type MC operates by pressure of finger, elbow, knee, or foot anywhere on its top plate. Ratings: motor load  $\frac{1}{3}$  H.P. at 115/230 volts a-c; lamp load 500 watts 115 volts a-c, or 100 watts 115 volts d-c; heater load 10 amps. 115 volts or 5 amps. 230 volts d-c; In cast iron cases: Model MI, 4" w. x  $6_4^3$ " l. x 3" h.; Model MC, 4" diam. x  $2_8^3$ " high.

Type Price	Type Price	Action	Contact Operation
MC-11 \$5.50	MI-21 \$8.80	Spring return, normally open	•
MC-12 \$5.50	MI-22 \$8,80	Spring return, normally closed	~
MC-13 \$6.00	MI-23 \$9,35	Spring return, ON double throw	
MC-14	MI-24 \$10.45	First	Pauls
MC-15	MI-25 \$11.00	First	
MC-16	MI-26 \$13.25	1st half-throw closes 1st contact 2nd half-throw closes 2nd contact Spring return	

### HEAVY DUTY ELECTRONIC TIMERS

Convenient and compact units for either full or semi-automatic control of industrial processes. Two or more timers control a number of individually timed operations in a predetermined sequence with either self-recycling or manual recycling. Handle 10 amps. at 125 volts, 60 cyces, on DPDT power control con-tacts. Five ranges: 0.06-.1.2,1/2-8, 3/4-15, 1.5-30, and 3-60 seconds. Plug-in capacitors give ready selection of timing range. Adaptable to use as photoelectric or sensitive relay in non-timing use. \$32.00 list.





Туре МС



GENERAL CONTROL COMPANY 1202 SOLDIERS FIELD ROAD **BOSTON 34. MASSACHUSETTS** 



161





AIRBORNE RECEIVING EQUIPMENT

**AN/FRN-8 LOW FREQUENCY OMNIDIRECTIONAL RADIO RANGE** SYSTEM DESIGNED AND DEVELOPED **BY RADIO RECEPTOR FOR U. S. AIR FORCE** 

0

MONITOR UNIT

**GROUND TRANSMITTER** 

Enables aircraft to navigate safely along any radial track to a ground station from distances up to 500 miles. The ground equipment is completely air transportable, permitting the expeditious setting up of a complete medium range navigation system when required.

A novel FM-AM system confines the navigational signal to a total r-f bandwidth of 60 c.p.s. permitting simultaneous voice broadcast on the same carrier. The airborne receiver employs push-button selected crystal control and has a navigational I-f bandwidth of only 150 c.p.s.

This entire project, from its original theoretical conception to final delivery to the U.S. Air Force, was undertaken by Radio Receptor. This includes preliminary research, development of the component equipments, production of a complete packaged station including transmitter, monitors, test equipment, antennas, and tuning units, production of air-borne receivers and finally actual installation of the complete working system at a U.S. A.F. base.

**Communications Division** 

Since 1922 in Radio and Electronics 84 NORTH 9TH STREET, BROOKLYN II, N.Y.



June, 1949 - MID-MONTH - ELECTRONICS BUYERS' GUIDE

## Seletron selenium rectifiers

FOR high efficiency and dependability specify SELETRON. Built on aluminum, these advanced type rectifiers are light in weight yet rugged in construction. Used within their ratings they will give you long, trouble-free performance.

Recommended by leading manufacturers and electrical engineers for their dependability and economy under all service conditions.

## Engineered for HIGH EFFICIENCY AND DEPENDABILITY

		.15 Amps. D. C.		Amps. D. C		.30 Amps. D.C.		.45 Amps. D.C.		.60 Amps, D.C.	
Approx.D.C. Max, A.C.											
Volts	Input	Code No.	Length	Code No.	Length	Code No.	Length	Code No.	Length	Code No.	Length
19 38 57 76 95	24 48 72 96 120	M1B1S1B M2B1S1B M3B1S1B M4B1S1B M5B1S1B	17/16 25% 215/16 33/16 33/15	M1B1S1B WM2B1S1B WM3B1S1B WM4B1S1B WM4B1S1B WM5B1S1B	17/16 29/16 338 43/16 5	P1B1S1B P2B1S1B P3B1S1B P4B1S1B P5B1S1B	1%16 25/16 3 35%8 45/16	P1B1S1B WP2B1S1B WP3B1S1B WP4B1S1B WP5B1S1B	1% 97/8 37/8 47/8 57/8	Q1B1S1B Q2B1S1B Q3B1S1B Q4B1S1B Q5B1S1B	1 2 <sup>5</sup> /16 3 3 <sup>5</sup> /8 4 <sup>5</sup> /16

BUILT ON ALUMINUM

		.90 Amps. D.C.		1.2 Amps. D.C.		1.6 Amps	1.6 Amps. D.C.		5. D.C.	3.1 Amps. D.C.	
Annua D.C.						× 2 <sup>1</sup> / <sub>2</sub>		338 K - HENGTH BELOW K-		ХО 3 3 26 №	
Approx.D.C. Volts 19 38 57 76 95	Max A.C. Input 24 48 72 96 120	Code No. Q1B1S1B WQ2B1S1B WQ3B1S1B WQ4B1S1B WQ5B1S1B	Length 1%16 27/8 37/8 47/8 57/8	Code No. D1B1S1B D2B1S1B D3B1S1B D4B1S1B D5B1S1B	Length 25/8 3 <sup>13</sup> /16 5 6 <sup>3</sup> /16 7 <sup>3</sup> /8	Code No. D1B1S1B WD2B1S1B WD3B1S1B WD4B1S1B WD4B1S1B WD5B1S1B	Length 25% 4 <sup>11</sup> / <sub>16</sub> 6 <sup>7</sup> / <sub>16</sub> 8 <sup>1</sup> / <sub>8</sub> 9 <sup>13</sup> / <sub>16</sub>	Code No. E1B1S1B E2B1S1B E3B1S1B E4B1S1B E5B1S1B	Length 25/8 3 <sup>13</sup> / <sub>16</sub> 5 6 <sup>3</sup> / <sub>16</sub> 7 <sup>3</sup> / <sub>8</sub>	Code No. E1B1S1B WE2B1S1B WE3B1S1B WE4B1S1B WE4B1S1B WE5B1S1B	Length 25/8 4 <sup>11</sup> / <sub>16</sub> 6 <sup>7</sup> / <sub>18</sub> 8 <sup>1</sup> /8 9 <sup>13</sup> / <sub>16</sub>

		4.0 Amp	os. D.C.	5.2 Amps. D.C.		6.0 Amps. D.C.		7.5 Amps. D.C.		8.0 Amps. D.C.	
		0 4	ENGTH BELOW								
Approx.D.C. Volts	Max A.C. Input	Code No.	Length	Code No.	Length	Code No.	Length	Code No.	Length	Code No.	Length
18 37 56 75 93	24 48 72 96 120	F1B1S1B F2B1S1B F3B1S1B F4B1S1B F5B1S1B	25/8 3 <sup>13</sup> /16 5 6 <sup>3</sup> /16 7 <sup>3</sup> /8	F1B1S1B WF2B1S1B WF3B1S1B WF4B1S1B WF5B1S1B	$\begin{array}{c} 2^{5/\!\!/_8} \\ 4^{11/\!\!/_{16}} \\ 6^{7/\!\!/_{16}} \\ 8^{1/\!\!/_8} \\ 9^{13/\!\!/_{16}} \end{array}$	G1B1S1B G2B1S1B G3B1S1B G4B1S1B G5B1S1B	$\begin{array}{c} 3\\ 4^{11}\!/_{16}\\ 6^{7}\!/_{16}\\ 8^{1}\!/_{8}\\ 9^{13}\!/_{16} \end{array}$	G1B1S1B WG2B1S1B WG3B1S1B WG4B1S1B WG5B1S1B	3 55/8 7 <sup>13/16</sup> 10 <sup>1</sup> /16 12 <sup>1</sup> /4	H1B1S1B H2B1S1B H3B1S1B H4B1S1B H5B1S1B	3 4 <sup>11</sup> /16 6 <sup>7</sup> /16 8 <sup>1</sup> /8 9 <sup>13</sup> /16

		10 Amps. D.C.				
Approx.D.C.	Max, A.C.		AC + AC -			
Volts	Input	Code No.	Length			
18	24	H1B1S1B	3			
37 56	48	WH2B1S1B	55/8 7 <sup>13</sup> /16			
56	72	WH3B1S1B	713/16			
75 93	96	WH4B1S1B	101/16			
0.2	120	WH5B1S1B	191/			

Above are listed full wave bridge rectiflers. Ratings are for continuous duty, resistive inductive load, in an ambient temperature of 35° C.

Note: For higher voltages and currents other combinations are available. The tabulation above is only a partial list. Send specifications for other designs, Address Dept. BG-9



### Specify SELETRON MINIATURE SELENIUM RECTIFIERS For RADIO AND TELEVISION APPLICATIONS The complete family of miniature Seletron Selenium Rectifiers is designed for use on a nominal 115 A-C line, to provide direct current for radios, television sets, amplifiers, and other low power applications. Instant starting, small size, long life and simplicity of installation are a few of many features of the Seletron Family.

Code Number	1M1	5M4	5M1	5P1	5R1	5Q1	5S1	
Current Rating	100 MA	75 MA	100 MA	150 MA	200 MA	250 MA	500 MA	
Plate Height Plate Width	1″ 1″	1″ 1″	1″ 1″	$1\frac{3}{16}'' \\ 1\frac{3}{16}''$	$\frac{11/2''}{11/4''}$	$\frac{1}{2''}$ $\frac{1}{2''}$	2″ 2″	ź



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## Phil-trol RELAYS





**TYPE 4QA** Midget, efficient, economical relay for fast operation.



ACTUATORS Phillips has a complete line of actuators and

contactors

### for electronic control

Phillips offers a complete selection of relays particularly suited for applications in the electronic field. Phil-trol Relays are engineered to the highest standards for quality, dependability and long life.

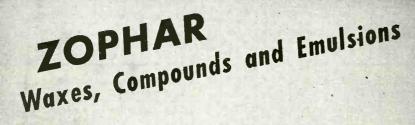
All Phil-trol Relays have "built-in" features which permit versatility in application. Units can be adapted as engineered parts to meet exact requirements.

Send for Catalog Phil-trol Relay Catalog gives full information on the complete line.



PRODUCTS

PHILLIPS CONTROL CORPORATION 84 W. JEFFERSON ST., JOLIET, ILL. Representatives in Principal Cities





Materials for potting, dipping or impregnating all types of radio components or all kinds of electrical units. • Tropicalized fungus proofing waxes. • Waterproofing finishes for wire jackets. • Rubber finishes. • Inquiries and problems invited by our engineering and development laboratories.

Zophar Mills, Inc. has been known for its dependable service and uniformity of product since 1846.





For photographic recording of d.c. or a.c. currents with "flat" frequency response to as high as 2500 cycles per second. Available in a wide range of natural frequencies, all having high factors of sensitivity and dynamic balance. Their tubular hermetically sealed construction insures long-lived dependability and ruggedness. Magnetic assemblies are constructed for 2, 4, 8, 12 and 14 element mounting.

Century also offers a complete repair service on all types and makes of oscillograph galvanometers. Recent expansion of facilities makes possible immediate service.

Manufactured under Century Pat. 2439576, also licensed by Kannestine Laboratories Patent 2149442.



World's Largest Manufacturer of Geophysical and Special Galvanometers



### TEST CHAMBERS TO SIMULATE TEMPERATURE • ALTITUDE HUMIDITY •

Designed by Bowser, Inc., to meet the most rigid reauirements for testing electronic components or equipment in relation to temperature, humidity or altitude. Used widely by government and industry in laboratories for research and development work and on the production line.

### BOWSER LABORATORY UNITS-L-Series

These Units are designed so that industry may perform its testing and processing simply, accurately, and in a minimum of time. Electronic equipment or components which are to be subjected to severe weather conditions can be proved in a Bowser Laboratory Unit. The temperature ranges  $(+180^{\circ}F. to -100^{\circ}F)$  cover every conceivable application from Tropic heat to Arctic cold and from sea level to 75,000 ft. above the earth. These temperatures are controlled to within  $\pm 2^\circ$ F. within the range. The range of Relative Humidity simulation (from 20% to 95%, see table) is equivalent to practically any condition, and the Vacuum simulation easily meets all present day needs for this type of equipment.

MODEL NO.	H W D	LOW TEMP. POINT F.	PULL DOWN FROM AMB. MIN.	DISSIPATION AT LOW OPERATING POINT AT SEA LEVEL	MASS LOAD OF STEEL	8 POST, 4 THERMOCOUPLE TERMINAL PAD	CUT OUT AND REMOVABLE INSULATION BATT
L1–50 VH L1–76 VH L1–100 VH	12" 12" 12" (1 cu. ft.)	50°F. 76°F. 100°F.	70 105 170	100 watts 100 watts 50 watts	25# 25# 25# 25#	Available in all 3 L1 Units installed on left side wall, only if " cut out " not required	Available in all 3 L1 Units, installed on left side wall, only if Ter- minal Pad is not
L5-50 VH L5-76 VH L5-100 VH	18″ 30″ 15½″ (5 cu. ft.)	50°F. 76°F. 100°F.	70 110 200	200 watts 200 watts 100 watts	50∦ 50∦ 50₽	Installed in left side wall	required Installed in left side wall
L8-50 VH L8-76 VH L8-100 VH	24" 24" 24" (8 cu. ft.)	−50°F. −76°F. −100°F.	70 110 200	200 watts 200 watts 100 watts	50# 50⊭ 50∦	Installed in left side wall	Installed in left side wall
L18-50 VH L18-76 VH L18-100 VH	30″ 30″ 36″ (18 cu. ft.)	50°F. 76°F. 100°F.	70 110 210	200 watts 200 watts 100 watts	25# 25# 25#	Installed in left side wall	Installed in left side wall
L27-50 VH L27-76 VH L27-100 VH	36" 36" 36" (27 cu. ft.)	50°F. 76°F. 100°F.	75 110 210	200 watts 200 watts 100 watts	100 <i>†</i> 100 <i>†</i> 100 <i>†</i>	Installed in left side wall	Installed in teft side wall

### THE FOLLOWING SPECIFICATIONS ARE STANDARD FOR ALL MODELS:

- Rehcat time from ambient to +180°F. is 70 minutes.
   Thermocouple Type Indicating Controller; installed in instru-ment panel to right of free-working space. Range: -150° F. to +200°F.
   Altitude Simulation Equipment: Laboratory Type, Oil Sealed Vacuum Pump and Hand Op-erated Climb Neutral Dive Valve.
- Valve. 4. Current (for control): 110 volt,



requirements do not call for conditions of high 115 altitude or relative humidity, the Industrial "low temperature" Unit is available. A typical application might be the expansion fitting of bushings.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

60 cycle, single phase. (for nower): 220 volt,

- 60 cycle, single phase. (for power): 220 volt, 60 cycle, three phase.
  5. Average Climb Rate: 3,000 feet per minute to 50,000 feet.
  6. Maximum Vacuum: 1" mercury obsolute.
  7. Vacuum Gauge: 4½" Dial Type, 0' to 80,000'.
  8. ¾" 1.D. Low Pressure Pipe: 50 psi. installed in left side wall.
  9. Special instrumentation can be supplied at customer's request.

CONSTRUCTION

CONSTRUCTION Cabinet mounted on rigid steel base of welded channel irons to prevent warpage or distortion. Refrigeration equipment and vacuum pump, etc., mounted on separate inner frame to minimize vibration. Work being tested checked during processing through in-spection window mounted in door of chamber. Interior illuminated by means of a light mounted on door outside the chamber. Instrument panel is also supplied with a light mounted over it.

### ALTITUDE-VACUUM UNITS

For the user whose products or testing requirements are not affected by temperature or humidity, but who is primarily interested in noting the effect of varying atmospheric pressures, the specially engineered Altitude Chamber is offered.

### OTHER BOWSER UNITS

Some of the many Bowser units are shown and briefly described on this page. They have a wide scope of application throughout industry. Complete details regarding any of them are available upon request.



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2. Internal Terminal Pad

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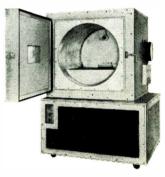
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- 3. Cam Latch
- 4. Access Port
- 5. Inspection Window
- 6. Air Mover
- 7. Hand Regulating Water PavinV
- 8. Instrument Panel Light
- 9. Indicating Potentiometer, Controller (Wet and Dry Bulb)
- 10. Altitude Gauge
- 11. Control Panel
- 12. Climb-Dive Valve
- 13. Manometer Connection
- 14. Condensing Unit Compartment

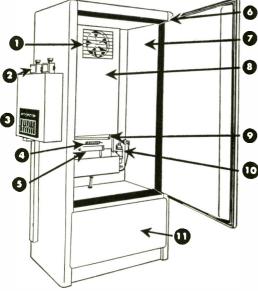


### UTILITY UNITS

Designed for rapid, dependable production testing and processing. It is also capable of being used for limited amounts of research and development work. Adaptable to a wide range of applications from production processing of radio crystals to testing of cameras and camera lenses. Provided with temperature control from +158°F. to -80°F. with a tolerance of control of  $\pm 3^{\circ}$ F. over the range. Relative Humidity simulation can be supplied within the limits of the range as shown in table on next page.



### BOWSER RELATIVE HUMIDITY UNITS-H Series



Bowser Relative Humidity Units provide Relative Humidity simulation controllable over a wide range, more than fulfilling present and future requirements of Industry and Research. They will automatically maintain humidity conditions from 20% to 95% from  $+35^{\circ}$ F. to  $+175^{\circ}$ F. (dry bulb). See chart below for limitations. Designed to produce almost all conditions of Relative Humidity to be found anywhere on the globe where temperatures are above freezing. These conditions can be controlled to the close tolerance required for research and industrial testing.

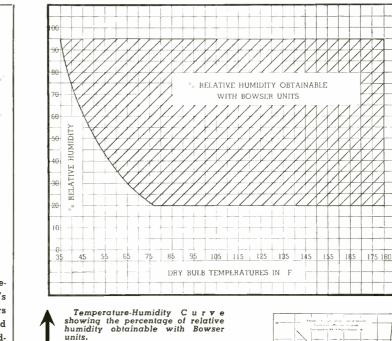
	MODEL		TERIOR					NO. OF	CONTROL	
	NO.	W	D	н	W	D	н	DOORS	INSTRUMENT	INTERIOR
0	H-10R	22″	16″	46″	37″	24"	68'	1	Bulb Type Non- Indicating Controller	Stainless Steel
	H-20R	3834"	221⁄4"	<b>47</b> ½*	45″	<b>31</b> 5 8 <b>"</b>	69"	2	Bulb Type Non- Indicating Controller	Stainless Steel
	H-30R	4434°	<b>25</b> <sup>1</sup> ⁄ <sub>4</sub> "	48"	51°	35"	72″	2	Bulb Type Non- Indicating Controller	Stainless Steel

The following specifications are standard for all models:
1. Current: 110 volt, 60 cycle, single phase.
2. Wet bulb and humidity reservoir water level automatically maintained by float valve.
3. Air circulation provided by means of air/movers within test space.
4. Special instrumentation can be supplied at customer's request.

- 1. AIR MOVER 2. NON INDICATING BULB TYPE CON-
- TROLLERS
- 3. CONTROL PANEL
- 4. WET BULB WICK



- 7. STAINLESS STEEL INTERIOR & EX-TERIOR
- 8. HUMIDIFYING EQUIPMENT 9. DRY BULB
- 10. AUTOMATIC FLOAT VALVE
- 11. CONDENSING UNIT COMPARTMENT



A chart of Altitude-Pressure-Tem-perature Curves showing Altitude in relation to Vacuum Gauge and Ab-solute Pressure in terms of inches solute of me mercury.

### FOR COMPLETE DATA:

Send for informative booklet, "Bowser Temperature Altitude and Humidity Simulating Units". Contains complete specifications on all standard Bowser Instruments.



BOWSER, INC. REFRIGERATION DIVISION - 420 LEXINGTON AVE., N.Y.C. IN CANADA, S. F. BOWSER CO., LTD., 344 SHERMAN AVE., HAMILTON, ONTARIO

### BOWSER SPECIAL ENGINEERING



200°F. Unit capable of attaining vasily lower temperatures than ever before presented commercially in Industrial Refrigeration without the use of liquid gases.

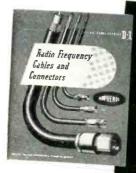
Achievements obtained through many years of research are now available to you through Bowser's Special Engineering Service Program, This service offers you the results of the engineering functions performed in conjunction with the standard line of Bowser products. They include • Special programming of temperature cycles • High frequency, high voltage and/or high amperage insulators • Special control of the moisture content of the air, within test space • Automatic vacuum control with varying tolerances • Amphenol type coaxial cables installed in standard units of the 'L," "U" and "H" series • Extra visibility of equipment to be tested • hand holes for manipulation, and many others. Write for complete description.

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A N° CONNECTORS in annual and annual tectronic tourneter

The Section A-1 Catalog – a comprehensive listing of technical data for Amphenol "AN" and "97" Connectors, listed numerically by insert number and cross referenced to show the standard shells and special con-





The Section D-1 Catalog – a complete classification of Amphenol's Radio Frequency Cables and Connectors. Engineering details are clearly presented for utmost convenience. Various modifications not shown can be supplied on special order.

## COMPONENT PARTS for the RADIO and ELECTRONICS INDUSTRY

Amphenol produces component parts for use in many divisions of the radio-electronic industry. Therefore, in order to provide a convenient, comprehensive listing according to product adaptability and usage, the cataloging is in four sections. A fully descriptive presentation of Amphenol products is offered in these four catalogs.

Request the catalogs you require



TOHENOL .....

The Section G-1 Catalog – Amphenol's plastic products, covering the complete range of plastics; polystyrene, polyethylene, acrylic, acetate, vinylite, and so on. Constantly expanding, Amphenol's field of potential plastic products is unlimited.

> The Section 73 Catalog – a general catalog containing a greatly condensed listing of products in the other Amphenol catalogs. It also includes a complete listing of radio sockets and connectors and Amphenol antennas for TV, FM and amateur use.

> > "Amphenol Engineering News" is a monthly bulletin sent to engineers, technicians, purchasing agents and production men. To keep posted on latest developments in electronics, request that your name be added to our mailing list.

### AMERICAN PHENOLIC CORPORATION 1830 SO: 54TH AVENUE CHICAGO 50, ILLINOIS

### ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

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## **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-913 D-C AMPLIFIER

Designed for use with Brush Magnetic Direct Inking Oscillograph, also used to make re-cordings of many types of phenomena heretofore measured only with the aid of complicated interme-diate equipment. Studies of static or dynamic conditions, such as strains, dis-placement, pressures, light intensities, tem-peratures, d-c and a-c peratures, d-c and a-c

with the BL-913 Amplifier. Voltage gain is sufficient to give 1 chart mm deflection per mv input. Novel design features combined with both plate and heater voltage regulation reduce effects of power line fluctu-ation. Zero signal drift amounts to not more than 1 chart mm per hr. Frequency response essentially uniform from d-c to 100 cycles per sec. Control panel located at front contains a factor of 10 attenuator, gain control, calibrating meter and controls for determining input voltages. Balancing potentiometer provided for electrically biasing oscillograph Balancing potentiometer provided for electrically biasing oscillograph pen to any position on the chart.

Frequency response. DC to 100 cps Sensitivity.....1 chart mm/mw Stability....1 chart mm pen drift or less per hr. Voltage gain...1000 times (Ap-prox.) Power requirements..105 to 125 v 60 cycles 125 w

Input Impedance..10 meg Input voltage range...001 to 200 v Dimensions..1714" long x 11" wide x 714" high Net Wgt..33 lbs. Shipping wgt..37 lbs. Balancing control..Helipot (10 rev-olutions)

### BL-309 AMPLIFIER—DIRECT RECORDING DISPLACEMENT



Used with Brush Magnetic Direct Inking Oscillograph and BL-306 Pickup Head, measures small displacements within the range of .000010 in. to .015 in. Utilizing a car-rier type displace-ment sensitive pick-

GAGE

ment sensitive pick-up, produces imme-diate records of ab-solute values. The d'rect recording displacement gage useful for many industrial and research problems, such as measurement of pressures, forces, vibra-tions and other phenomena which involve a displacement or a change in dimensions. Well suited to checking eccentricity of shafts or the contour of cams or other irregularly shaped sections by comparison with a master. The output of the amplifier consists of 3 stages, direct coupled, designed to match characteristics of direct inking Oscillo-graph. This section may be used as a general purpose, low gain d-amplifier with gain and centering controls provided. Range of measurable displace.

Range of measurable displace-ment..10 to 10,000 microinches Pickup Energizing Frequency..100 \_KC

Frequency response (when used with Brush Direct Inking Oscil-lograph. Essentially uniform d-c to 100 cps.

Output impedance..50 ohms (not to be loaded with less than 150

ohms) Feeler Arm travel...015 in.

Feeler Arm force...Adjustable, min. approx. 1 oz. Amplifier Dimensions...171/4" L 11" W 71/2" H Power required..135 w at 100 to 125 v. 60 cps Weight..30 lbs. Tubes required..2—617, 1—6C5, 1—6H6, 1—6SN7GT, 2—6V6, 1— 5U4, 2—VR150, 1—VR105, 1— VR75

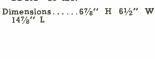
### BL-202 **DOUBLE CHANNEL** MAGNETIC OSCILLOGRAPH



Chart paper. .BL-202—3 15/16" W BL-201—2%" W 5mm. longitudi-nal divisions 1 mm. transverse divisions

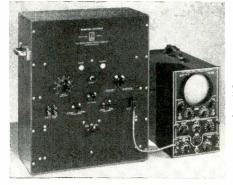
Paper speeds...5, 25 and 125 mm./sec.

Chart Drive Motor. 105-125 v, 50 to 60 cycles, 40 w, synchronous



Net wgts..BL-201-20 lbs. BL-202-25 lbs.

Shipping wgts. BL-201-23 lbs. BL-202-28 lbs.



impulses recorded and reproduced automati-cally. Such transients as vibrations, explo-sion waves, light flashes, welding cy-flashes, welding cy-flashes,

Frequency Range...1 to 1000 cps; down 13 db at 2000 cps

Carrier Frequency. 10,000 cps Rec. Time with 33" Tape...1 sec. 66" Tape...2 sec. Sig. to Noise Ratio...45 db

Percentage Distortion..Less than 4%

Input Signal Range for Full Mod-ulation... 1 v peak (min.) 250 v peak (max.)

### BL-502 TRANSIENT RECORDER

Designed to record and graphically rep-resent varied trans-ient phenomena of  $\frac{2}{10}$  sec. or less. 2/10 sec. or less. Transient phenomena capable of being con-verted into electrical impulses recorded and

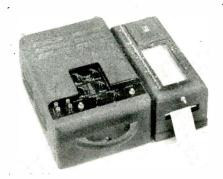
Input Impedance. 100,000 ohms Output Impedance. 20,000 ohms Output Impedance. 20,000 oh: Trigger Circuit. Internal or Trigger ternal Ex.

Power Requirements...175 w 105-125 v, 60 cycles

Dimensions. 231/2" x 10" x 193/8" Net Wgt. 85 lbs.

Shipping Wqt., 165 lbs.





### **BL-310 STRAIN** ANALYZER DIRECT RECORDING

DIRECT RECORDING When used with Brush Magnetic Direct Inking Oscillograph, is a complete pack-age unit for measure-ment of strains. Sim-ply operated, produc-ing records which are immediately avail-able and easily inter-preted. Records either

immediately avail-able and easily inter-preted. Records either static or dynamic merework. Third ad he read from the calibrated for individual gages, so that strain can be read directly in microinches per inch from the chart deflection. Can be used for record pressures, temperatures, accelerations, forces, etc., provided the equip-ment is calibrated in terms of the particular pickup used. The output consists of 3 stage, direct coupled, designed to match characteristics of direct inking oscillograph. This section may be used as general pur-pose, low gain d-c amplifier with gain and centering controls provided. May be adapted for use with Esterline-Angus or other similar graphic recorders.

recorders. Recommended gages...120 ohms (higher resistance gages may be used) Range of measurable strain..l0 to 40,000 microinches/inch (with one active gage) Frequency response (when used with Brush Direct Inking Oscil-lograph)..d-c to 120 cps Bridge Energizing Frequency ... 2000 cps

### **BL-902 MAGNETIC PENMOTOR:**

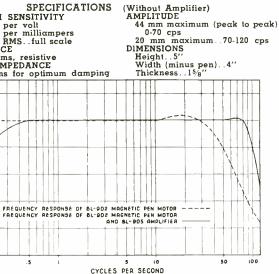
High speed direct-writing ele-ment for use where instantane-ous record is needed. Highly stable and accurate. Flat fre-quency response and linear stable and accurate. Flat fre-quency response and linear phase shift with frequency per-mit accurate reproduction of both transient phenomena and steady state signals. Construc-tion permits use under vitually any temperature or climatic con-ditions. Available as a separate unit. It is well adapted for use in field of electrocardiography, geophysical and seismic record-ing, any special laboratory measurements of every descrip-tion. tion.

MINIMUM SENSITIVITY 1.1 mm per volt 1.6 mm per milliampers 16 volts RMS. full scale IMPEDANCE 1500 ohms, resistive DRIVER IMPEDANCE

COMPANY

250 ohms for optimum damping щW × PEAK 5 PERK DEFLECTION FREQUENCY RESPONSE OF BL-902 MAGNETIC PEN MOTOR FREQUENCY RESPONSE OF BL-902 MAGNETIC PEN MOTOR AND BL-905 AMPLIFIER 50





### **BL-206 SIX-CHANNEL** MAGNETIC OSCILLOGRAPH

Consists of 6 magnetic penmotors mounted in a line, recording on 12" wide chart paper. Dust-proof case. Chart paper may be torn off, or re-rolled as desired. Paper speeds from 0.1" to 5"/sec. Built in gear changer provides instan-taneous shift from high to low speed. The 6-channel oscillograph provides ex-cellent recording medium for multi-ple strain gauge recording, vibra-tion analysis, wind tunnel work, etc. Either D.C. or A.C. circuits may be measured. Assures uniform fre-quency response and linear phase shift with frequency. Furnished with or without BL-905 amplifiers. quency response and linear phase shift with frequency. Furnished with or without BL-905 amplifiers. When equipped with amplifiers, a junction box is supplied, providing a convenient method for making necessary connections. (Designated as Model BL-216)

Dimensions.. 201/4" High 173/8" Wide



For exploration, and instantaneous charting of surface finishes-metals, For exploration, and instantaneous charting of surface finishes—metals, glass, plastics, paper, plated and painted surfaces from less than 1 to 5000 microinches. Complete with PA-2 Pickup Arm, Drive Head, Amplifier, Magnetic Oscillograph, Surface Plate, Carrying Cases, Glass Calibration Standard, 2V-Blocks, 6 rolls Chart paper, one 2 oz. boille Red ink, connecting cords and operating instructions. BRUSH "RMS" WETER: "average reading" type calibrated in terms of the "RMS" value of an equivalent sine wave. Provides constant visual check of "RMS" surface roughness where "hill and dale" chart profiles are not needed. Convenient to read because of a large illuminated dial. The "RMS" Meter may be purchased separately or with the Surface Analyzer. Analyzer.

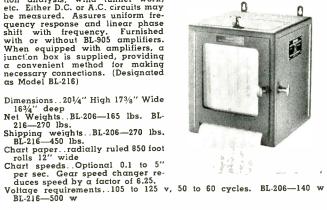
### SPECIFICATIONS

SPECIFICATIONS ROUGHNESS RANGE—1/2 to 125 microinches (may be extended) POWER REQUIREMENTS—105 watts, 105-125 volts, 50-60 cycles DRIVE HEAD—Model DA-2 STROKE—1/16" reciprocal .0125" per second Complete Cycle—10 seconds Height Adjustment—7 inches PICKUP—Model PA-2 Roughness Range—1/2 to 125 microinches "RMS" Exploring Stylus—Diamond, .0005" tip radius Minimum Bore—250" dia. x 750" depth Maximum Penetration—4" for dia. 1.125" or greater CALIPRENTIC CMULTIPE

- Maximum Penetration—4" for dia. 1.125" or greater CALIBRATING AMPLIFIER Maximum Voltage Gain—2000 times Input Voltage Range—001 to 300 volts Maximum Output Voltage—22 volts peak Input Impedance—10 megohms MAGNETIC OSCILLOGRAPH—Model BL-201 Frequency Response—1/4 to 120 cps with BL-905 amplifier Chart Speeds—5, 25, 125 mm. per second Chart Drive—Synchronous Motor MODEL BL-106 "RMS" METER Scales—3 and 10 microinch Frequency Range—1/4 to 120 cps Circuit—Rectifier type meter reads true "RMS" value of a Sinusoidal input signal.

- - "RMS" value of a Sinusoidal input signal.
- 3405 Perkins Avenue Cleveland 14, Ohio, U.S.A.





## Easy on the Ears...

### **TELEX** MONOSET\* – Under Chin Headset

Stethoscope design of the Telex Monoset eliminates tiresome pressure-instrument swings lightly under the chin. Wear it for hours without fatigue!

Telex Monoset sends signal directly into both ears, blocking out background noise. Built of durable Tenite, the Monoset is excellent for communications, office dictation equipment, aircraft radio, wired sound installations, dental offices and beauty shops. Choice of five-foot cords: standard, or with built-in volume control.





### **TELEX** TWINSET\*-Nothing Need Touch Ears!

Here's the lightest twin-receiver headset made-Telex Twinset weighs only 1.6 oz! In-phase receivers assure excellent sensitivity and full-range high fidelity, nonresonating sound reproduction . . . eliminate listening fatigue. Adjustable, self-locking sound arm may fit into the ear, or may be moved a fraction of an inch away, so that nothing touches the ear.

Telex Twinset adjusts simply to any shape head, without pinching or pressure. So flexible it may be coiled up and slipped into the pocket! Perfect for any headset need-amateur, experimental, commercial. Special cord with built-in volume control available.

### **TELEX** Earset\* — Slips onto the Ear

Unlimited earphone applications are possible with the new Telex Earset. Weighing only  $\frac{1}{2}$  oz., this entirely new conception in earphone design finds a ready welcome among stenographers, technicians-all who use single-phone headsets.

Earset's flat plastic frame slips onto the ear, holds the sensitive receiver securely in place. User's other ear is always free for phone calls or conversation. Telex Earset won't fall or slide off-fits either right or left ear, may be worn by anyone without special adaptation.

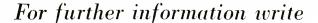




### **TELEX** PILLOW SPEAKER ---For private radio listening

Solves the problem of radio listening without disturbing others-in hospitals, hotels, trains, buses, institutions. Telex Pillow Speaker tucks away beneath pillow, headrest or cushion-makes possible perfect individual reception!

Palm-sized, weighs only 1.1 ounces, yet virtually unbreakable. Easily sterilized in alcohol. Entire assembly completely shock-proof. Detachable flexible cord. \*Trademark





DEPT. P-6, MINNEAPOLIS, MINNESOTA



-MICO-

A further adaptation of the already proven model 252 Mico Engraver, Permits accurate engraving on metal or plastic panels up to 19 inches wide and of unlimited length. Maximum height of work above table, 19 i Micrometer spindle and four reduction are standard equipment. 19 inches ratios

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# THE BRADLEY LINE

## SELENIUM RECTIFIERS



### HIGH CURRENT USES SE11X-Series

Bradley's exclusive Vacuum-Processed Selenium Rectifiers provide good efficiency and stability at D.C. ratings up to 18 volts per plate. Square plates afford a maximum ratio of rating to space factor. Forced cooling gives higher current per plate. Plate size up to 5" x 6". Rated up to thousands of amperes. Consult Bradley engineers for best rectifier for your need.



### MEDIUM POWER USES SEll-Series

Rated from 50 ma up, these Bradley exclusive Vacuum-Processed rectifiers are available in half-wave, full-wave bridge, voltage multiplier, center-tap full-wave, polyphase and special connections. Aluminum plates, improved assembly hardware afford best thermal characteristics and economy in size and weight. Hermetically-sealed or protectively coated. HIGH VOLTAGE USES

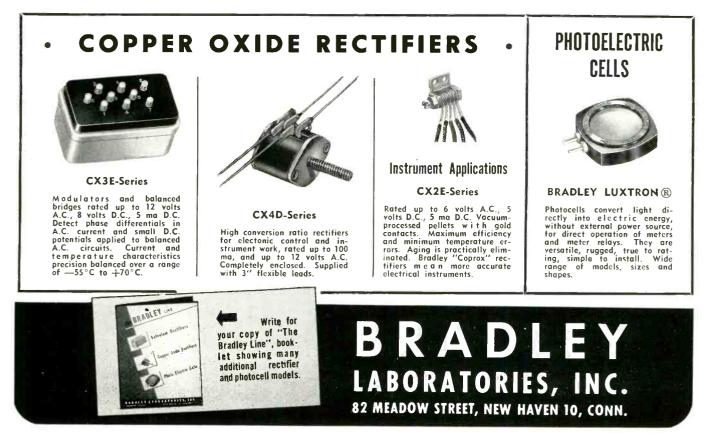


SEBL-Series Rated at 1.5 ma, half-wave, this rectifier has a 1/4" diameter housing available in lengths up to 3". Tinned pigtail contacts.



SE6M-Series

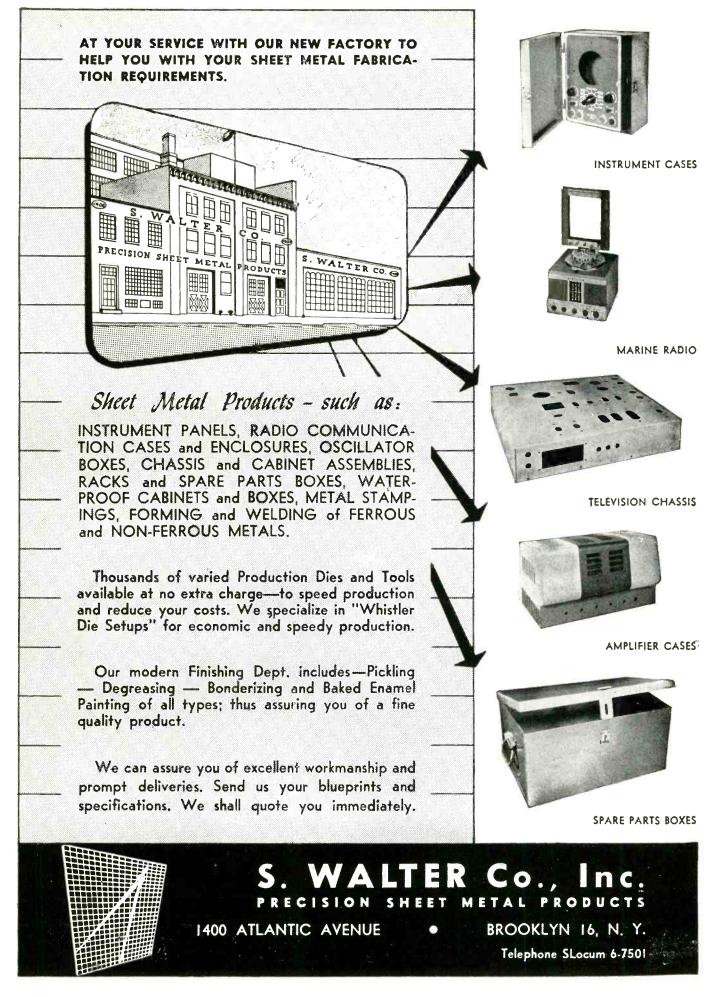
For high voltage electronic applications, these rectifiers are rated up to 70 volts peak inverse per plate. Current rating up to 10 ma D.C. Hermetically-sealed in  $\frac{1}{2}$ " diameter glass tubes.



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## STANDARD TRANSFORMER CASES AND COMPONENTS

Olympic manufactures a complete range of standard transformer cases and components, available from stock in sizes specifically designed for standard size cores.

> Cases can be furnished with pierced holes if required, or with a special Olympic snap lock feature which speeds assembly and increases production. Cases conform to current JAN T-27 specifications for dimensions.

Transformer cases and covers in standard sizes or to meet your specifications—core bands — mounted covers — deep drawn flanged covers—mounting brackets—channels—reinforcing feet—covers with pierced, rolled or amphenol holes—special chassis and sheet metal fabrications.

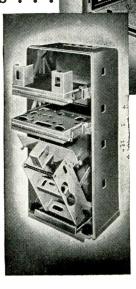
Write today for standard specifications ---or send us your problems!

Tool & Manufacturing Company, Inc. 39 Chambers St., New York 7, N.Y.

### **FABRICATED SHEET METAL PRODUCTS** to your specifications . . .

COMPLETE facilities under one roof for quantity mass production—including welding, baking and finishing. Whistler and Wiedermann equipment for short runs. Tool and die engineering and designing.

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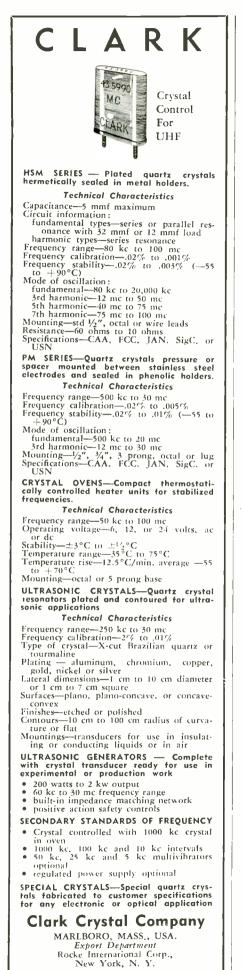
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### TORODIAL INDUCTANCES OF HIGH "Q"UALITY

Toroidal Inductances wound on Molybdenum Permaloy compressed powered dust cores are available in all practical inductance values. Several core sizes and types are stocked making it possible to suppy high Q inductances, especially suitable for *your* frequency and load ranges. We supply Inductoroids either cased or uncased

## **Filters and Equalizers**

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.

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## electronics BUYERS' GUIDE

## REGULATE **POWER SUPPLIES**

DESIGNED for use in industry, school and laboratory these power, supplies are ruggedly constructed and conservatively rated for long and dependable service. Attractively styled and priced, these units have found wide acceptance. They are also available in complete kit form for maximum economy. The following characteristics apply to the models listed below:

### CHARACTERISTICS

INPUT: 105-125V/50-60cps/100 volts. OUTPUT: Variable from 200 to 325/DC @ 100ma regulated, 6.3VAC CT @ 3A unregulated. **REGULATION**: Less than 1% no load to full load. Less than 1% for line voltage variation 105 to 125 volts. NOISE AND RIPPLE OUTPUT: Less than 10 mv rms for above ratings. TUBE COMPLEMENT: 5V4G, VR-105, 6SH7, 2-6Y6G. DC OUTPUT CONNEC-2-6Y6G. DC OUTPUT CONNEC-TIONS: Either positive or negative may be grounded.

### **BENCH MODEL 25**



COMPACT AND LIGHT WEIGHT Functionally designed for maximum convenience in operation. Six sturdy, insulated, "5-way" output terminal posts. Grey finish. 14" wide, 6" deep, 8" high. Weight 17 pounds. 6" deep, 8" high. Weight 1 Model 25 Model 25K Complete kit \$39.95 29.95 f.o.b. Corona, N. Y.

### **RACK MODEL 28**



COMPACT UNIT FOR STANDARD RACK MOUNTING

Rear access terminal board. Panel 19"x51/4". Black wrinkle finish (grey optional). Depth be-hind panel 7/2". Weight 16 pounds. Model 28 \$34.95 24.95 Model 28K Complete kit f.o.b. Corona, N. Y.

### **BASIC REGULATED POWER** SUPPLY KIT MODEL 31K

Basic kit of parts for incorporation into equipment. Comprises cased power transformer and filter choke, oil-filled capacitors, sockets, resistors, tubes and schematic diagram.

Basic Kit 31K ... \$14.95 f.o.b. Corona, N. Y.



**Use GRAPHALLOY Materials** for Exacting **Electric BRUSH or CONTACT Applications** 



The GRAPHALLOY family of metal-impregnated graphite brush and contact materials is specially designed for a wide range of applications requiring very low contact drop, very low elec-trical brush noise level or non-welding contact operation. Made by impregnating metals into solid graphite, they are inherently fitted for high speed, high altitude applications and for low-current circuits. Certain types are valuable for their arc-quenching characteristics in opening inductive circuits.

A few of the more commonly used types are given in the following table:

	LOW-METAL GRADES		
Material Silver GRAPHALLOY	Typical Current Density* Amperes per Square Inch 100-150 and higher	Typical Rubbing Speeds Feet per Minute 5000	
Copper GRAPHALLOY Cadmium GRAPHALLOY	90 75	3000 4000	
	HIGH-METAL GRADES		
Copper GRAPHALLOY Special Copper GRAPHALLOY	100-125 150	3000 3000	
*Depending or	brush size.		

Silver GRAPHALLOY, the supreme brush ma-terial, is widely used in brush applications where low, constant contact drop and low resistance are needed and where a low electrical noise level is imperative. Its high quality results from the use of extremely pure silver for impregnation into the graphite. Adapted for high-altitude brush applications and for low current circuits. It operates best against coin-silver slip rings.

As a non-welding contact material, Silver GRAPHALLOY is valuable in circuits where a low and constant contact drop are necessary or where contact welding must be prevented. Copper GRAPHALLOY — This material is widely used as brush material for small and medium sized motors and generators where long brush and commutator life are important.

As a contact, certain types are extensively used for arcing and main contact tips in circuit

breakers and contactors. Cadmium GRAPHALLOY — This material is par-ticularly adapted for commutating or opening circuits which are subject to heavy inductive arcing. The arc quenching characteristics of

the Cadmium vapor which is released during arcing make this material very valuable for high duty contactors and for brush applications where wear conditions and arcing are severe.

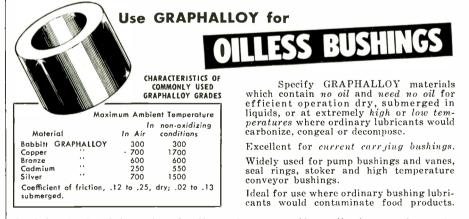
### HIGH METAL TYPES

**Copper GRAPHALLOY** is extensively used for rotary converter slip ring brushes, plating generator brushes and for other applications requiring extremely high current carrying ca-pacity with low or moderate friction.

Special Copper GRAPHALLOY grades have been developed for contacts which are required to carry extremely high operating current without overheating and without sacrificing arc-quench-ing qualities.

### APPLICATION DATA

Upon receipt of a brief description of your contact or brush problem we shall be glad to suggest a suitable design and material. We suggest that you send the current and voltage conditions, proposed rubbing speed, commutator or slip ring width and material. Send for our special brush inquiry sheet which outlines the required information. required information.



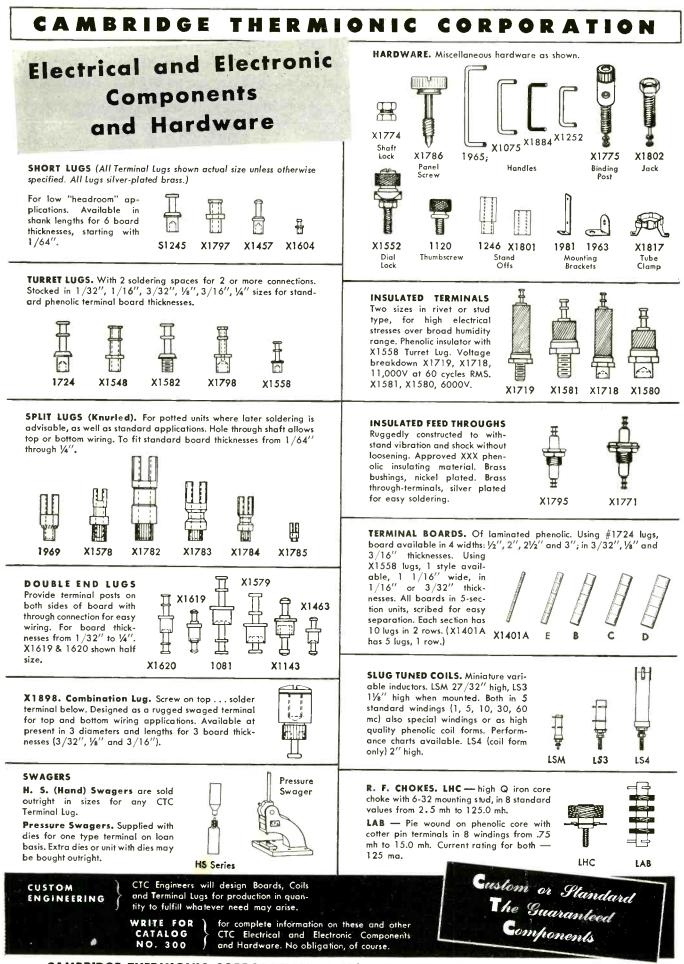
Send for further information. Or, if you have a specific application, supply us the details of speed, load, shaft material and temp ture conditions and we shall be glad to make recommendations or  $suppl_{j}$  test samples.

Call on the accumulated design experience of our engineers for help in solving your problem.



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CAMBRIDGE THERMIONIC CORPORATION . 438 CONCORD AVE., CAMBRIDGE 38, MASS.

## Browning INSTRUMENTS Engineered for Engineers

The features described here are merely the highlights of this Browning equipment . . . write for data bulletins giving detailed specifications, circuit design, and operation of these instruments.



## SWEEP CALIBRATOR

For use with oscilloscopes and synchroscopes, Model GL-22 accurately calibrates sweep time intervals. Markers provided at 0.1, 0.5, 1, 10, and 100 microsecond intervals may be applied as deflection or as intensity modulation. May be triggered directly from OL-15B.

## OSCILLOSYNCHROSCOPE

An outstandingly versatile instrument, Model OL-15B combines the functions of oscilloscope and synchroscope for application in laboratory and industrial testing in television, facsimile, pulse modulation, radar, nuclear physics, and communications circuits. Widerange amplifiers assure faithful reproduction of 100 KC square wave rising or falling at 500 volts per microsecond.





## LABORATORY AMPLIFIER

Model TAA-16 is designed for use with square-law-detector probes and slotted wave-guides in determination of standing-wave voltage ratio. Operating frequencies 500 to 5000 cycles. wide band or highly selective. Fullscale readings with less than 15  $\mu$ -volts at input with wide band, 10  $\mu$ -volts with selective operation.

## POWER SUPPLY

Comprising a regulated power supply and square-wave modulator for low-powered velocitymodulated tubes. Model TVN-7 is the basic unit for laboratory type micro-wave signal generator. Modulation is square-wave. FM. or pulse. Cathode voltage 280-480 volts, continuously variable, reducible to 180-300 volt range.





## SYNCHROSCOPE

Designed for triggering a radar modulator at one of four repetition rates and for viewing various voltage pulses present in the circuit. Model P-4-E may be used for observation of any recurrent phenomenon that can be externally triggered between 500 and 4000 c.p.s. Modulation envelope of any triggered r.f. source may be viewed if arranged to feed 50-ohm detector input.

#### FREQUENCY METER

Dependable, compact, easy to use... Model S-7 is custom-built, hand-calibrated for one or two frequencies, as specified, in the 72-76 and/or 152-162 mc. bands. Single meter may be used to check both fixed and mobile units. Aural indication of zero beat. Accurate to .0025% of specified frequency. Calibration can be checked in the field.





#### FREQUENCY METER

Model S-5 accurately checks frequencies in one, two, or three bands, from 30 to 500 mc. Custom-built: accurate to .0025% of specified frequency. Crystal frequency stability allows extended use where it is inconvenient to check WWV signals. Calibration can be checked.in the field.

## ELECTRONIC ALARM SYSTEM

#### Model BL-200

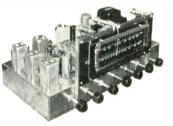
Super-sensitive capacitance-operated alarm system.

## CAPACITANCE-OPERATED RELAY

Model DD-20 operates on circuit or capacitance changes of 0.25 mmfd. Panel meter indicates changes as low as .005 mmfd.; mechanical movements as small as .0001".

## FM-AM AND FM TUNERS

The new model RJ-20 FM-AM tuner, built to meet highest performance requirements, has Armstrong FM circuit, full frequency response to 15.000 cycles. Separate RF and IF for AM and AM. 9 kc. and 4 kc. bandwidths. Two-stage audio system. 20 db. boost in base or treble.



•For use with existing high-fidelity audio systems: Model RJ-12A FM-AM Tuner; Model RV-10 FM Tuner. •For commercial communications. Type RP crystal-controlled. fixed-frequency tuners. All with Armstrong FM circuit.



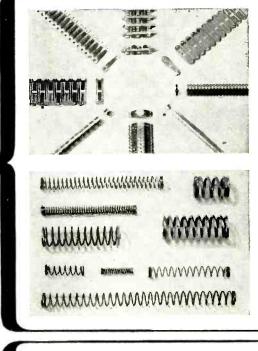
## I-S SPRINGS of beryllium copper can help you IMPROVE YOUR PRODUCT'S QUALITY, REDUCE YOUR COST, INCREASE YOUR PRODUCTION

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# FOR HIGH PRODUCTION

STRIP SPRINGS



## STRIP SPRINGS

Fabricated from beryllium copper. Easily handled, readily broken apart by hand or used in automatic or semi-automatic assembling devices and contact riveting machines.

Individual pieces may be broken off without trace of burr.

Eliminate sorting, untangling and handling of loose pieces.

Springs may be produced in strips to various shapes; formed angles may be held within plus or minus one degree.

Heat treated in multiple fixtures to insure uniformity, close tolerances and elimination of variations in spring-back.

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Made from laboratory tested beryllium copper wire. Special coil and heat treating equipment insures 100% uniformity

Guaranteed rigid tolerances held on diameter and load tests at specified deflection.

These factors combine to assure increased service life through higher endurance strength—make products perform more consistently by eliminating drift, set or fatigue. Furthermore, they eliminate expensive hand adjustment and reduce inspection costs of finished product.

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mente un have evoliable. However, all items listed are nor are ready for immediate delivery. Special ranges and instr tions can be supplied on short notice. n can be supplied on snorr notice. Detailed descriptive and technical literature on all er i be supplied on request. TABLE OF CONTENTS 2.15 - Laboratory and Portable Test Instruments Lawerwry unw rwrrwnru ywr innerennwnru \_\_\_\_\_ Including Laboratory Standards, Pesting Portables, Bridges, Decades, Recording Instruments. CTION 1 16-21 ranus una zweschnwassa smessarsense Including Voltmeters, Annesters, Wattneters, Milliammeters, Microammeters, Milliammeters, Microammeters, Milliammeters, Shunis and Current Transformers. meters, Frequency Heters, Watthour Meters, Shunis and Current Transformers. meters, Millivolt-Panel and Switchboard Instruments SECTION 2 22.27 22-27 r yr ame iars and associated equipment Including Pyrometers, Controllers, Potentiometers, Temperature Recorders, Ther-mometers, Thermocouples. Pyrometers and Associated Equipment SECTION 3 28-45 Service INSTruments Including Industrial Analyzers, Industrial Testers, Inculation Testers, Tachometers, Light Measuring Instruments, Appliance Testers, Set Analyzers, Pocket Instruments, Tube Testers, Oscilloscopei, VTVM's. Service Instruments SECTION 4 46-54 46-34 sransformers, nectifiers, wattals Including Variable-Valtage Transformers, Constant-Valtage Transformers, Valtage Regulators, Electronic Heaters, Auto and Isolation Transformen, Battery Eliminators, Relations Transformers, Rectifiers, Controis SECTION 5 55-64 MISCENSINGUES EQUIPMENT Including Timers and Time Switches, Counters, Photo-Electric Relays, Thermostats, Solenoids and Solenoid Valves, Motor Starters, Storage Battery Tester, Hardware Rheostats. Miscellaneous Equipment SECTION 6 and Accessories. THEOARD DISTRIC ERS. RECTUTERS. CONTROLS PANEL AND SW yde. Fik 5 -----SERVICE -----SECCES !!

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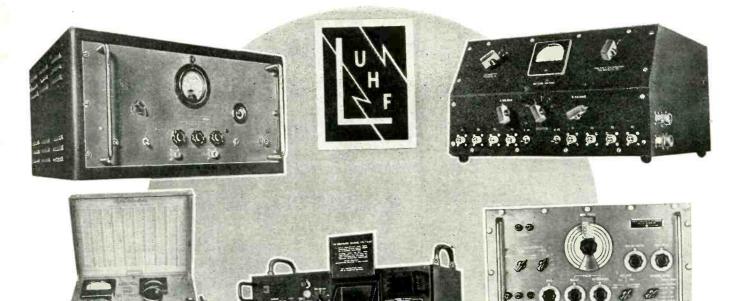
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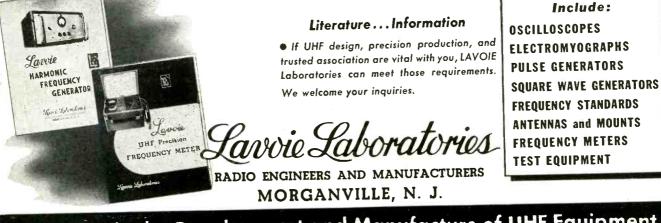
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NEW ENGLAND E. P. PACK AND ASSOCIATES, 968 FARMINGTON AVE. WEST HARTFORD, CONN.



### New Terminal Attaching Machine-

attaches and solders various sizes and types of pre-soldered tandem terminals (supplied on reels) at rates up to 1200 per hour. Machine cuts off, clinches and solders terminals in one instantaneous operation. Eliminates handling of loose terminals, solder and flux to increase production and lower costs on long runs. Standard types available. Strong, perfectly soldered joints are assured, as absolute control of heat is maintained. Send for detailed information, enclose sample of wire and terminal now used. Address Dept. F.

For ordinary runs in moderate quantity we continue to produce SEPARATE TERMINALS for ELECTRIC WIRES

We also make SMALL METAL STAMPINGS, exact to Customer's Prints. Modern Plant, Equipment and Methods. Precision Work. Moderate Die Charges. Prompt, Dependable Service.



Don't Overlook the MATERIALS SECTION

of this issue of the electronics

## BUYERS' GUIDE

In it you will find pertinent engineering information on . . .

- ACOUSTIC MATERIALS
- CERAMICS
- COATINGS
- FLUORESCENT COMPOUNDS
- GASES
- GLASS
- INSULATION
- MAGNETIC CORE MATERIALS
- METALS
- PERMANENT MAGNET MATERIALS
- PLASTICS
- POTTING COMPOUNDS
- RADIOACTIVE MATERIALS
- SEALING COMPOUNDS
- WAXES

used in the manufacture of electronic and allied products

> Comments and suggestions on this section of the Buyers' Guide will be appreciated.

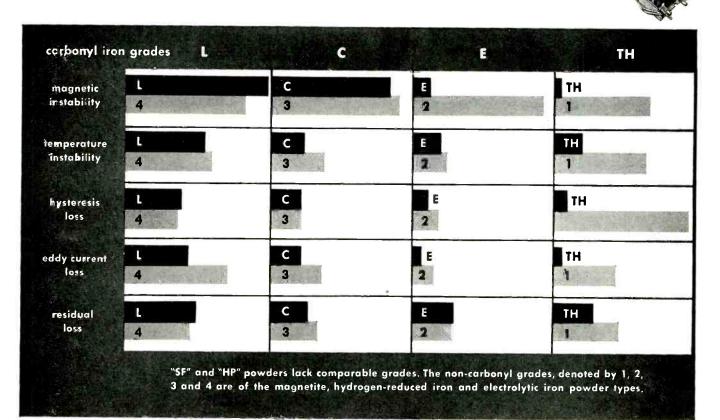
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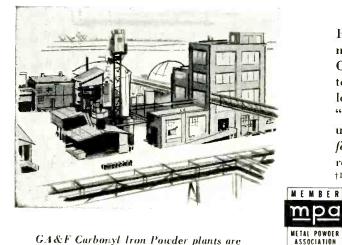
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## when it comes to high frequency applications

Leading Manufacturers Specify G. A.<sup>&</sup> F. Carbonyl Iron Powders





GA&F Carbonyl Iron Powder plants are located at Grasselli, N. J., and Huntsville, Alabama

## Ask any good designer!

He'll tell you that for performance with economy, there's nothing to equal G.A.&F. Carbonyl Iron Powders. It was CIP that enabled the manufacturer of the famous "K-Tran" † to secure high electrical performance along with unparalleled mechanical and elimatic stability. It was low-cost CIP "E" grade that a Chicago manufacturer used in cores at the unheard-of frequencies up to 25 mc., without sacrifice in performance! Hundreds of designers agree; there must be a reason. Write today for full details.

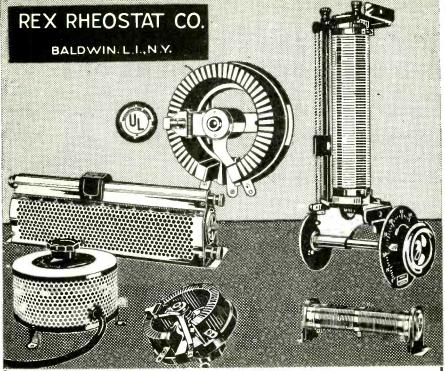
† Reg. U. S. Pat. Off. by Automatic Mfg. Corp.





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TUBULAR SLIDE.CONTACT RHEOSTATS with SELF-LUBRICATING FLOATING CONTACT ELEMENT • Protected and Unprotected Types • Easy and accurate adjustment.

VITREOUS ENAMELED ROUND POWER RHEOSTATS with SPRING-HINGED CONTACT ARM • 7 Types • 50 to 500 Watt.

UL APPROVED • With and without Housing • Permanent smooth action.



D. C. POWER SUPPLIES

Selenium and Mercury Vapor Rectifiers

POWER CONVERSION FOR—Industrial Application—Laboratory Use—Production Testing of D.C. Apparatus—High Voltage Plate Power Supply—Dynamotor Operation—Electroplating—Replacing Batteries —Etc.



MODEL SV 30-24 INPUT: 115 volts, 60 cycle, single phase OUTPUT: (Variable) 0-30 volts at up to 24 Amperes of Filtered D. C. RECTIFIER: Full wave bridge selenium stock

NET F. O. B. NEW YORK \$298. This unit is representative of one of the types we supply. Upon receipt of your requirements we will promptly furnish quotation.

MODEL RECTIFIER CORP. 127 ATLANTIC AVE. Oceanside L. 1., New York Phone: WOrth 2-3844

THIS BOOK... The electronics BUYERS' GUIDE

tells you who makes each of fourteen hundred different electronic and allied products.

Keep it and use it for quick buying and technical reference throughout the year.

When buying, or requesting product information be sure to mention ELECTRONICS BUYERS' GUIDE.



#### PRODUCTS FOR AM-FM-TV STATION USE

GRAY "professional" equipment for broadcast station use is conceived, designed, engineered and produced by specialists in the audio-video field. The products here described are widely used, ap-proved and recommended by networks and independents. This broad acceptance by the industry is our best testimonial to the high quality built into products by GRAY.

- TONE ARMS
- **Reduce Intermodulation Distortion**



## **GRAY TRANSCRIPTION ARM** with Quick Change Cartridge

Reduction of the distortion content of "lows" results from minimum vertical inertia and maximum stiffness. Other characminimum vertical inertia and maximum stiffness. Other charac-teristics include frictionless motion, adjustable stylus pressure, self-leveling base and features resulting in the finest lateral reproduction. Accommodates all modern cartridges—GE, etc. —and has been adopted for all transcription tables by national radio networks—Columbia Broadcasting System, American Broadcasting Company—and numerous independent stations. Arm, less cartridge, \$45.15. Arm, with 1 mil diamond stylus GE cartridge, and 21/2 mil sapphire stylus cartridge \$84.60.



The Gray 602 Equalizer is an advanced design of the famous Gray 601 and has been specially engineered to provide the same constant velocity frequency response for LP records. A convenient control permits instantaneous switching from conventional records to Micro-Groove, Here in one assembly are all the various combinations of equalization required for all types of records. SPECIFICATIONS—Frequency response available at no extra charge); Insertion loss: 20 DB; Output level: --67 Vu. at 4.7 cm sec; Cable length; 18". Complete, \$53.50 level : -\$53.50



Preserve your record library. Check stylus force with this new gauge, Accurate to grams. As simple as it is important to use! Each, \$14 75

## **GRAY 901 STYLUS FORCE GAUGE**



TURNTABLES

## TRANSCRIPTION **TURNTABLE 304T**

• TV TELOP •

with the Exclusive RECORD LIFT

• Absolute synchronism at 78 and 33 1/3

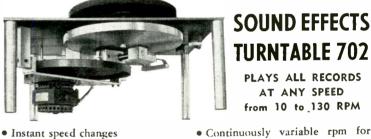
• EQUALIZERS

- r.p.m. Instant speed change Single control for starting and speed

Single control for starting and speed change
Filters building vibrations
Record Lift lever-operated
No record slipping, flutter, wow
Record Lift guarantees exact timing
Maximum simplicity and SPEED of operation
The Gray Transcription Turntable 304T assures you virtually perfect reproduc-tion with 78 rpm or 33 1/3 rpm ttan-scriptions, Mounted in an all metal cabinet 27 inches square. Price \$450 f.o.b. Hartford (Pickup, Equalizer, casters extra).

**SOUND EFFECTS** 

**TURNTABLE 702** PLAYS ALL RECORDS AT ANY SPEED from 10 to 130 RPM



Instant speed changes

The GRAY

- One speed control lever
- Stops at 33 1/3, 45 and 78 RPM
  "Spindle-thimble" for 45-rpm
- records
  - ciency Turntable for bench mounting, \$125.00 Cabinet (extra) \$65.00 Arm and Equalizer extra

TELOP

sound effects

Makes pattern time revenue time!

**TV Optical Slide Projector** 

• Precision-built, trouble-free effi-

Dual Projection capable of any desired optical dissolve with exact density control.

For advertising, photos, titles, pro-grams, glass slides, transparencies or small physical objects.

The TELOP is a TELevision Op-tical Projector for use with TV film cameras. Great flexibility permits instant fading of one object to another, change by lap dissolve or by superimposing with exact density control of each object for unique effects. The widest latitude is given the program director for maximum interest and added station income.

Complete, \$3,500.00

Please ask for bulletins describing the above equipment. INQUIRIES INVITED FOR DEVELOPMENT AND MANUFACTURING.

**ESEARCH & DEVELOPMENT CO., INC. 16 ARBOR STREET, HARTFORD 1, CONNECTICUT** 

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

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





June, 1949 - MID-MONTH - ELECTRONICS BUYERS' GUIDE



#### UNSURPASSED PLANT AND ENGINEERING FACILITIES AVAILABLE FOR PRODUCT DEVELOPMENT, MANUFACTURE AND ASSEMBLY

OUR completely equipped precision electronics plant and laboratories are at your service. Whether you are in need of tooling and production facilities to manufacture a product in accordance with your own designs or are confronted with a problem in product application requiring the development of one or many units, specifically made to fulfill your particular requirements, call on us.

## COMPLETE GEIGER MULLER COUNTERS AND ACCESSORIES

## EL-TRONICS SCALING TYPE LABORATORY COUNTER



A completely modern unit, designed to speed up laboratory counting. Direct reading scale quickly indicates total count. No extra computing. Total count on 100 scale up to 999,999 or 9,999,999 on 1000 scale before recycling. Model LS100 (100 scale) Model LS1000 (1000 scale) EL-TRONICS COMBINED COUNTING RATE METER AND COUNTER SET

Complete laboratory type counting rate meter with recording circuits suitable for operation of external impulse register. Vacuum Tube Voltmeter Circuit provides for use of 5 M.A. Pen Recorder. Built-in speaker for aural monitoring. Operates on 115 Volt 60 cycle line. Model RM4A



## EL-TRONICS INTEGRATING RATE METER ATTACHMENT



A practical time and cost saving accessory. When connected to the oscilloscope of such scalers as El-tronics models LS64, LS256, LS100, LS1000, CGM3B or the equal it becomes an integral part of the scaler, saving the expense of a complete counting rate meter. Model SA4

Finest "in the Field"!

## EL-TRONICS LIGHTWEIGHT PORTABLE RADIATION SURVEY INSTRUMENT

The newest design in Portable Survey Meters. Sensitive to both BETA and GAMMA radiation. Specially designed circuit minimizes drain on battery. Uses standard Miniature radio tubes. Entirely weatherproof construction in welded aluminum case. Total weight 8<sup>3</sup>/<sub>4</sub> pounds. Model SM3

## EL-TRONICS CAPACITY OPERATED BURGLAR ALARM



Another ingenious development from El-Tronics' laboratories is the RA10 "Electronic Radio Alarm." This is the heart of a unique burglar alarm system which detects intrusion by the simple principle of "interrupted capacitance." The prowler entering the sensitized area immediately sets off the alarm by the change his "presence" causes in the antenna capacity of the installation. The antenna can be any ungrounded metal object. A set of controls adjusts the sensitivity of the system as needed. Little maintenance is required. Compensatory circuit adjustments assure dependable operation regardless of temperature or weather conditions.

- Simple, Inexpensive, Inconspicuous Installations
- Adaptable for fire detection as well
- Recycles automatically 90 seconds after operation

## 

Other EL-TRONICS products include—Regulated Power Supplies 

High Fidelity & High Power Audio Equipment 

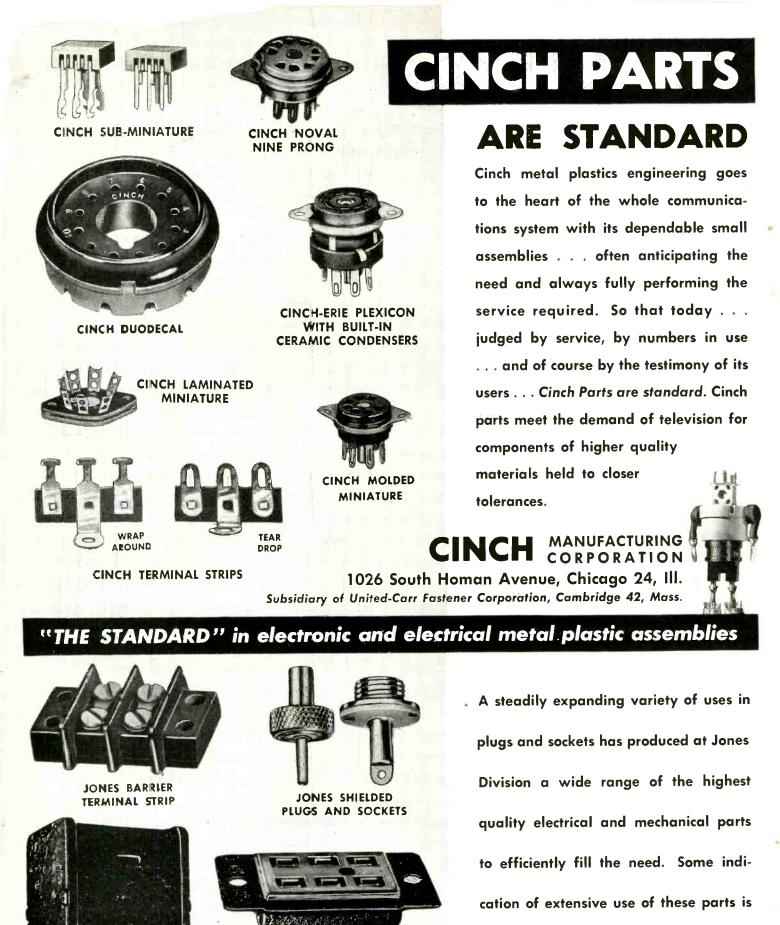
Radio Xmitters & Receivers Carrier Current Control Devices 

Electronic Counting & Signaling Devices 

Variable Frequency Electronic Generators.

Write us on your business letterhead for further information





JONES 2400 SERIES PLUGS AND SOCKETS shown in the photographs on this page.

HOWARD B. JONES. DIVISION CINCH MANUFACTURING CORPORATION 1026 South Homan Avenue CHICAGO 24, ILLINOIS

AVAILABLE AT LEADING ELECTRONIC JOBBERS ... everywhere

# S. WHITE PRODUCTS AND SERVICES FOR THE ELECTRONIC INDUSTRY

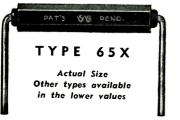
FLEXIBLE SHAFTS

S.S.White Flexible Shafts, in both power drive and remote control types, come in a large selection of sizes and characteristics for a wide range of requirements. Combinations of selected flexible shaft, flexible casing and end fittings are made up to user's specifications in any length, ready for connection. **Engineering cooperation** on specific applications always available without obligation.

## WRITE FOR BULLETIN 4501-FREE

It gives essential facts and data on the selection and application of flexible shafts. A free copy is yours if you write for it on your business letterhead and mention your position.





For Power Drive

For Remote Control

BULLETIN 4505 gives full details about S.S.White Resistors. Copy, with Price List, mailed on request.

## PLASTIC PLUGS and CAPS



S.S.White offers a large variety of threaded type plastic plugs and caps for low-cost protection and seal of instruments and other units against damage, dirt and molsture during handling, shipment and storage. BULLETIN P-4601 on request. Also a variety of flexible plastic plugs and caps for protection and seal of tubing and tubular parts.

## "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 applications.

**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.

## NYLON and OTHER PLASTICS MOLDED to YOUR REQUIREMENTS

S.S.White offers the most modern facilities plus an experienced organization to give you the best in contract molding in Nylon and in other thermoplastic and thermosetting materials, in small or large quantities at reasonable prices. Your inquiries are invited. Quotations furnished without obligation. NYLON BULLETIN P-4801 mailed on request.

THE S. S. WHITE DENTAL MFG. CO. INDUSTRIAL DIVISION DEPT. E. 10 EAST 40th ST., NEW YORK 16, N. Y.

KK)

FLEXIBLE SHAFTS - FLEXIBLE SHAFT TOOLS - AIRCRAFT ACCESSORIES SMALL CUTTING AND GRINDING TOOLS - SPECIAL FORMULA RUBBERS MOLDED RESISTORS - PLASTIC SPECIALTIES - CONTRACT PLASTICS MOLDING

One of America's AAAA Industrial Enterprises



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with equal efficiency. Send us your specifications for guotation whether you require an untreated coil or one that is vacuum pregnated with wax Don't let Acetate Section
Bakelite Bobbin
Cotton Interweave a COIL hold up . COILS FOR HIGH TEMPERATURE APPLICATIONS production MADE TO EXACT SPECIFICATIONS ALSO TRANSFORMERS MADE TO ORDER THE DANO ELECTRIC CO. MAIN ST., WINSTED, CONN. METALS IN ALL FORMS FOR THE ELECTRONIC INDUSTRIES SILVER BRAZING JBING ALLOYS & FLUXES FOR A COMPLETE LIST OF OUR PRODUCTS SEND FOR OUR NEW FOLDER. E-20 PLATINUM, GOLD & SILVER FOR SCIENCE, INDUSTRY & THE ARTS 231 NEW JERSEY R.R. AVE. AMERICAN PLATINUM WORK NEWARK 5, N. J PRECIOUS METALS SINCE 1875 June, 1949 --- MID-MONTH --- ELECTRONICS BUYERS' GUIDE

**OVENS** 



(Model 901) PORTABLE TEST INSTRU-MENTS available in DC, Model 901 and AC, Model 904, single and multiple ranges of wide coverage. Excellent scale readability and shielding. Accuracy within ½ of 1%.



SENSITIVE RELAYS a line of sensitive relays including the Model 705 which provides positive control at levels as low as  $V_2$  microampere. Non-chattering magnetic contacts handle up to 10 watts at 120 volts.



(Model 622) ULTRA-SENSITIVE INSTRU-MENTS portable DC and AC Thermo instruments for precision measurement of potentials and minute currents involving electronics, thermo-couples or laboratory research.



(Model 798) MULTI-PURPOSE TUBE-CHECKER offering provision for testing Receiving Tubes - Voltage Regulator Tubes-Light Duty Thyratron Tubes such as 2A4-6D4-884-885-2051. Scale is calibrated "Good-Bad" as well as in mutual conductance range.



PANEL and SWITCHBOARD INSTRU-MENTS a complete line of instruments in all types, sizes and ranges required for switchboard and panel needs . . . including DC, AC power frequencies and radio frequency, rectifier types and D.B. meters.



(Model 697) VOLT-OHM MILLIAM-METER one of a line of pocket-size meters, Model 697 combines a selection of AC and DC voltage, DC current, and resistance ranges. Ideal for maintenance testing and many inspection requirements.



(Model 769) ELECTRONIC ANALYZER incorporating a conventional Volt-Ohm-Milliammeter with self-contained power source—a high-impedance electronic Volt-Ohmmeter using 115 volt, 60 cycle power—a stable, probe-type, Vacuum Tube Voltmeter, for use to 300 megacycles.

## TO SPEED AND SIMPLIFY ELECTRONIC PRODUCTION AND MAINTENANCE

NSTRIIMFN

Illustrated are but a few of the many specialized instruments available from WESTON . . . all designed to simplify and speed-up electrical and electronic installations, production testing, and maintenance. For details, see your local representative, or write Weston Electrical Instrument Corporation, 618 Frelinghuysen Avenue, Newark 5, New Jersey.

WESTON Instruments

ALBANY • ATLANTA • BOSTON • BUFFALO • CHARLOTTE • CHICAGO CINCINNATI • CLEVELAND • DALLAS • DENVER • DETROIT • HOUSTON JACKSONVILLE • KNOXVILLE • LITTLE ROCK • LOS ANGELES MERIDEN • MINNEAPOLIS • NEWARK • NEW ORLEANS • NEW YORK ORLANDO • PHILADELPHIA • PHOENIX • PITTSBURGH • ROCHESTER SAN FRANCISCO • SEATTLE • ST. LOUIS • SYRACUSE • TULSA IN CANADA, NORTHERN ELECTRIC CO., LTD., POWERLITE DEVICES, LTD.



(Model 785) INDUSTRIAL CIRCUIT TESTER a versatile, portable tester for laboratory or maintenance needs, where an ultra-sensitive instrument is required. Provides 27 AC and DC voltage, AC and DC current, and resistance ranges. (DC sensitivity 20,000 ohms per volt.)



(Model 779, Type 1) SUPER-SENSITIVE ANALYZER small, light, compact, 26 range Volt-Ohm-Milliammeter with 5 DC voltage ranges, sensitivity of 1000 or 20,000 ohms per volt. AC temperature compensated. Self-contained power supply. Ideal for many production and test requirements.

## VICKERS ELECTRIC DIVISION

VICKERS Inc.

1815 LOCUST ST., ST. LOUIS 3. MISSOURI

Manufacturers of

## ELECTRICAL PRODUCTS

Vickers Electric Division, Vickers Inc., a unit of The Sperry Corporation, maintains a high standard of productengineering through the complete facilities of its research and development sections. Vickers Electric Division is well qualified to consider your technical problems in relation to:

MAGNETIC AMPLIFIERS • STATIC VOLTAGE REGULATORS • STATIC MOTOR SPEED CONTROLS • POWER SATURABLE REACTORS • REC-TIFIERS • PHOTOELECTRIC CELLS • SERVOMECHANISMS • MAG-NETIC FLUID CLUTCHES • SPECIAL MOTORS AND GENERATORS TRANSFORMERS • CONTROLLED POWER RECTIFIERS FOR ELECTRO-CHEMICAL PROCESSES.

**REQUEST BULLETIN VT-2000-MAGNETIC AMPLIFIER CIRCUITS, APPLICATIONS** 

Request Complete Catalog and List Prices of Vickers Selenium Rectifiers and Photoelectric Cells

INKING FUNCTION DESIGN TO Engineers and Designers who insist on dependable components have adapted Vickers Selenium Rectifiers into their circuits. They are specifying Vickers products, and are submitting their rectifier problems to us. Our greatly expanded plant facilities, plus the recognized dependability of Vickers products, make it possible for us to offer the most complete line of Selenium Rectifiers and selfgenerating Photoelectric Cells. PHOTOELECTRIC CELL FOLLOW THE ENGINEERS. SPECIFICITIES **VICKERS ELECTRIC DIVISION** VICKERS INC. 1815 LOCUST ST., ST. LOUIS 3. MISSOURI EXPORT: Frazar & Hansen, Ltd., 301 Clay St., San Francisca 11, Calif. CANADA: Powertronic Equipment Ltd., 494 King St., E. Toronto 2, Canada

REPLACEMENT CELLS

**RADIO** – PHONOGRAPH



Magnified View PS-1 For restoring original life and brilliant tone to radio-phonograph sets. The high efficiency and wide frequency range of these Selenium Cells make them ideal replacement units for photoelectric radio-phonograph sets. Now available in quantity for immediate installation.



Self-generating photo cell has output of 600 micro amperes at 100 ft. candles. Characteristics permanent and unit withstands severe conditions of use.

Request 12-page booklet on Photoelectric Cells.

## ... you draw the curve **BUILD THE CARTRIDGE** WE'LL

Your specifications . . . your special requirements in phono pickup cartridges . . . are ideally "custom-solved" through E-V creative engineering . . . unusual manufacturing facilities . . . and inherent advantages of exclusive TORQUE DRIVE.\*

CARTRIDGES

## CUSTOM RESPONSE

VOLTAGE

TRACKING

FORCE

FONO-FITTED

Smooth upper response with roll off frequency to your specifications or wide range, peak-free response to 10 kc. You draw the curve, we'll build the cartridge.

E-V TORQUE DRIVE cartridges provide the highest compliance per volt output. For example,

the E-V 14 cartridge tracks at 5 grams with excellent wave form down through 50 c.p.s. on the RCA 12-5-31V record at 1 volt at 1,000 c.p.s.

### Modern One-Acre Plant with **Complete Internal Facilities for Quality-Controlled Volume Production**

From original conception to final product, you get full benefit of the unusual E-V processes. Here are E-V laboratories, where constant research keeps making new contributions to the Art. Here we make tools and dies . . . die cast, plate, screw machine, stamp, mold plastics, and assemble. Here we use specially designed test equipment for quality control. With all these facilities, we produce high standard acoustical products in quantity, with utmost economy. Come-see this plant in action.



\*E-V Pat. Pending Licensed under Brush patents

Export: 13 East 40th St., New York 16, U.S.A. Cables: Arlab

COMBINATION One and Three Mil

With the high compliance and low mass of the driving system, needle forces at 5 grams for both one and three mil records are used in everyday production by leading manufacturers. Cartridges with even lower needle force with slight reduction in voltage are thoroughly practical. 3 gram tracking pressures are definitely in sight.

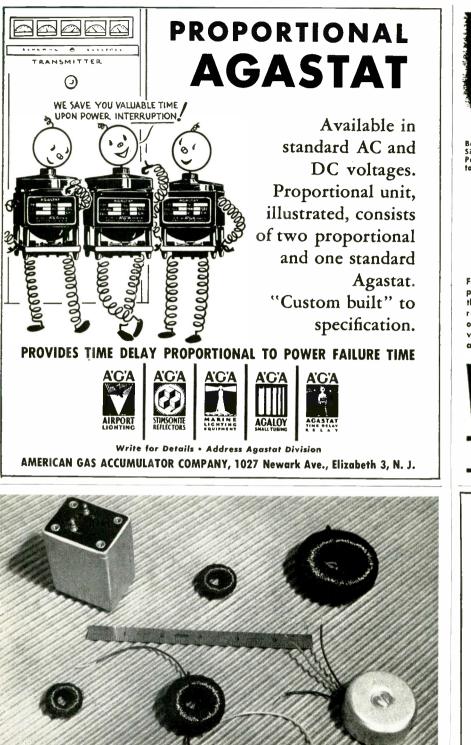
E-V TORQUE DRIVE again leads in twin needle cartridge design. Tracking force of 5 grams on both one and three mil records precludes weight changing. Straight line needle position assures accurate set down when used with changers. Approximately the same output is obtained on both stylii. The E-V Twin-Tilt cartridge mounts in any arm with  $\frac{1}{2}$ " mounting holes with no modification except adjustment for correct needle force.

## MOISTURE PROOFING

The cartridge is entirely filled with DC4 Silicone jelly-the material that is used for inhibiting moisture on aircraft wiring. Tests indicate that it increases the life of an ordinary crystal some 20 times. This is a plus feature, found in all E-V crystal cartridges.

Our engineering staff and full facilities are at your service. Contact us today.

ELECTRO-VOICE, INC. • BUCHANAN, MICHIGAN



## **TOROIDS**-for Performance

Close tolerance toroidal coils wound on  $\frac{3}{4}$  inch diameter, or larger, cores. Inductance tolerances can be maintained to 0.1%. Available with balanced windings, taps and close-coupled secondaries.

Where a wide frequency range of operation is required, coils with extremely low distributed capacity are available.





Lenkurt knows how

## Faster Evacuation to Low Pressures with Top Efficiency

Beach-Russ Type RP Single Stage Vacuum Pump. Capacity —17 to 845 c.f.m.



For vacuum exhausting and processing at low pressures in electronic or electrical operations, these pumps offer the advantages of positive rotary, automatically lubricated, noiseless operation. They are "tops" for producing high vacuum or for backing diffusion pumps. Test to absolute pressures as low as 4 microns.



## NOT...

until next year will you get another

electronics BUYERS' GUIDE

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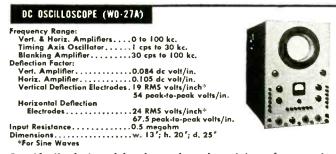


#### PORTABLE OSCILLOSCOPE (WO-79A)

Frequency Range:		
Vert. Amplifier		
Horiz, Amplifier		
Deflection Factor:		
Vert. Amplifier	9 9 8	
0.5 peak-to-peak volt/in,		
Horiz. Amplifier		
1.3 peak-to-peak volts/in,		
Input Resistance and Capacitance: With Low-Capacitance		
Cable	1. 1. 1. Fall	
Sawtooth Time Base 20 cycles to 250 kc.	8	
Triggered Time BaseRepetition rate up to 50 kc.		
Intensifying AmplifierProvides Increased brightness	1 1 1 1	11
on triggered time base.	140 Q Q Q	ŗ.
Dimensions	1 4 6 9 P	

\*For Sine Waves

For detailed observation and accurate measurement of voltages produced by TV sync. and deflection circuits, ignition systems, and pulse generators. Horizontal deflection up to twice screen diameter. Calibrating meter for voltage measurements. Built-in delay line.



Specifically designed for the study and servicing of extremely low-frequency actions in mechanical, hydraulic, and electrical systems. The single-sweep feature can be employed in the investigation of transients which occur once only. The circuits used are excellent for high-speed photographic work. C-R tubes with different persistence characteristics can be easily interchanged without removing instrument from the case.

#### AUDIO VOLTMETER (WV-73A)

AC Voltage Range., 0.001 to 1000 volts
Frequency Response. ± 0.5 db from 20 to 20,000 cycles
Input Resistance and
Capacitance I megohm shunted by 25 mmf.
DB Range 0 to 120 db
Accuracy
over entire voltoge range
Dimensionsw. 131/2";
h. 10': d. 7½'



Useful for measuring minute ac voltages in high-impedance circuits. Logarithmic scale and over-lapping attenuator assure accuracy even when pointer is at either end of scale.

#### INDUSTRIAL OSCILLOSCOPE (WO-60C)

Frequenc	y Response: (Both Amplifiers)
Sine W	ave
	Flat ± 20%; 2-100,000 cps
	Flat ± 50%; 0.5-300,000 cps
Square	WaveNo tilt or overshoot, 20-6000 cps
Deflection	Factor;
Vert, A	mplifier0.020 RMS volt/inch*
	0.056 peak-to-peak volt/in,
Horiz.	Amplifier0.024 RMS volt/inch*
	0.067 peak-ta-peak volt/in,
Input Res	istance and Capacitance:
	Horiz, Amp., I meg. shunted by 35 mmf.
	Time Base, .3 to 30,000 cps
Dimensio	nsw. 9½"; h. 14"; d. 19½" ne Waves

A portable instrument with wide variety of uses. Excellent phase-shift characteristics. Reliable indications even under violent shock. Designed for fast change-over to a C-R tube with different persistence characteristic.

#### LABORATORY OSCILLOSCOPE (715-B)

## 

even with random recurrence of signal. Triggered sweep is

initiated by signal observed during that sweep. Has built-in

time-marker generator, and input calibrating meter.

## ADVANCED VOLTOHMYST\* (WV-75A)

For FM and TV measurements. Diode probe permits peak-topeak ac voltage readings up to 250 Mc. WV-75A meets six needs: VHF Voltmeter, Audio Voltmeter, AC Voltmeter, DC Voltmeter, Ohmmeter, Zero-Center Indicators. Meter is burnout proof. Voltmeter circuit has excellent linearity and stability. \*Reg. Trade Mark, U. S. Pat. Off.

#### ULTRA-SENSITIVE DC MICROAMMETER (WV-84A)

 Current Range
 0.001 microamp to 1000 microamps

 Full-Scale Values
 0.01; 0.1; 1.0; 10, 100, 1000 microamp

 Full-Scale Voltoge Drop (all scales)
 0.5 v.

 Power Supply (Botteries)
 2— 11/2 volts "A" (RCA VS106)

 2—22/2 volts "B" (RCA VS102)
 0.1 microamp (d. 3/4")



Excellent for weak-current measurements in tubes, phototubes, multiplier phototubes and dc bridges.

Available from your RCA Test and Measuring Equipment Distributor



RADIO CORPORATION of AMERICA

TEST AND MEASURING EQUIPMENT

HARRISON, N. J.

## For Uniform High Energy in EVERY Application, use INDIANA PERMANENT MAGNETS



#### THIN-WALL ALNICO RINGS

All sizes of thin-wall, ring-type permanent magnets for television focus coils. Indiana quality assures a strong magnetic field.

#### "ION-TRAP" PERMANENT MAGNETS

Permanent magnets to deflect electrons out of the ion-electron stream. Made of Alnico and Cunife in all diameters and forms.

#### PERMANENT MAGNETS FOR PHONOGRAPH PICK-UPS

Indiana permanent magnets for transforming mechanical energy into electrical energy cover the full range of physical properties, sizes, and shapes. For phonograph pick-ups, microphones, electric organs, etc.

#### PERMANENT MAGNETS FOR SPEAKERS

Indiana permanent magnets for transforming electrical energy into mechanical energy in loud speakers, telephone receivers, polarized vibrators, electric clocks, etc. Indiana has the right permanent magnet for each need.

#### PERMANENT MAGNETS FOR INSTRUMENTS, RELAYS, AND CONTROLS

A complete variety for ammeters, galvanometers, light meters, voltage regulators, switches, polarized relays, etc. Indiana brings you the latest methods and techniques.

#### PERMANENT MAGNET SUB-ASSEMBLIES

Assemblies, of which the permanent magnet is a part, designed to meet your specifications. Furnished for all requirements. • Look to INDIANA for *quality* permanent magnets—for skill in manufacture—for cost-cutting engineering aid. Strict supervision in every step of production is your assurance of exact magnetic and mechanical characteristics.

#### ALL MATERIALS . ALL SIZES . ALL SHAPES

INDIANA-the world's largest exclusive producer of permanent magnets, and the only manufacturer furnishing all

commercial grades of permanent magnet alloys—has the know-how and facilities to develop and produce the permanent magnets you require. More than 30,000 different needs have been met successfully by INDIANA "packaged energy." Write today.

## Sales Offices Coast to Coast

Boston 16, Mass., 258 Park Square Building. Cleveland 14, O., 508 Hippodrome Building. Detroit 2, Mich., 908 Fisher Building. Los Angeles 15, Calif., 1151 S. Broadway. New York 17, N. Y., 51 East 42nd Street. Philadelphia 7, Pa., Real Estate Trust Bldg. Rochester 4, N. Y., 519 Sibley Tower Bldg. Washington 7, D. C., 1011 New Hampshire Ave.

variety of magnet alloys permits precise selection. CAST Alnico, I, II, III, IV, V, VI, XII Cobalt Cunico Indalloy SINTERED Alnico II. IV. V Indalloy Vectolite DUCTILE Cunico Cunife I, II Silmanal FORMED Chrome Cobalt Tungsten

INDIANA'S wide



HE INDIANA STEEL PRODUCTS COMPANY

NORTH MICHIGAN AVENUE • CHICAGO 2, ILLINOIS

SPECIALISTS IN "PACKAGED ENERGY" SINCE 1908



## NEW RECORDING DISCACHIEVES LEADERSHIP IN RECORD TIME.

By A. C. Travis, Jr.\*

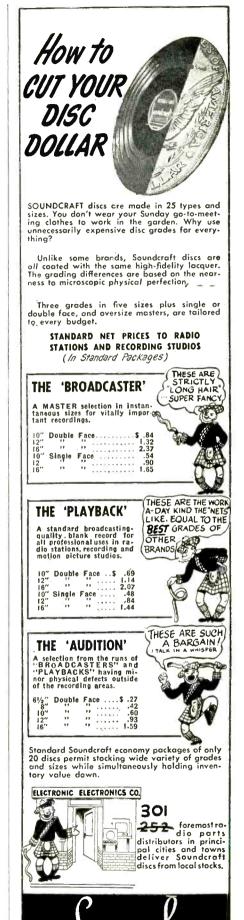
The fact that so few manufacturers of blank recording discs ("acetates") have successfully established themselves in the broadcasting-quality disc field in the last twenty years bears witness to the magnitude of the problems besetting the Johnnycome-lately disc manufacturer. Every year some seventy-five concerns or individuals express to material suppliers an interest in getting into the field. Occasionally another name appears only to fade in a short time. What is the invsterious factor that enables some to remain in business in a quiet way, others to have tolerable acceptance over the years, and still another to rocket to leadership?

One may say the answer is know-how, better lacquer chemistry, more research, a patented process, widespread distribution. These would indeed be true answers, but not the answer. Soundcraft discs as a name were born in November, 1946. The Soundcraft group as people were in disc manufacture for ten years before and in disc use almost ten years before that. Such experience helped avoid the repeated mistakes of which even well accepted brands are occasionally guilty. It provided know-how, processes, and good distribution. Above all, however, experience taught Soundcraft the keynote of success in the disc business -simply to analyze what the sound recording engineer needed and give it to him.

What above all else does the recording engineer want in a blank disc? He wants and must have a recording medium that cannot "fluff a line", that will not have to be done over when it *cannot* be done over. He wants complete confidence in the disc brand, from box to box, from season to season. Soundcraft realized that any of several brands usually made excellent recordings. There were unpredictable moments, however, when these discs might become unuseable. Such problems as grey cutting, abrasive spots, hard and soft areas, extraneous noise, and erratic thread behavior would crop up from time to time. Soundcraft discs attained leadership in only two and one-half years because Soundcraft knew the problems in advance, designed the manufacturing processes to minimize them, and demonstrated predictable performance from the word "go".

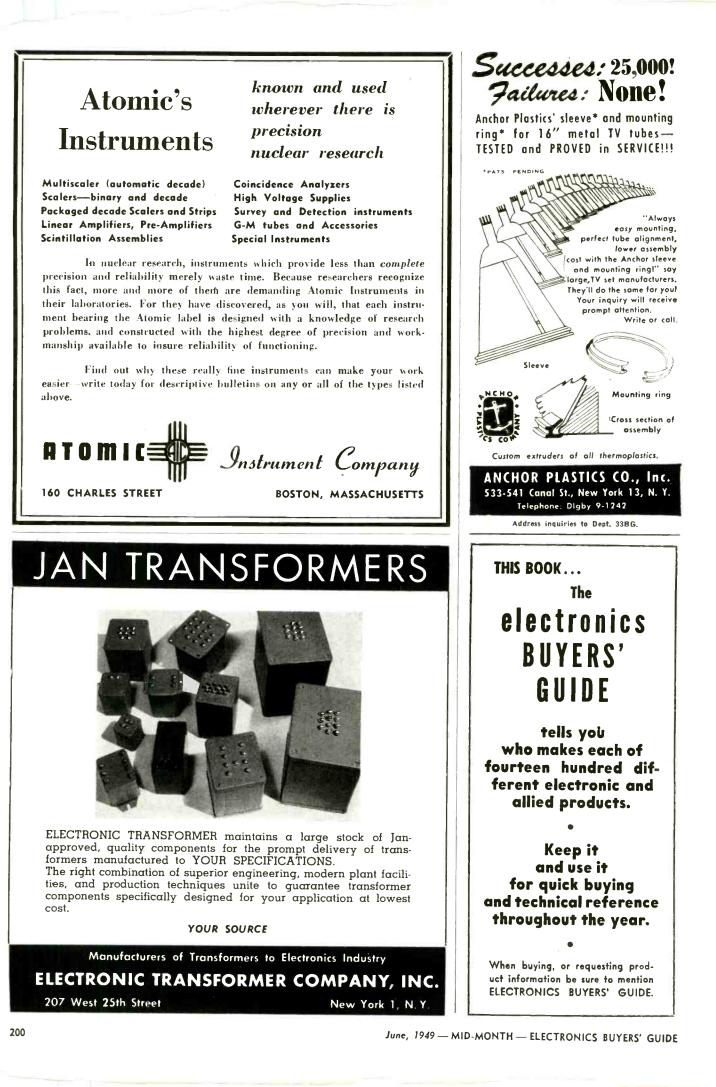
Why waste money cutting "safeties" or precautions", when you can cut Soundcraft? (Advertisement)

\* Vice Pres., Reeves Sounderaft Corp.



REEVES CUNCTAL CORP.

10 EAST 52nd STREET . NEW YORK 22, N.Y.





# Be Right with OHMITE



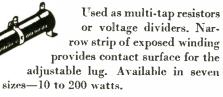
CLOSE CONTROL RHEOSTATS

Here is the most extensive line of rheostats offered today . . . 10 sizes, from 25 to 1000 watts, with many resistance values. Allceramic construction. Windings are locked in vitreous enamel.

## VITREOUS ENAMELED RESISTORS

Resistors are wire wound on a ceramic core, rigidly held in place, insulated, and protected by vitreous enamel. Even winding dissipates heat rapidly -prevents hot spots. Many types, in ratings from 5 to 200 watts.

## **DIVIDOHM ADJUSTABLE RESISTORS**



## **RADIO FREQUENCY PLATE CHOKES**



Single-layer wound on low power factor steatite or molded plastic cores. Seven stock sizes cover range 3 to 520 mc. Two units rated 600 ma; all others 1000 ma.

## \* MOLDED COMPOSITION POTENTIOMETER



A 2-watt molded composition unit with good margin of safety. It is unaffected by heat, cold, or moisture. Resistance element is a thick, solid-molded ring.

## \* MOLDED COMPOSITION RESISTORS



Small and sturdy, these "Little Devil" units come in ½, 1, and 2-watt sizes. 100hms to 22 megohms. Tol. ± 10% and ± 5%.

> Write for

\* So that two exceptionally high-quality products will be universally obtainable, Ohmite Manufacturing Company, in co-operation with the Allen-Bradley Company, has arranged for the Type AB (Allen-Bradley Type J) control and Little Devil Molded Composition Resistors (Allen-Bradley Types EB, GB, and HB) to be available from stock at Ohmite distributors.



ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH .

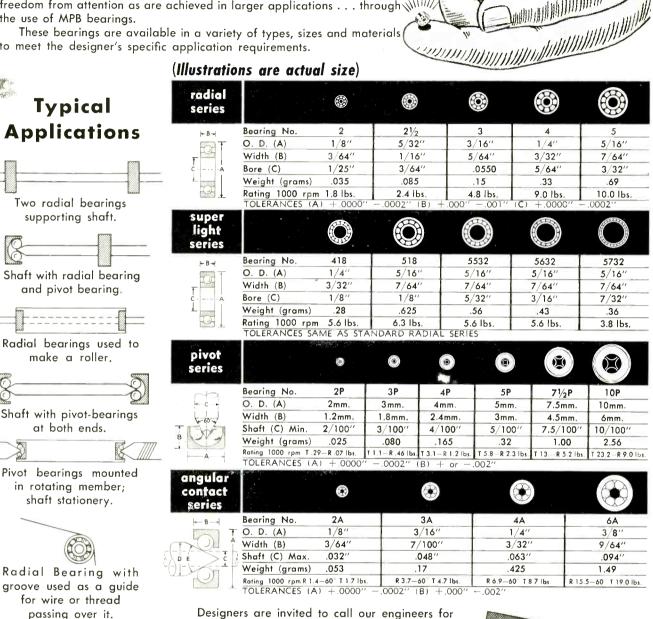


June, 1949 --- MID-MONTH --- ELECTRONICS BUYERS' GUIDE

## Minimize Friction, space and weight...w ΜΙΝΙΑΤURE BALL BEARINGS

Bearings for precision instruments, controls and similar fine mechanisms can have the same properties of accurate alignment, long wear and freedom from attention as are achieved in larger applications . . . through the use of MPB bearings.

These bearings are available in a variety of types, sizes and materials to meet the designer's specific application requirements.



Radial bearing with shaft as inner race; for cam followers.

D

at -

assistance on any problem involving the application of small ball bearings. Our new catalog #49 contains detailed specifications on more than forty different types and sizes of standard miniature bearings. Ask for your copy today.

Also ask for "What You May Expect"-showing why you may not need ball bearings at all!

**RE** Precision **BEARINGS** 

INCORPORATED KEENE, NEW HAMPSHIRE, U.S.A.



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# MOTRU ~ACKAGE

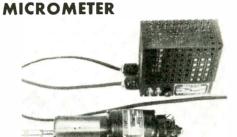
## ADD A A **REMOTE POSITIONING** NO OVERSHOOT **NON-HUNTING**

- A. Single Speed 1/2°-26 RPM-75"#
- B. Three Speed 1/6°-8.7 RPM-225"#
- C. Five Speed 1/10°-5.2 RPM-375"#

## VARIABLE SPEED

ADD A

50:1 to 100:1 2%-3% Regulation Micrometer Set to .05% or less --to 1/12 HP



IVO CONTROL

**HRO REPEATER** 

## ADD EXPLOSION-PROOF BOX

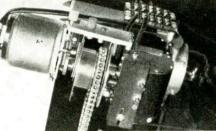
## PAPER WEB GUIDE AND TENSION CONTROL

Guides paper as close as edge can be determined. Machine shown is constructed of light sheet steel and angle framework.

# ADD SYNCHROSCOPE OR SYNCHRO

## THROTTLE SERVO TURBINE OR ENGINE

Remote Speed Control to .05% or exact Synchronizing to any A.C. standard frequency. Torque limiting or balancing optional



## ADD SPECIAL ENGINEERING + EQUIPMENT

**Many Other Uses** 

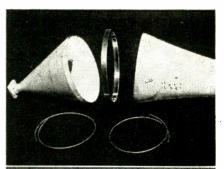


## MACHINE TOOL ACTUATOR SLIDE

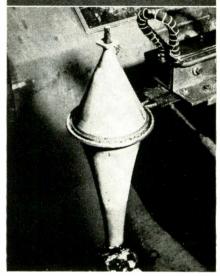
Positions and traces to .0005" under high cutting forces. Electronic interlocking provides travel protection with complete automatic cycle operation. No relays. Integral Amplifier.

For the Solution to Your Problem Call on

W. C. Robinette Co. 802R Fair Oaks Ave. South Pasadena, Calif.



## F-M DUMMY ANTENNA MADE WITH . .



Above are the antenna parts--two silver-plated copper spinnings and brass support ringand the two EASY-FLO 45 wire rings used to join them. As shown at left, heating is done by induction, with the alloy rings preplaced, one on each side of the joint. Results obtained by the manufacturer, Hoffman Radio Corp., Los Angeles, meet every requirement, while the brief three to four minutes of heating leaves the silver plate intact and creates no distortion. On work of this character, particularly with thin metals, you can't beat lowtemperature EASY-FLO silver alloy brazing. For the full story write today for BUL-LETINS 12-A and 15.



## Get **KOBZY** Quality INTO YOUR QUALITY PRODUCTS ...

## IMMEDIATE DELIVERY

FROM STOCK



LAMINATIONS HOUSINGS CONTACTS LUGS and Miscellaneous METAL STAMPING PARTS

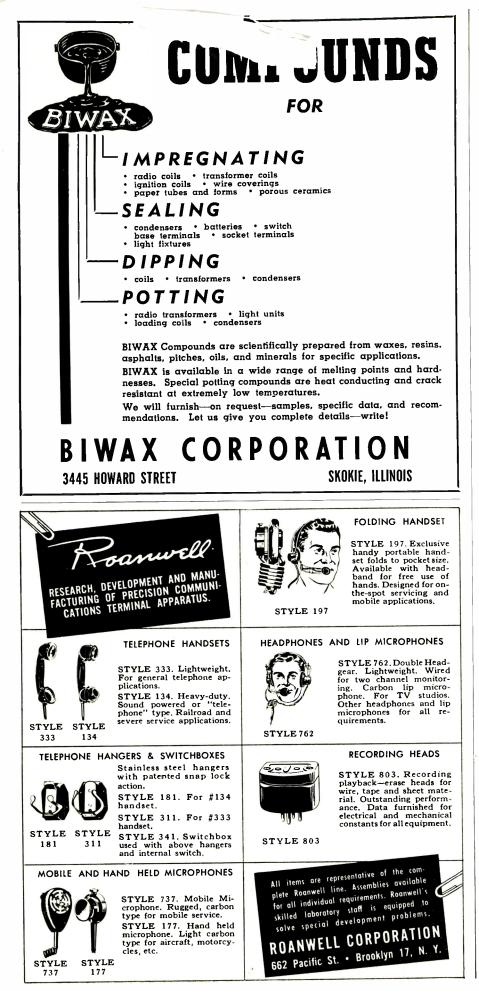
• If any of the many Kobzy Standard Products meets your requirements for television or other electronic purposes, we can give you immediate delivery. If special parts are wanted we are geared to give you prompt cooperation and there will be no delays.

You'll find that this organization produces that all important quality. We meet your definite specifications in specially designed parts. Get the benefits that come from an experienced, modernly equipped organization that has worked closely with engineers and designers in the radio and electronic industries for years.

Keep a copy of the Kobzy Catalog handy for reference. If you don't have one send for your copy.



ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH



# THIS IS THE ONE BOOK

THE ONLY ONE OF ITS KIND

In which 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.

Keep it handy for ready reference throughout the year.

When buying, or requesting product information be sure to mention...

## electronics BUYERS' GUIDE



The units listed on this page are representative of the most complete stock line in the industry available for 48-hour delivery from Stancor distributors in your territory or direct. In addition to maintaining the Stancor stock line of more than 400 part numbers, a large part of Stancor's modern production facilities is devoted to the fabrication of special design components for leading

manufactu. 1io, television and other electronic equ 🛀 Your inquiries are invited. Quotations win be furnished promptly.

Write for your copy of Stancor's 1949 catalog. In many cases, a standard catalog item will meet the special application, with a corresponding saving in cost.

#### **HF Series HIGH FIDELITY AUDIO Transformers**

These units have a wide frequency response of 20 to 20,000 cps with  $\pm 1$  db. Correct design reduces harmonic and intermodulation distortion to a negligible amount. Balanced humbucking construction minimizes hum pickup. Stancor

impregnation insures long life. Cases are finished in gray enamel and have four threaded holes at each end for flush mounting. Stud-type terminals are plainly marked for easy identification. LOW IMPEDANCE TO GRID

-								
PART NO.	APPLICATION	PRIMARY IMP/OHMS	SECONDARY IMP/OHMS	MAX. LEVEL IN DB	HUM-PICKUP REDUCTION		SHPG. WT., LBS	LIST PRICE
* H F-20	Low Imp. Mic., Pickup or Line to Grid	50, 125, 200, 250, 333, 500/600	60,000 overall, in two sections	15	-74 db	HF-1	3.0	\$24,50
<u>* H F-20 X</u>	Low Imp. Mic., Pickup or Line to Grid	50, 125, 200, 250, 333, 500/600	50,000	14	92 db	HF-1	3.0	31.25
* H F-22	Low Imp. Mic., Pickup or Line to P.P. Grids	50, 125, 200, 250, 333, 500/600	120,000 overall, in two sections	15	-74 db	HF-1	3.0	27.50
<u>* H F-22X</u>	Low Imp. Mic., Pickup or Line to P.P. Grids	50, 125/150, 200, 250/333, 500/600		14	-92 db-Q	HF-1	3.0	34.25
		INTERS	STAGE					
* H F-29	Sgl. Pl. to P.P. Grids-2A3, 6A3, 6L6, etc.	15,000	95,000 overall	17		HF-1	3.0	23,50
<u>* H F-81</u>	Single Plate to P.P. Grids. Split pri. and sec.	15.000	135,000 turn ratio 3:1 overall	14	-74 db	HF-1	3.0	24,00
<u>* H F-32</u>	P.P. Plates to P.P. Grids. Split pri. and sec.	30,000 Plate to Plate	80,000 turn ratio 1.6:1 overall	26	-50 db	HF-2	7.5	30.50
		MIX	ING					
* H F-40	Low Imp. Mixer, Mic., Pickup or Line to Line	50, 125, 200, 250, 333, 500/600	50, 125, 200, 250, 333, 500/600	17	-74 db	HF-1	3.0	24.50
		OUT	PUT					
*HF-65†	P.P. 2A3, 6L6, etc. to Line or Voice Coil	3,000 to 5,000 Plate to Plate	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333 or 500	20		HF-2	7.5	27.50
<u>+ H F-67</u>	P.P. 2A3's, 6A5G's, 300A's, 275A's, 6A3's, 6L6'	s 3,000 or 5,000 Plate to Plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	20		HF-2	7.5	20,00
*HF-68	P.P. Par. 2A3's, 6A5G's, 300A's, 6A3's	1,500 or 2,500 Plate to Plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	40		HF-3	15.0	49.50
HF-1 Cas $l^{15}/6^{"} \times 23$	se: Overall dimensions, 3¼" H x 3¼6" W x ¼6". HF-2 Case: Overall dimensions, 4½" F	2 <sup>9</sup> / <sub>16</sub> * D. Mounting centers, I x 4 <sup>3</sup> / <sub>16</sub> *W x 3 <sup>3</sup> / <sub>16</sub> * D. Mount-	ing Centers, 211/16" x 311/16". 411/16" D. Mounting centers,	HF-3 Case: ( 4 <sup>3</sup> /16" x 5 <sup>1</sup> /32".	Overall dimensi	ons, 41	$1_{16}'' H \ge 5'$	%16° W x
WF Se	eries HIGH FIDELITY AUDIC	<b>Transformers</b>						
These un series, ab	its are of the same premium quality ar ove, and, with the exception of the WF-	nd construction as the HF 21 unit, have a frequency	response of 30-20,000 cps ±2 db of 50-10,000 and ha	within $\pm 2$ data a multiple al	lb. The WF-2 loy shield for ex	l has tremel	a response y low hum	e within

PART NO,	APPLICATION	PRIMARY IMP/OHMS	SECONDARY IMP/OHMS	MTG.	SHPG. WT., LBS.	LIST PRICE
		INPUT				
* W F-20	Low Imp. Mic., Pickup or Line to Grid	50, 125, 200/250, 333, 500/600	50,000	WF-6	0.6	\$14.50
* W F-21	Low Imp. Mic., Pickup or L. to Sgl. or P.P. Grids	50, 200, 500	50,000	WF-6	0.6	15.50
* W F-22	Low Imp. Mic., Pickup or Line to P.P. Grids	50, 125/150, 200/250, 333, 500/600	80,000 overall, in two sections	WF-6	0.6	14.50
<u>* W F-24</u>	Dynamic Microphone to 1 or 2 Grids	30	50.000 in two sections		0,6	14.00
		INTERSTAGE				14100
* W F-26	Single Plate to Single Grid	15,000	60,000, 2:1 turn ratio	WF-6	0.6	12.75
* W F-28	Sgl. Pl. to 2 Grids. Can use split pri, for P.P. Pl.	15,000	80,000 overall, 2.3:1 turn rat, overall	WF-6	0.6	14.00
		LOW LEVEL OUTP			0.0	14.00
* WF-34	Single Plate to Line	15.000	50, 125, 200/230, 333, 509/600	WF-6	0.0	44.50
* W F-36	P.P. Low Level Plates to Line	30,000 Plate to Plate	50,125/150,200/250,333,500/600	WF-6	0.6	14.50
		MIXING	55, (29), 155, 265, 255, 055, 000, 100	W1-0	0.0	15.00
* W F-30	Low Imp. Mixer, Mie., Pickup or Line to Line	50, 125, 200/250, 333, 500/600	50, 125, 200/250, 333, 509/600	WF-6	0.6	14.50

§WF-6 Case: Overall dimensions, 2" H x 11/2" W x 11/2" D. Mounting centers, 15/2" x 15/2".

#### **HIGH FIDELITY OUTPUT Transformers**

These high quality units are made in ten stock sizes to match the most popular types of output tubes to speaker or line impedances. They have an excellent frequency response of 30-15,000 cycles within  $\pm 1.5$  db and are designed to

insure an extremely low percentage of intermodulation distortion over the en-tire frequency range and at any power level within the rating of the transformer.

PART NO.	PRI, Z C. T. OHMS	SEC. Z IN OHMS#	TYPE OF TUBES	CLASS OF OPERA- TIONS	MAX. PRI. D. C. PER SIDE	MAX. AUDIO WATTS	TYPE OF MTG.	DIN H	W	ONS D	WEIGHT 1N CARTON	LIST PRICE
A-8050	1500	8,16	P.P. Par. 2A3's	AB	80	50	С	.1 <sup>5</sup> ís"	3%16"	14"	6.5	\$14.20
A-8051	2500	8, 16	P.P. Par. 6L6's	Α	150	50	C	4 <sup>5</sup> 16	39/16"		6.5	14.20
A-8052	3000	8, 16	P.P. 2A3's	AB	75	25	C	43/16"	39/16"	$-\frac{1}{4}\frac{4}{4}$	6.5	12.80
A-8053	5000	8, 16	P.P. 6L6's or2A3's	A	75	25	<u> </u>	43/16	3%6"	- <u>4 14</u>	6.5	12.80
A-8054	9000	8, 16	P.P. 6L6's	AB1	75	25	Č	-15/16"	3916	44	6.5	12.80
A-8060	1500	500	P.P. Par. 2A3's	AB	80	50	<u> </u>	-4 <sup>5</sup> /16	3%16	414	6.5	
A-8061	2500	500	P.P. Par. 6L6's	A	150	50	<u> </u>	45/16	39/16"	4 1/ #	6.5	14.20
A-8062	3000	500	P.P. 2A3's	AB	75	25	$\frac{c}{c}$	45/16	3%16"	<u>4'4</u> 4!⁄*		14.20
A-8063	5000	500	P.P. 6L6's or 2A3'		75	25		- 107			6.5	12.80
A-8064	9000	500	P.P. 6L6's	AB1	75			45/16	39/16"	41/4"	6.5	12.80
A 0004			1.1.01.05	ADI	15	25	C	45/16	3%6"	41/1"	6.5	12.80

\*New part number. †Response ≠ 1 db from 25 to 20,000 cps. #Where more than one secondary impedance is shown, only one value is to be used at any time.

## STANDARD TRANSFORMER CORPORATION, 3580 ELSTON AVE., CHICAGO 18, ILLINOIS

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH



IMPEDANCE . . .

200 ohms

level of only 200 ohms; thus, existing coaxial cables can readily be used. Standing wave ratio of less than 1 db per stage for low-level, h-f measurements. For use in oscillog-

Model 202

WIDE-BAND

CHAIN

AMPLIFIER SPECIFICATIONS

100 kilocycles to 200 megacycles

20 db

200 ohms

VOLTAGE GAIN . . .

IMPEDANCE . . .

BAND WIDTH . . .

raphy, nuclear research, laboratory measurements. Also as pre-amplifiers for vacuum tube voltmeters, sweep generators, oscilloscopes, and radio and television testing equipment. Especially suited to study of pulses, transient wave forms, and similar phenomena.



A two-stage traveling wave amplifier in which reflections are reduced to a minimum because degree of coupling between coil sections has been carefully chosen, and terminating sections of delay-lines can be varied. This permits adjustment of response characteristic to fit particular appli-

cations as well as particular co-axial cables. A flat characteristic with sharp h-f cutoff can be obtained where continuous wave amplification is required. For pulse amplification, the h-f cutoff can be made less sharp, thereby reducing "overshoot" to a minimum.

#### 400 Series **BRIDGE-CONTROLLED** THYRATRON THERMOSTAT SPECIFICATIONS

CONTROL Heater Elem. OPER. VOLT.	Resist. Thermo.
115-230 v, AC	115—230 v, AC
21°C to 1200°C	70°F to 1000°F
Less than ± 0.2°C	Less than $\pm$ 0.1 $^{\circ}$ F



MODEL	400A	401	450
NOMINAL CURRENT	3 amps 15 amps, max.	3 amps 15 amps, max.	71∕₂ amps 80 amps, max.
NOMINAL POWER INPUT 115 Volts 230 Volts	325 watts 650 watts	325 watts 650 watts	<b>8</b> 50 watts 1700 watts
TEMPERATURE	Fixed-step	Continuous	Continuous

Complete information available upon request.

SPENCER-KENNEDY LABORATORIES, INC. 186 MASSACHUSETTS AVENUE CAMBRIDGE, MASSACHUSETTS

MAKERS OF PRECISION TEMPERATURE CONTROLS, DURAL KNURLED KNOBS AND POWER SUPPLIES



Don't Overlook the

MATERIALS SECTION

of this issue of the electronics

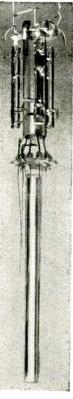
## **BUYERS'** GUIDE

In it you will find pertinent engineering information on . . .

- ACOUSTIC MATERIALS
- CERAMICS
- COATINGS
- FLUORESCENT COMPOUNDS
- GASES
- GLASS
- INSULATION
- MAGNETIC CORE MATERIALS
- METALS
- PERMANENT MAGNET MATERIALS
- PLASTICS
- POTTING COMPOUNDS
- RADIOACTIVE MATERIALS
- SEALING COMPOUNDS
- WAXES

## used in the manufacture of electronic and allied products

Comments and suggestions on this section of the Buyers' Guide will be appreciated.





Three Pillar Construction

Accepting orders now for immediate delivery.

Samples upon request.

New and rebuilt glass machinery for television, radio and lamp making,

> HAYDU BROTHERS PLAINFIELD, N. J.

## 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.



## **RADIO • TELEVISION • INSTRUMENT AND** GENERAL ELECTRICAL MANUFACTURING





For greater strength: Allen  $\bigcirc$  Head Screws permit the use of smaller sizes. For instance a No. 6 Allen O Head Cap Screw is equivalent to a No. 8 conventional screw.

For space economy: Allen O Head Screws permit closer spacing of screws, eliminate projecting heads.

For greater holding power: Allen 🔿 Head Screws are insurance against avoidable costly service operations.

In hard-to-reach places: Allen O Head Screws, plus Allen Hex Keys and Drivers start screws easily and save awkward "fingering in."

For fine adjustments, close, snug fit between key and screw permits delicate adjustments that stay put.

For tomper-proof settings in gauges and instruments, Allen O Head Screws can be set below surface and wax sealed.

If vibration is a factor, the precise Class 3 fit of Allen O Head Screws will build longer trouble-free life into the product.

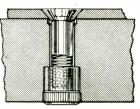
For a ready-made threaded hole, the new Allenut offers greater holding power and positive anchor in soft metals.

Allen () Head Screws are available as standard items in a wide range of sizes ranging upward from No. 4 x 1/8". NC and NF threads. Popular sizes also available in 18-8 nonmagnetic stainless steel. Set screws stocked in cup, oval, flat cone and half dog points (full dog, special).

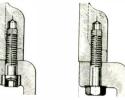
Sold only through leading distributors. Write the factory for technical information or regarding any special requirement.



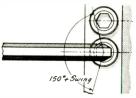
WARNING Allen-Type screws aren't necessurily Allen-Made. Get gennine "Pressur-formd Allen O Head screws in this block and silver bex.



Allenut and Allen Flat Head Cap Screw used to hold thin metal plate to metal base. Allenut has been pressed into counterbored hole. Will not fall out or turn against driving action.



Allen O Head Cap Screws contribute to compact designing. Can be countersunk without allowing for wrench clearance.



Allen O Heads permit close spacing impossible with conventional heads.



Firm grip without the use of weak slots or projecting heads.



FOR 40 YEARS THE BUY-WORD FOR SOCKET SCREWS

## **BUSS Fuses**

## FUSETRON dual-element Fuses and Fuse Holders

for Protection of Radios, Instruments and Electronic Equipment

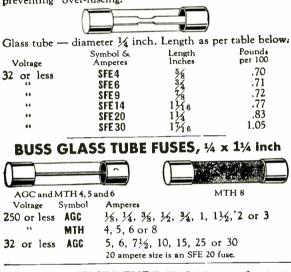
## FAST ACTING FUSES for **PROTECTION OF INSTRUMENTS, Etc.**

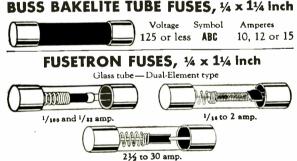
Provide high speed action necessary to protect sensitive instruments.

	J4 x 1 inch, Glass tube				
MIB	AGX				
Voltage Symbol 250 or less MJB '' AGX	Amperes 1500, 1200, 1100, 152 or H6 16, 14, 38, or 12				
125 or less AGX	$\frac{34}{4}$ , 1, 1 <sup>1</sup> / <sub>2</sub> or 2				
BUSS FUSES - SEE STANDARD					

#### BUSS FUSES

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





## A FUSE WITH A LONG TIME-LAG

These fuses avoid needless blows from starting currents or I nese ruses 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 short-circuits or continued overloads.

Test specification—carry 110%, open at 135% in 1 hour. Approximate blowing time: at 200% load 25 seconds

at 500% 125 and 250 volt sizes listed as approved by Underwriters' Laboratories. ....

Shipping weigh	ht 0.9 lt	os. per 100.
Voltage	Type	Amperes
250 or less	MDL	Amperes 1400, 182, 16, 10, 15/100, 210, 310, 40,
		$\frac{1}{2}, \frac{6}{10}, \frac{8}{10} \text{ or } 1$
125 or less	MDI	$1\frac{1}{4}$ 16% or 2. or 21%
32 or less	MDL	3 <sup>2</sup> / <sub>10</sub> , 4, 5, 6 <sup>1</sup> / <sub>4</sub> , 8, 10, 15, 20, 25 or 30
JE OI ICSS		

## **BUSS FUSE CLIPS & CLIP ASSEMBLIES**

## for $\frac{1}{4}$ inch Fuses

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

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

Beryllium copper clips combine low electrical resistance with great gripping strength. This means cooler operation of clips and fuse. 4548 Spring bronze clip, nickel plated. 4592 Beryllium copper clip, Silver plated.

Assemblies consist of clip, terminal screw;

brass terminal, and mounting screw.
4431 uses No. 4548 clip — described above.
4432 uses No. 4592 clip — described above.

## BUSS FUSE BLOCKS



Blocks are made of 3/16 inch bakelite with countersunk mounting holes. Clips are of spring bronze.

Fuse blocks are made in many sizes and types. Tell us your requirements.

## **BUSS FUSE HOLDERS**

Make it convenient to mount fuse on any equipment.

It is easy to change or inspect fuse. Holder has removable knob. Fuse projects beyond body of holder and is not held tight on other end when knob is removed.

Fuse and contacts are protected from dirt and fumes. Good contact on fuse is made certain by strong coil

spring pressure. Poor contact heating that often causes fuses to blow needlessly is eliminated.

Holder bodies are made of black bakelite. All current carrying parts are of brass or copper. Terminals and all contact parts are bright alloy plated.

### 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  $\frac{1}{4} \times 1$  inch fuses (AGX, MJB, SFE 14) HKP for  $\frac{1}{4} \times 1\frac{1}{4}$  " " (ABC, AGC, SFE20, MDL, MTH)

## IN-THE-LINE HOLDERS for 1/4 inch Fuses

Holders are for mounting in wire. Consist of body and



bayonet type knob-two terminal contacts ready to be crimped on wire - a pressure spring that is used under contact in base of holder.

Holder can also be mounted in panel up to 5/16 inch thick by means of a Tinnerman nut. Flat spot on holder permits it to be locked against rotation

Normal current carrying capacity: 15 amperes.

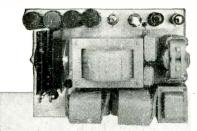
- for <sup>1</sup>/<sub>4</sub> x 1 inch fuses (AGX, SFE 14, MJB) Takes No. 18 or smaller wire. HDI
- HDJ-A for  $\frac{1}{4} \ge 1\frac{1}{4}$  inch fuses (ABC, AGC, MDL, MTH, SFE 20)
  - Takes No. 18 or smaller wire.
- **HDJ-B** for  $\frac{1}{4} \ge 1\frac{1}{4}$  inch fuses (as above) Takes No. 14 or 16 wire.

#### 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

June, 1949 --- MID-MONTH --- ELECTRONICS BUYERS' GUIDE

Gene	ral Appli	cation 4
	Load Range	*Regulation
Model	Volt-Amperes	Accuracy
150	25-150	0.5%
250 500	25-250	0.2%
1000	100-1000	0.2%
2000	200-2000	0.2%
tion accura	railable with incr cy.	eased regula-
		•
Extra	a Heavy L	oads
	a Heavy L Lood Range	. O a d S *Regulation
Model	A Heavy L Load Range Volt-Amperes	*Regulation Accuracy
Model 3,000	A HEAVY L Load Range Volt-Amperes 300-3000	*Regulation Accuracy 0.2%
Model	A Heavy L Load Range Volt-Amperes 300-3000 500-5000	*Regulation Accuracy 0.2% 0.5%
Model 3,000 5,000	A HEAVY L Load Range Volt-Amperes 300-3000	*Regulation Accuracy 0.2%
Model 3,000 5,000 10,000 15,000 *Models ave	• A Heavy L Load Range Volt-Amperes 300-3000 500-5006 1006-10,000 1508-15,000 ailable with incre	*Regulation Accuracy 0.2% 0.5% 0.5% 0.5%
Model 3,000 5,000 10,000 15,000	• A Heavy L Load Range Volt-Amperes 300-3000 500-5006 1006-10,000 1508-15,000 ailable with incre	*Regulation Accuracy 0.2% 0.5% 0.5% 0.5%



#### The NOBATRON Line Output oad Range Voltage DC Amps. 6 5-15-40-100 12 5-15-50 28 10-30 48 15 125 5-10 Regulation Accuracy-.25% from ¼ to full load.



400 Cycle Line Inverter and Generator Regulators for Aircraft Single Phase and Three Phase Load Range Reg. Nodel Volt-Amps. Accurac

Model	Volt-Amps.	Accuracy
D 100	10-100	0.5%
D 500	50-500	0.5%
D 1200	120-1200	0.5%
D 2000	200-2000	0.5%

## Special Transformers, D. C. Power Supplies, Saturable Core Reactors and Meter Calibrators made to order; please request information. SORENSEN & Company, Inc. Stamford, Connecticut Represented in all principal cities.

the first line of

**STANDARD** 

electronic AC voltage

regulators and nobatrons

GENERAL SPECIFICATIONS • Harmonic distortion : max. 5% basic or 2% "S"

Input voltage range: either 95-125 or 190-250

Output: adjustable between either 110-120 or

All AC Regulators and Nobatrons may be used at no load. Special Models designed to meet your unusual applications. Write for the new Sorensen catalogue. It contains complete specifications on standard Voltage Regu-

models

volts

220-240 volts

lators and Nobatrons.

Input frequency range: 50-60 cycles

• Power factor range: down to 0.7 P. F.



## 3-Phase Regulation

Star-connected three-phase systems can be handled effectively. Other three-phase systems must be reviewed by our Engineering Dept. VA Capacities up to 45 KVA.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH



## Don't Guess - Specify BOND Precision Resistors and Coils

■ Where space-saved is vital, specify BOND Miniature Resistor #503. The smallest noninductive wire-wound unit now available! Being designed is a unit even smaller: for Aircraft, TV, and Electronic apparatus.

■ Another New First! Multiple Resistor #210 has (4) independent, non-inductive windings internally connected to any conceivable network, to meet your requirements. Unit is designed primarily to cut production assembly costs.

■ Entire Bond Resistor line manufactured in accordance with Jan R-93 specifications. Fungi and humidity proofing, standard feature. Plus a complete line of Precision Wire-Wound Resistors, available in tolerances from 1% to 0.1%.

Bond Coil facilities now ready:

TOROIDAL INDUSTRIAL RADIO TELEVISION

for custom winding to your exact specifications and requirements.

Send for Bond Catalog and Information Today!



## Complete Moisture & Fungus Proofing Service

## TREATMENT OF COMPONENT PARTS TO GOV'T SPECS. JANIZING - TROPICALIZING HOT WAXING AND VARNISHING

A new high-speed low-cost method for Automatic Moisture Proofing.

• DEHYDRATING .

Small parts are thoroughly dehydrated for the length of time needed to thoroughly extract moisture.

• AUTOMATIC DIPPING .

Parts are waxed and varnished according to specifications and all areas are thoroughly coated.

• IMPREGNATING . . . Sufficient time is allowed to thoroughly impregnate all materials to the full extent of their porosity.

.

• CENTRIFUGING . . . All surplus wax is removed by this operation leaving all machined surfaces and counter bores clean and smooth.

DOW-CORNING SILICONE TREATMENT OF ALL TYPES OF CERAMICS



## THIS IS THE

ONE BOOK

THE ONLY ONE OF ITS KIND

In which

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.

Keep it handy for ready reference throughout the year.

When buying, or requesting product information be sure to mention...

## electronics BUYERS' GUIDE

June, 1949 --- MID-MONTH --- ELECTRONICS BUYERS' GUIDE



FREQUENCY RANGE: 40 - 20,000 c.p.s., scale logarithmic.

FIVE INPUT VOLTAGE RANGES: 0.5mv to range divided into seven scale 500v, each ranges with precision step attenuators. Internal voltage and frequency calibrators.

RESOLUTION: See graph VOLTAGE SCALE: Linear and two decade log

VOLTAGE ACCURACY: Within 10% on linear

## **PANORAMIC SONIC ANALYZER**

Complete Audio Waveform Analysis in ONLY ONE SECOND

MODEL AP-1 is a scanning heterodyne instrument which in only one second automatically separates the frequency components of a complex electrical wave and simultaneously measures their frequency and amplitude. Components between 40 - 20,000 c.p.s. are graphically displayed, on a long per-sistence 5" cathode-ray tube screen, as vertical deflections distributed horizontally in order of frequency. Deflection height directly indicates component magnitude. Simplicity of operation and high speed spectrum visualization assure the fastest, simplest and most direct determinations of waveform content under static or dynamic conditions.

#### SPECIFICATIONS

scale and 1.5 db on log scale. Residual harmonic products suppressed at least 60db, hum suppressed at least 55db below maximum

signal permitted on any input range. INPUT IMPEDANCE: 250,000 ohms, approximately constant. POWER SUPPLY: Voltage stabilized, operates

on 115V-230V, 60 cycle, 100 watts. DIMENSIONS: 22%" x 2234" x 20 x 22<sup>3</sup>⁄4" x 20<sup>1</sup>⁄2"

SB-8

MODELS SA-3, SA-6, SA-8

MODELS SB-3, SB-6, SB-8

#### VISUAL PRESENTATION OF RF SPECTRUM FOR SIMPLE, RAPID ANALYSIS

PANADAPTOR PANALYZOR

By visualizing the frequency and amplitude of signals in portions of the RF spectrum, the Panalyzor and Panadaptor provide the utmost in simplicity and speed for investigating and solving such RF problems as frequency stability, modulation characteristics, oscillation, parasitics and monitoring under static and dynamic conditions.

PANADAPTOR units operate with superheterodyne receivers which tune in the spectrum segment to be observed.

PANALYZORS use an external signal generator for this purpose and have a flat amplitude response for determining relative levels of signals.

LYZOR Model SB-3 DAPTOR Model SA-3 Types		Model SB-6 Model SA-6 Types		Model SB-8 Model SA-8 Types				
T50	T200	T1000	T6000	T10,000	T20,000	T200	T1,000	T10,000
50KC	200KC	1MC	6МС	10MC	20MC	200KC	1M	10M
2.5KC	4.4KC	11.0KC	25KC	75KC	100KC	4KC x 2KC **	9KC x 4KC **	55KC x 25KC **
1.9KC	3,8KC	7.5KC	22KC	65KC	75KC	450cps x 200cps **	600cps x**	12KC x**
500KC	500KC	5MC	30MC	30MC	30MC	500KC	5MC	30MC
455KC	455KC	5.25MC	30MC	30MC	30MC	455KC	[5.25 MC	30MC
	50KC 2.5KC 1.9KC 500KC	Mod. T50 T200 50KC 200KC 2.5KC 4.4KC 1.9KC 3.8KC 500KC 500KC	Model SA-3 Types           T50         T200           50KC         200KC           1.9KC         3.8KC           7.50KC         500KC	Model SA-3 Types           T50         T200         T1000         T6000           50KC         200KC         1MC         6MC           2.5KC         4.4KC         11.0KC         25KC           1.9KC         3.8KC         7.5KC         22KC           500KC         500KC         5MC         30MC	Model SA-3 Types         Model Ty           T50         T200         T1000         T6000         T10,000           50KC         200KC         1MC         6MC         10MC           2.5KC         4.4KC         11.0KC         25KC         75KC           1.9KC         3.8KC         7.5KC         22KC         65KC           500KC         500KC         5MC         30MC         30MC	Model SA-3 Types         Model SA-6 Types           T50         T200         T1000         T6000         T10,000         T20,000           50KC         200KC         1MC         6MC         10MC         20MC           2.5KC         4.4KC         11.0KC         25KC         75KC         100KC           1.9KC         3.8KC         7.5KC         22KC         65KC         75KC           500KC         500KC         5MC         30MC         30MC         30MC	Model SA-3 Types         Model SA-6 Types           T50         T200         T1000         T6000         T10,000         T20,000         T200           50KC         200KC         1MC         6MC         10MC         20MC         200KC           50KC         4.4KC         11.0KC         25KC         75KC         100KC         4KC x 2KC **           1.9KC         3.8KC         7.5KC         22KC         65KC         75KC         200cps x 200cps x 200cps **           500KC         500KC         5MC         30MC         30MC         30MC         500KC	Model SA-3 Types         Model SA-6 Types         Model SA-8 Types         Model SA-8 Types           T50         T200         T1000         T6000         T10,000         T20,000         T200         T1,000           50KC         200KC         1MC         6MC         10MC         20MC         200KC         1M           2.5KC         4.4KC         11.0KC         25KC         75KC         100KC         4KC x         9KC x           1.9KC         3.8KC         7.5KC         22KC         65KC         75KC         450cps x         200cps **         600cps x**           500KC         500KC         5MC         30MC         30MC         500KC         5MC

or 30cps scenning rate



USES

- Harmonic and Cross Modulation Studies
- Filter and Transmission Line Checks
- **Vibration Analysis**
- **Noise Studies**
- Telemetering Monitoring
- ELECTRONICS BUYERS' GUIDE June, 1949 MID-MONTH

FREQUENCY IN CPS

USES

Intermodulation Measure-

**High Frequency Vibration** 

Harmonic Analysis

Noise Investigations

**Acoustic Studies** 

ments

Studies

1,000

CPS

NOI

ESOLU 100



#### SOME USES

- Analyzing FM and AM Transmitters
- Testing Diathermy, Industrial **RF** equipments
- Analyzing Oscillators
- Monitoring Communications Channels
- Investigating Pulsed R.F. Signals
- Telemetering

MODELS SA-8, SB-8 . . FOR USE WHEREVER MAXIMUM SIGNAL **RESOLUTION IS A "MUST."** 

#### SPECIAL FEATURES

Continuously Variable Resolution. Variable Scanning Rates, Synchronous and Non-synchronous. Long Persistence Displays. Intensity Grid Modulation for Pulse Analysis



## PANORAMIC ULTRASONIC Model SB-7 for Easy, Fast Ultrasonic Spectrum Analysis

An entirely new instrument, the SB-7 provides continuous, high speed graphic displays of frequency versus amplitude of signals between 2KC and 300KC. Allows observation of many signals at one time. Enables instant identification of signals and their characteristics. Provides rapid indications of random changes in energy distribution. Direct Reading.

## SPECIFICATIONS

FREQUENCY RANGE: 2KC - 300KC, stabilized linear scale SCANNING WIDTH: Continuously variable from 200KC

to zero. FOUR INPUT VOLTAGE RANGES: 0.05V to 50V. Full

- scale readings obtainable with 1mv to 50V. AMPLITUDE SCALE: Linear and two decade log AMPLITUDE ACCURACY: Within 1db. Residual harmonics suppressed by at least 50db.
- RESOLUTION: Continuously variable. 2KC at maximum scanning width, 500 c.p.s. for scanning widths below 8KC. INPUT IMPEDANCE: 1 megohm shunted by 25mmf, approximately constant.

FOR COMPLETE DETAILS: Complete data and prices available on request on all Panoramic Products



## PLASTICON ( CAPACITORS



Cat. No.

PS-1 PS-2 PS-5

**PS-10** 

PS-30

VDC

2400 2400 5000

10000

30000

## **GLASSMIKES ASG**

Cat.

No.

LSG500 LSG101 LSG251

LSG501

LSG301 LSG102 LSG202 LSG502

LSG602

LSG103

Cap. Mfd.

.00005

.0001 .00025

.0005

.001 .002 .005

.006

.01



Type ASG are Plasticon A dielectric-silicone fluid impregnated capacitor elements in hermetically sealed glass tubes. Temperature range  $-60^{\circ}$  G to  $\pm 125^{\circ}$  C. The smallest and lightest high voltage capacitors made. Type ASG are ideal for DC and low frequency AC applications.

Cat. No.	Cap. Mfd.	Volts D.C.	Dimen- sions	List Price
ASG 1	.01	600	19/13/13/16"	\$1.50
ASG 2	.02	600	19/4×13/6"	1.60
ASG 3	.05	600	19 49 x 19 48"	1.75
ASG 4	.1	600	3/4 x 1 3/4 "	1.95
ASG 5	.25	600	29 /4×2 1/4 "	2.25
ASG 6	.5	600	1 3/8 x2 3/4 "	2.60
ASG 7	.005	1,000	19,52×18,16"	1.50
ASG 8	.01	1,000	19/13 13/16"	1.60
ASG 9	.02	1,000	19/4×18/6"	1.70
ASG 10	.05	1,000	74 X 1 74	1.85
ASG 11	.1	1,000	3/4 x2 1/4 "	2.15
ASG 12	.25	1,000	29/22 3/4 "	2,50
ASG 13	.002	2,000	12/3gX 12/18	1.90
ASG 14	.005	2,000	1 /g X 1 //6	2.05
ASG 15	.01	2,000	1 /g X 1 / 16	2.25
ASG 16	.02	2,000	19 / X 19 / B"	2.50
ASG 17	.05	2,000	233 24	2.80
ASG 18	.1	2,000	29 /2×2 1/4 "	3.20
ASG 19	.25	2,000	1 3/8 x2 3/4 "	3.70
ASG 20	.001	3,000	19 /2x 1 3/16"	5.15
ASG 21	.002	3.000	19/28X13/18" 19/28X13/18"	5.25
ASG 22	.005	3,000	19 4X I 3/16"	5.40
ASG 23	.01	3,000	19/2×19/16"	5.60
ASG 24	.02	3,000	24 X I 24	5.85
ASG 25	.05	3,000	<sup>29</sup> / <sub>2</sub> ×2 <sup>1</sup> / <sub>4</sub> "	6.15
ASG 26	.1	3,000	1 78 84 74	6.50
ASG 27	.001	5,000	19/13/18"	6.50
ASG 28	.002	5,000	19 4x 1 3/18"	6.70
ASG 29	.005	5,000	1 %3X 1 */16	6.95
ASG 30	.01	5.000	% X1 %	7.25
ASG 31	.02	5,000	% X4 74	7.65
ASG 32	.05	5,000	1 78 4 4 74	8.15
ASG 33	.1	5,000	1 % X3 22	9.10
ASG 34	.001	7,500	19/2x19/18"	7.00
ASG 35	.002	7,500	19/2×19/6"	7.25
ASG 36	.005	7,500	24 X 1 74	7.55
ASG 37	.01	7,500	%4 X Z %4	8.15
ASG 38	.02	7,500	<sup>29</sup> / <sub>2</sub> ×2 <sup>3</sup> / <sub>4</sub> "	9.25
ASG 39	.05	7,500	13/8×23/4"	
ASG 40	.0005	10,000	<sup>19</sup> / <sub>18</sub> X <sup>19</sup> / <sub>18</sub>	7.30
ASG 41	.001	10,000	19/11/19/15"	7.80
ASG 42	.002	10,000	1.Vay 1./16	9.00
ASG 43	.005	10.000	<sup>3</sup> / <sub>4</sub> x1 <sup>3</sup> / <sub>4</sub> "	10.50
ASG 44	.01	10.000	<sup>29</sup> ⁄4x2 <sup>1</sup> ⁄4″ 1 <sup>3</sup> ⁄8x2 <sup>3</sup> ⁄4″	12.50
ASG 45	.02	10,000	$1\frac{1}{8}x2\frac{4}{1}$ $1\frac{3}{8}x3\frac{1}{2}''$	15.00
ASG 46	.03	10.000	$1\frac{1}{8}x3\frac{72}{2}$ $1\frac{3}{8}x3\frac{1}{2}$ "	17,50
ASG 60	.06	10,000	<sup>1</sup> % X3 72 <sup>29</sup> /2X2 3/4 "	14.50
ASG 47	.0005		29/2X23/4"	14.80
ASG 48	.001	15,000	13/8×2 % "	15.50
ASG 49 ASG 50	.002	20.000	1 3/8 x3 1/2"	19.50
	.0005	20.000	1 % x3 ½ ″	20.50
ASG 51 ASG 52	.0001	30,000	13/8 x3 1/2"	22.50
130 34	1.0000	1 00,000	1 1/10/2	,

## INDUSTRIAL and TRANSMITTING

Plasticon A element; mineral oil impregnated insturdy lead coated steed containers. Smaller. lighter and more econom-ical than paper capa-citors. Temperature range - 40° CoC-rectanguitation oval. Type ASC and ASCO (not listed) hux Plas-toot Achement, sili-Same dimensions as corresponding AO types. Temperature atom.

range  $- 60^{\circ}$  C to  $+ 125^{\circ}$  C; stability. Prices on application.

(Cr

#### DC RECTANGULARS Cap. Volts Dimensions List Cat.

CP

	No.	Mfd.	DC		Din	iens		1	Pric	e
	AOC6C1	1.0	60	00	$2\frac{1}{8}$	1 3/4	1″	9	S3.	74
	AOC6C2	2.0	60	00	244	1 3/4	1″		4.	
	AOC6C4	4.0	60	00	31/2	$2\frac{1}{2}$	13/16"		5.0	
) i	AOC6C8	8.0	60		4	3 3/4	14"	L 1	8.	
	AOC6C10	10.0	6	00	4%	$3\frac{1}{4}$	114"		9.	52
;	AOCIM1	1.0	1,00		$2\frac{1}{8}$	$1\frac{3}{4}$	1″	L	4.	
5	AOCIM2	2.0	1.0		4	$1\frac{3}{4}$	1″	1		39
) [	AOCIM4	4.0	1.00		4	$2\frac{1}{2}$	13/16			54
	AOCIM8	8.0	1,0		4 1/8	$3\frac{1}{4}$	134"			24
	AOCIM10	10.0	1.0		4 %	$3\frac{3}{4}$	1 1/1	1	10.	67
	AOC2MO5		2,0		$2\frac{3}{8}$	1 %	1″			84
5	AOC2M1	1.0	2,0		$3\frac{1}{2}$	134	1	1		88
5	AOC2M2	2.0	2,0		312	212	13/16			82
	AOC2M4	4.0	2,0		31/2	3 3/4	1 4	÷		24
	AOC3M1	1.0	3.0		4	21/2	1.10	1	12.	
2	AOC3M2	2.0	3,0		4	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$	$\frac{1\frac{1}{4}}{2\frac{1}{4}}$		21.	
2	AOC3M4	4.0	3,0		4%		11/4	1 :	27.	
2	AOC4M1	1.0	4,0		4	$\frac{3\frac{1}{4}}{3\frac{3}{4}}$	1 %		33.	
2	AOC4M2	2.0	4,0		4	334	4%		33. 50.	
2	AOC4M4	4.0	4,0		4	3%	1 34		33.	
2	AOC5M1	1.0			4316				41.	
2	AOC5M2	2.0	5.0		332		49/16		49	
2	AOC75C1	1.0	10.0		4	334	49/16		88.	
2	AOC10M1	1 1.0	110.0	00	-12	0 74	-x /jb	1 1	50.	00
	DC OVALS									
5			-	-						_
5	Cat. N		Cap.	Vo			nen-		Li	
5	Gat. It	<u> </u>	Mfd.	D.	G.		ons	_	Pri	-
D	AOCO6C2		2.0				2 1 1/2		\$4	
2	AOCO6C4		4.0			4	2 11/2	k	5	.28
2	AOCO1M		1.0		000		2 1%	t. 1	3	.85
2	AOCO1M2		2.0		000		2 11/2	τ I		.17
2	AOCO3M		0.1		000		2 11/2	8)		.59
2	AOCO5M		0.1		000		2 11/2	s )		.08
2	AOCO5M		0.25		000		2 11/2	4		.40
2	AOCO5M		0.5		000		$     \begin{array}{ccc}       2 & 1 \\       2 & 1 \\       2 & 1 \\       \end{array} $	1, //		.15
	AOCO8M		0.05		000		$\frac{2}{2}\frac{1}{2}$	3,11		.72
0	AOCO8M		0.1		000		$\frac{2}{2} \frac{1}{1}$	4 J		,25
Õ	AOCOION	1005	0.05	110,	000	0 /2	2 1 %	4 3	19	,23

## LABORATORY CAPACITORS

Type IAG (Glassmike style) and Type IAC (Rectangular can) have the lowest delectric ab-sorption of any capacitor made. Residual charge is  $01 - 0.2^{\circ}$ . Dissipation factor at 1 MC is .0002 to .0003. Capacitance and Q is constant from DC to 100 KC. Resistance averages one million mergohms per microfarad. Standard capacitance tolerance is  $\pm 5\%$ . Type IA units are used for timing and integrating circuits. Plasticon L film-silicone fluid i m-gragnant in Glass mike at 3500 WV-7500 V Test. Lower losses, more easily mounted, smaller and more economical than mica capacitors.

Cat. No.	Cap. Mfd.	Dimensions		
LAG101	.0001	19/10 18/18"		
LAG201	.0002	19/mx13/16"		
LAG501	.0005	19/gx 13/16"		
LAG102	.001	19/mx13/15"		
LAG202	.002	19/mx 1 3/4 "		
LAG502	.005	3/4 x 1 3/4 "		
LAG103	.01	34 x1 34 "		
LAG203	.02	34 x2 1/4 "		
LAG503	.05	29/2x21/4 "		
LAC104	.1	2¼x1¾x1"		
LAC204	.2	21/4 x21/2 x13/6"		
LAC504	.5	4x2 1/2 x13/18"		
LAC105	1.	4x3 ¼ x1 ¼		
LAC205	2.	4x3¾x2¼′		
LAC505	5.	6x3¾x4%/s		
P	rices Upon A	plication		

The above condensed version of the Plasticon Line appears in the catalogs of leading electronic distributors. Plasticons are manufactured by Condenser Products Company, Chicago 22, Illinois

Dimensions OD Lengt

1948134'

29/4x19/4

29/0×13/

Length

**RF GLASSMIKES** 

Plasticon L

List Price

\$1.50

1.50 1.50 1.50 1.70 2.45

3,50 3,75 4,25

List Dimensions Price 3<sup>3</sup>/<sub>4</sub>x3<sup>3</sup>/<sub>4</sub>x5<sup>1</sup>/<sub>2</sub>" 3<sup>3</sup>/<sub>4</sub>x3<sup>3</sup>/<sub>4</sub>x5<sup>1</sup>/<sub>2</sub>" 4<sup>3</sup>/<sub>4</sub>x3<sup>3</sup>/<sub>4</sub>x6<sup>1</sup>/<sub>2</sub>" 4<sup>9</sup>/<sub>4</sub>x3<sup>3</sup>/<sub>4</sub>x8" 7x7x7" \$18.95 25.75 65.00 100.00

## PHOTOFLASH CAPACITORS

HIVOLT

For the best in photoflash capacitors, specify PLASTICONS for faster discharge and more light. Type AOCOE are the lightest photoflash capacitors made, more flexible to use, safer and more economical than single high capacitance large block.

PHOTO FLASH Watt Che Dimen-

Cat. No.	Watt Sec.	Pk. Chg V.	Dimen- sions	List Price
AOCOE22C3	7.6	2250	4x2x1¼"	\$4.95
AOCOE3M2	9	3000		5.12
AOCOE4M1.5	12	4000	4x2x1¼"	5.45
AOCOE55C1		5500		6.05
AOCE4M12			41/2x49/8x334	46.20
AOCE4M24	200	4000	8x4% x3 34 "	66.00

## PLASTICONS

By the use of synthetic plastic film dielectrics, PLASTICONS can be made smaller, lighter, more efficient and more economical than older types of capacitors made with paper and mica insulation. Plasticon films are chemically purer and more uniform. Plasticon capacitors have a longer life and can operate under more severe conditions.

## SPECIAL PLASTICONS

Taking advantage of the wide variety of plastic film dielectric character-istics, Plasticons are engineered to meet many special applications. We can furnish capacitors for 200°C for pulse network duty; close tolerances; ultra high resistance. Send us your specifications.

# KAY ELECTRIC COMPANY

## KAY MEGA-LINE



**MEGA-SWEEP** Wide range sweeping oscillator. Frequency range: 100 kc-1000 mc. Sweep: 30 mc. Price \$395.



#### **MEGA-MATCH** Visual display of reflected energy. Frequency range (Standard Model): 10-25( mc: (Modified Model): 10-1000 mc. Price STD. \$695, MOD. \$895.



**MEGA-PULSER** Ultra-short pulse generator. Pulse widths: .025, .05, 0.1, 0.25. Output: 100 v. across 50 ohms. Price \$195.





THE ALLYZER JR. Sensitive visual voltmeter and spectrum alignment. Frequency range: 19 to 49 mc. analyzer. Frequency range: 30 to 1000 mc. Sensitivity: 100 to 10,000 micro-v. Frequency resolution: 100 kc. Price \$250. **MEGALIGNER** 



#### **MEGA-MARKER SR.**

Crystal controlled. An accurate source of RF markers at sound carrier frequency. Frequency range: 12 channels. Output: channels 2-5, 6000 mv; 6-13, 3000 mv. channels 2-5, Price \$195.00,



**MICROWAVE MEGA-MATCH** Displays reflected energy at X-Band. Fre-quency range: 8500 to 9700 mc. Fre-quency sweep: 30 mc. Sensitivity reflec-tion coefficient down to 0.02. Frice \$895.



**MEGA-NODE** Calibrated noise source. Frequency range: 1-220 mc. Noise figure: 0-17 db at 50 ohms; 0-23 db at 300 ohms. **Price \$295** 



**SONA-GRAPH** A fourier analyzer for complex audio waves. Frequency range: 85-8000 ps. Recording time: 2.4 seconds. Amplitude display: 35 db. Price \$1595.



#### **SONALATOR**

An instantaneous fourier analyzer for complex audio or supersonic waves. Frequency range: 100-4000 cps and up. Frequency resolution 135 cps. Price \$950. WRITE FOR CATALOG

All prices FOB Factory. Prices outside U. S. A. and Canada 10% higher

KAY ELECTRIC COMPANY

#### 25 Maple Avenue

### Pine Brook, New Jersey

Caldwell 6-4000 Other instruments in the Mega-line: Micro-Pulser, Mega-Markers, Megalyzer, Mega-Pipper.

T

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

Pictured here is a tuning-fork frequency standard with accuracy guaranteed to one part per million per degree Centigrade. The fork is temperature-compensated and hermetically sealed against variations of barometric pressure. This standard, when combined with basic equipment, facilitates accurate speed and time control by mechanical, electrical, acoustical or optical means.

ANY FILEORENCE AND

The unit is available separately or in conjunction with complete timing instruments. Our engineers are ready to cooperate on any problem.

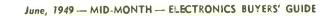
New York 19, N.Y.

MOTORS · FACSIMILE · AIRCRAFT · LABORATORIES cooperate on any problem.

580 Fifth Avenue

American Time Products.

OPERATING UNBER PATENTS OF THE WESTERN ELECTRIC COMPANY



## BIRD INSTRUMENTATION FOR COAXIAL TRANSMISSION

## **COAXWITCH . . .** The Selector Switch for Coaxial Circuits

These are 50 ohm switches, designed for use in coaxial circuits. Characteristic impedance is maintained thru all internal details of the switch and LOW STANDING WAVE RATIOS realized. Switch is comparable in VSWR with the cable and connectors with which it is used.

USES—As a channel selector in transmitter or receiver controls—production line testing of coaxial circuited equipment such as TV receivers-selection of antennas with phase monitors in directionals-intra-equipment switching in coax. links, etc.—with Model 72-2, double ended selection of insertion devices. filters, etc.

CABLE TYPES AND CONNECTORS—Three standard models now available for use with 50/52 ohm cable and Type "N" Fittings. Adaptors and special versions for use with other connectors are available. Other impedance levels, such as 70/75 ohm can be supplied.

STANDING WAVE RATIOS-at 550 mc, VSWR is below 1.03. At 1000 mc, below 1.1. At 3000 mc, VSWR is not over 1.3.

MODELS-Model 74 handles single circuit with choice of six channels. Model 72-2 handles double circuit with choice of two channels (DPDT). Model 718 handles single circuit with choice of eight channels.

#### TERMALINE DIRECT-READING RF WATTMETERS **VHF-UHF**

#### FOR USE WITH CW-AM-FM-TV TRANSMITTERS

Direct - reading instruments Direct reading instruments for power measurement of transmitters in the 30 to 1000 rc. 1 to 2500 watt group. Accuracy far exceeds any instrument previously avail-able. As simple as use of an ordinary DC voltmeter. Can measure transmitter power, take accurate data on how transmitter power output is

Cut-A-Way view Model 74

Single lines mean complete coaxial cir-cuits

take accurate data on how transmitter power output is affected by line voltage, transmitter temperature rise, time, etc. Gives an accurate standard load. Transmitter line and connector losses readily checked to accuracy needed in field work. Determination can be easily made as to how present transmitter performance compares with that realized previously. Results are accurate in absolute terms.

Solid lines indicate position I. Dotted lines indicate posi-tion 2.

In absolute terms. PRINCIPLE—Wattmeter measures power by the E<sup>2</sup>/R method. The Termaline resistor (almost a pure resistance over a wide frequency range) dissipates power applied. Dual or triple volt-meter cartridges using the IN21B crystal diode are bridged across the Termaline resistor input and feed a DC meter with scales direct-reading in terms of RF power.

SPEC.	MODEL 61	MODEL 67	MODEL 67C
FREQUENCY RANGE	30–500 mc or 500–1000 mc	30-500 me or 500-1000 me	30-500 mc or 500-1000 mc
POWER RANGE	80 Watts Dual Range 15/60 or 20/80	500 Watts Triple Range 25/100/500W	2500 Watts Water-Cooled Scales to Order
IMPEDANCE	51.5 ohms	51.5 ohms	51.5 ohms
IMPUT CONNECTOR			Fittings For Any Standard Rigid or Flexible Coax. Line Avilable
SCALE TYPE	Expanded At Low Seale Readings	Expanded At Low Scale Readings	Hand-Drawn To Order
ACCURACY	5% of Full Scale	5% of Full Scale	5% of Full Scale
PHYSICAL DIM.	8 x 6 x 4" Wght—10 lbs.	17 x 9 x 6" Wght—30 lbs.	21 x 9 x 6" Wght—40 lbs.

## **TERMALINE** Coaxial Load Resistors (Dummy Antennas)

1800 E. 38th St.

Designed to have a constant input impedance over the incut impedance over the incut impedance over the incut impedance over the over 4000 mc. Its unique design puts reactance to work and causes it to repre-sent an almost pure resist-ance, over its frequency range, with NEGLIGHLE VSWR. 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 structure. Constant

resistor. Major application has been as a dummy load for CW, AM, FM or TV transmitters. Being non-radiating, adjustment of transmitters can be made without volation of FCC rulings. A special version of the Termaline resistor is now being incorpo-rated in television transmitters for test purposes. It has proven highly useful as a terminat on for connectors being investigated for insertion VSWR properties, and for insertion loss measure-ments on filters, cables, etc.

**BIRD ELECTRONIC** CORP.

VSWR—Typical VSWR's taken on production units of Model 81 and 81B-

$\begin{array}{cccc} AT & VSWR \\ 130 \ \mathrm{mc} & 1.02 \\ 230 \ \mathrm{mc} & 1.02 \\ 300 \ \mathrm{mc} & 1.03 \\ 400 \ \mathrm{mc} & 1.048 \\ 500 \ \mathrm{mc} & 1.048 \\ 600 \ \mathrm{mc} & 1.024 \end{array}$	AT	VSWR	AT	VSWR
	700 mc	1.042	1400 mc	1.075
	800 mc	1.015	1500 mc	1.09
	900 mc	1.031	1700 mc	1.085
	1000 mc	1.046	1800 mc	1.03
	1100 mc	1.02	2000 mo	1.067
	1200 mc	1.037	3000 mc	1.114

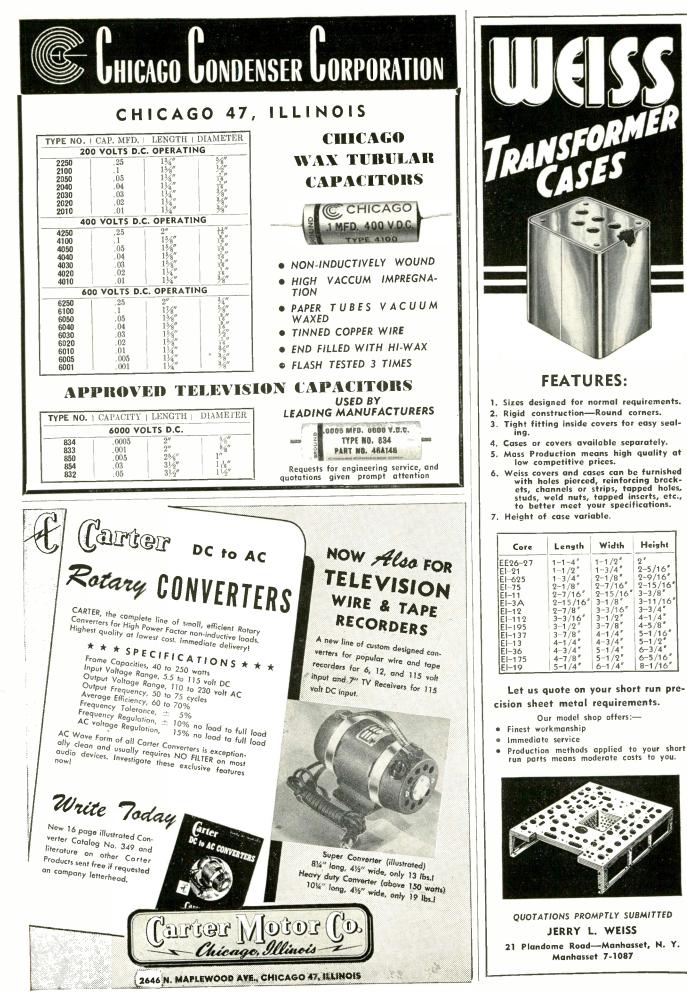
#### IMPEDANCE-51.5 OHMS

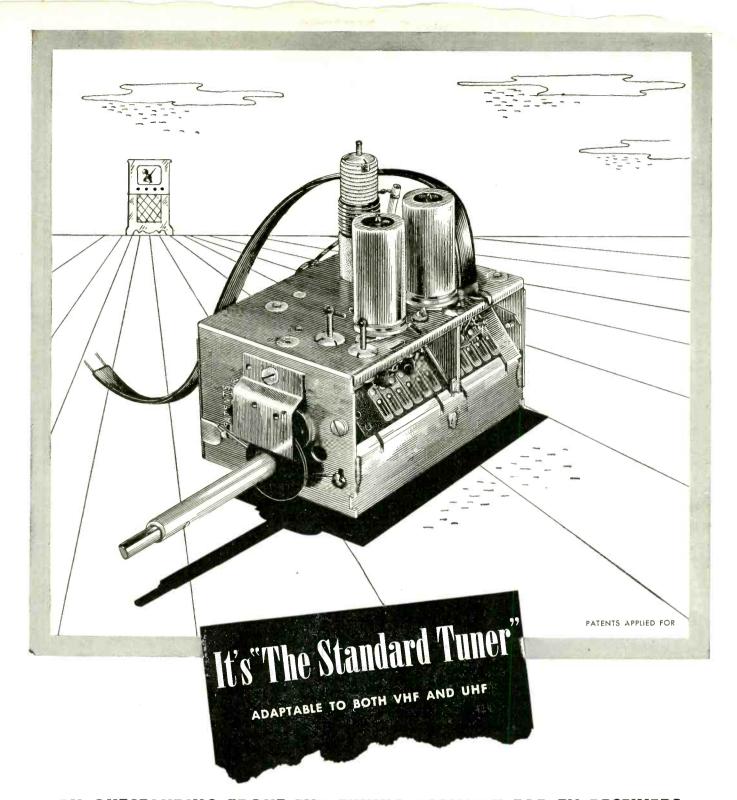
SPEC.	MODEL 81	MODEL 81B	MODEL 82	MODEL 82C
POWER RATING	50 Watts Continuous	80 Watts Continuous	500 Watts Continuous	2500 Watts Water-Cooled
VSWR LESS THAN	1.15 to 4000 me	1.15 to 4000 mc	1.2 to 2700 mc	1.2 to 2700 mc
FITTINGS	Type "N" Takes UG-21/U or UG-21B/U Plug	Type "N" Takes UG-21/U or UG-21B/U Plug	Supplied With CA-8 Adaptor for UG-21/U Other Optional	OPTIONAL Cable Type Being Used Should Be Specified

**CLEVELAND 14, OHIO** 

West Coast: NEELY ENTERPRISES, 7422 MELROSE BLVD., HOLLYWOOD 46, CAL.

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AN OUTSTANDING FRONT END TUNING ASSEMBLY FOR TV RECEIVERS

More and more TV engineers are specifying the Standard Tuner. It covers all 12 channels and is easily adaptable to UHF.

ADDITIONAL TV UNITS AVAILABLE: Picture I. F. Transformers • Cathode Trap Coils • Video Peaking Coils • Heater Choke Coils • Sound I. F. Transformers • Sound Discriminator Transformers • Horizontal Oscillator Coils • Horizontal Linearity Control Coils • Width Control Coils. THESE COMPONENTS TO YOUR SPECIFI-CATIONS: I. F. Transformers • R. F., Oscillator, & Solenoid Coils • Antenna Loops • Permeability Tuning Preselector Assemblies • Midget Ceramic Trimmers (.5-3.5 mmf.) • Miscellaneous Electro-Mechanical Assemblies.

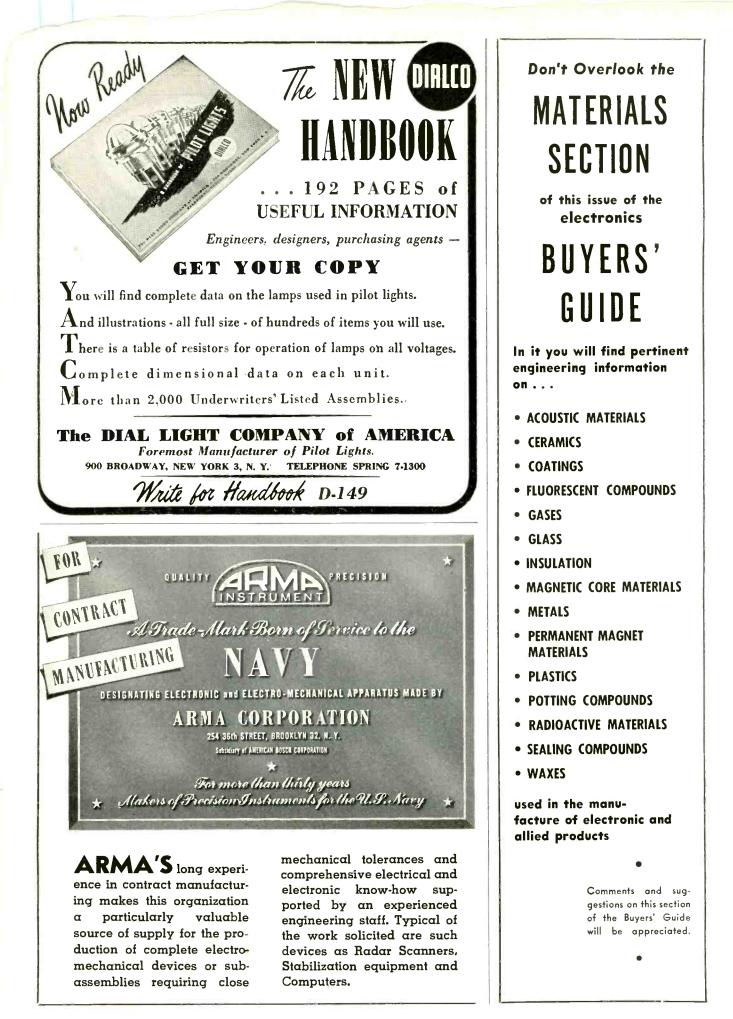
#### Your problems are ours-

Call our engineers.

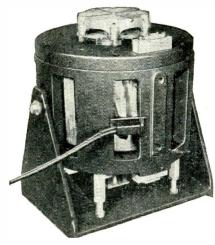
### STANDARD COIL PRODUCTS CO., INC.

2329 N. PULASKI ROAD, CHICAGO 39, ILL. Factories LOS ANGELES • BANGOR, MICH.

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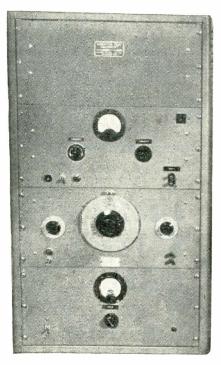


## THE MAB MANUFACTURING COMPANY, INC. 1060 STATE STREET, NEW HAVEN 11, CONN. • PRODUCTS FOR THE DETECTION, REPRODUCTION AND ISOLATION OF VIBRATION



S-3 EXCITER

T112031 POWER SUPPLY (for Model C-1)



#### **MB VIBRATION EXCITERS and CALIBRATOR**

These MB products have shown themselves to be valuable, versatile test and qualitycontrol tools to industry. Producing results quickly, dependably, and often visually, they 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 light 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.

The Model C-1 Vibration Exciter listed below has been specifically designed for the requirements of vibration pickup calibration work. Not only can it be used for calibration of vibration pickups up to 500 c.p.s. and higher, but also as a vibration exciter.

Model No.	Rated Force	Total Stroke	Wt. of Moving Components	Power Supply	Rated Frequency Range c.p.s.	Usable Range c.p.s.
S-A	5 lb.	1⁄2 in.	0.4 lbs.	Electronic	20 to 1000	20 to 20,000
C-1	25 lb.	1∕₂ in.	2.5 lbs.	Electronic	4 to 500	4 to 70,000
S-3	200 lb.	1 in.	10 lbs.	Rotating	3 to 500	3 to 500

#### **MB VIBRATION PICKUP**

An aid to vibration control and production inspection . . . sensitive to low amplitude vibration . . . can be used with wide range of equipment . . . simple field adjustment converts from horizontal to vertical use . . . electrically damped . . . maintains calibration over wide temperature ranges . . . resonant frequency below 5 c.p.s. . . velocity response flat from 10 to 1000 c.p.s.



#### **MB VIBRATION METER**

This precision Model "M" meter offers a complete, compact unit for vibration measurements when used in conjunction with the MB vibration pickup. It provides for accurate readings of velocities from .01 in./sec. to 100 in./sec. – or peak to peak amplitudes from .001 inch to 0.6 inch. It also serves as a preamplifier, so that signal can be fed to oscilloscope. Simple, rugged, batery-operated, portable, it is outstanding for quality control or research work.



#### **ISOMODE\* COMPRESSION-TYPE ISOLATORS**



These units utilize the properties of rubber in halanced compression and shear. They 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 loadrange 50 lbs. to 2500 lbs. Write for the Isomode Design Chart.

#### STANDARD PLATE-TYPE ISOMODE\* MOUNTS



These vibration isolators are built with standard mounting dimensions – are available for loadings of  $\frac{1}{2}$ to 100 pounds per unit. An

outstanding feature is the equal spring rate in every direction. No matter at what angle they are installed, they will absorb vibration with same high efficiency. \*Reg. U.S. Pot. Off.



DIRECT WRITING MULTI-CHANNEL OSCILLOGRADHS OSCILLOGRADHS INSTANT DIRECT RECORDS WITH-OUT INK INSTANT DIRECT RECORDS WITH-OUT INK INSTANT DIRECT RECORDS WITH-OUT INK CONSTANT DIRECT RECORDS WITH-OUT INK OUT INK OUT INK OUT INK INSTRUMENTS, INC. IN OT

> until next year will you get another

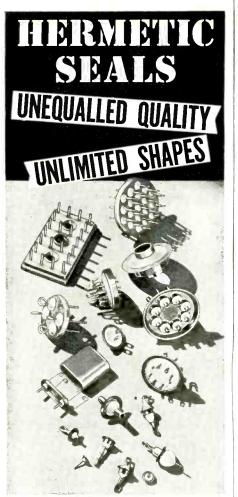
electronics BUYERS' GUIDE

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.

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In this era of super-charged competition and pressure selling, it's more important than ever to distinguish your products from those of your competitors. Your requirements for Hermetic Seals can be made to your own engineering specifications at no extra cost. The flexibility of our processing is such that we can provide small and large production runs in unlimited variety of designs and voltages with minimum terminal spacing of any number and in any pattern.

These features of Hermetic Seal Products will be of particular importance to you: May be hot tin dipped to facilitate soldering; permanent bond between metal and glass; thermal shock—room temperature to 525°F., dry ice to boiling water; leakage resistance over 10,000 megohms; impervious to moisture, oils, greases, acids, salt, water, etc.; vacuum tight; minimum spacing in any pattern for voltage rating.

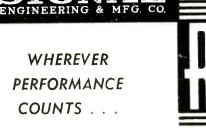
RMA Color Code Available.

Used in these industries among many Thermostat 

Crystal 

Relay others: Condenser • Meter • Transformer.

Write for New Catalog and Full Information FALED IN HERMETIC SEA PRODUCTS COMPANY 29-37 South Sixth Street, Newark 7, N. J.



#### Sensitive MULTIPLE ARM RELAYS A. C. and D. C.

Adaptable to a wide variety of circuit arrangements. Features: Mounting area minimized, vertical, balanced armature, interchangeable unit contact pile-ups, unusually high contact pressures, shock and vibration resistant. Four styles of assemblies: 1. Relays only. 2. Octal Base and removable cover. 3. Octal Base and hermetically sealed cover. 4. Header type container, hermetically sealed.

Also furniished with multiple pin plugs up to 20 points.

Write for Bulletin 50-6

#### Sensitive SPECIAL PURPOSE RELAYS



Many special purpose applications may be satisfied with this basic structure where sensitivity combined with ruggedness are essential requirements. Con-tact capacity 5 amperes. Contact springs are pre-loaded against suppressors to eliminate low pres-sure contact dwell. Contacts are self-wiging. Coils

sure contact dwell. C cellulose acetate sealed. Insulation available for either voltage or sensitive-current relay appli-cations. All ferrous parts plated for re-cietiong saft spray sisiting salt corrosion. spray Bulletin KR-6

#### NEW COAXIAL RELAY

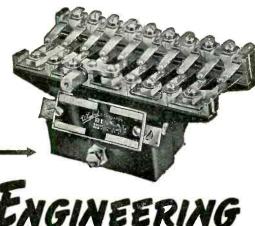
For High Frequency Switching. Double coil electro-magnets provide increased power for extra high contact pressures, insuring positive contact under vibration. Actuating rod of special molded composition floats in ball and cup end bearings. Armature provided with oilite bearings, and stainless steel shaft, insuring mechanical life of several million operations. wining

shaft, insuring mechanical ine of several operations. Contact arm construction provides wiping action in both transmit and receive positions Bulletin CR-6 upon request.



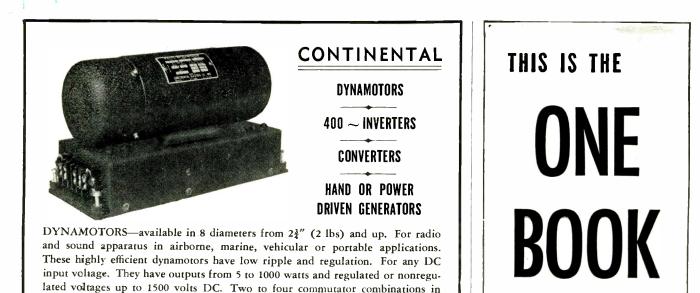
MULTIPLE ARM RELAYS A new series of multiple arm relays adaptable to many different circuit arrangements. Rigid, cast aluminum bodies. Balanced armature construc-tion. Highly resistant to shock and vibration. Write for the technical facts and particulars of our Engi-position Savico on your specific neering Service on your specific problem, Bulletin 30-6. MEDIUM DUTY POWER RELAYS

Sturdy, dependable types, in various contact de-signs and circuit arrangements, for industrial appli-cations. Actuating mechanisms designed with ample factor of safety to provide reliable performance and long life under widely varying conditions of indus-trial service. Bulletin 6-6.





Relays . Signals . Code Call . (Interior) FIRE ALARM SYSTEMS . DEVICES for Controlling Electrical Equipment



THE ONLY ONE OF ITS KIND

In which

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.

Keep it handy for ready reference throughout the year.

When buying, or requesting product information be sure to mention...

# electronics BUYERS' GUIDE

If so, let us help you solve them. We will build—to your specifications and design—any kind of equipment for the tube manufacturing or associated industries. Or, Buck engineers will design and build equipment to solve your problems. The devices illustrated here are just a few examples of Buck Engineering's work in this field. Inquiries are invited.

Do You Have Any Problems In

MANUFACTURING VACUUM TUBES?

MOTORS, GENERATORS, FREQUENCY CHANGERS, etc., in all industrial and marine types to standard or special design. 1 to 600 HP, DC and AC, all

frequencies including 400 cycles, with Drip Proof, Splashproof, Enclosed or

As designers and manufacturers of industrial motors and light weight rotary power supplies for more than 25 years we solicit your inquiries and specifications.

Continental Electric Co., Inc.

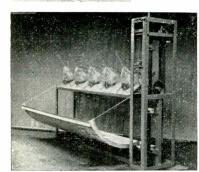
enclosed or ventilated types with or without filters.

Explosion Proof enclosures.

334 Ferry Street

• Takes 16" metal and 10" or 12" glass blanks with simple adjustment • Blanks insert or remove without stopping machine • No vacuum to operate or maintain • no revolving chuck jaws or joints to wear out • 3-speed cone sheave for wide speed range • Fixed linear speed for easy brushing • Cheaper than mechanical or vacuum chuck • Cannot jam—eliminates tube breakage.

Newark 5, New Jersey



CARRIER

TILTING TABLE

for 10" and 12" Tubes; greater capacity; l e s s floor area; no dirt on screens





ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

#### We are looking for "trouble" Let us know of your unsolved problem. Perhaps it can be resolved electronically. For the past six years we've helped many a manufacturer reduce costs and improve quality by more accurate measurement and control. Among our customers are manufacturers of: COMBUSTION ENGINES CLUTCHES LABORATORY EQUIPMENT • PLATE GLASS ORDNANCE EQUIPMENT • SPARK PLUGS We have available a service for pre-selection and testing (burning-in) of tubes for instrument manufacturers. Send for a reprint of the informative article entitled "ELECTRONIC INSTRUMENTS FOR INDUSTRY." Have your problem surveyed without obligation. quote promptly. CTRÓNICS, INC. INDUSTR METUCHEN 398 Main St. Detroit 1, Mich. 2457 Woodward Ave. A Complete Line of Electrolytic Capacitors For Every Electronic Application Whatever your condenser needs may be, from original application to replacement, there is an Illinois condenser to meet them. d D GUIDF The Illinois Condenser Co. has developed an expanded line to serve every phase of the entire electronic field-from radio to television. Illinois Condenser Co. can supply condensers to your individual specifications in production quantities. All Illinois condensers are backed by a one-year guarantee—can be depended upon who makes each of to serve outstandingly, even in the most humid climates and under brutal heat confourteen hundred difditions . . . thanks to strictest quality control manufacturing methods in the industry. ferent electronic and Time Tested ILLINOIS CONDENSERS allied products. TYPE UMP - TWIST PRONG CONDENSERS TYPE INT-TUBULAR ELEC-TROLYTICS IN ALUMINUM In seamless drawn aluminum cans. Universal mounting plate. Single, Dual, Triple and Quad-ruple, low and high voltage. TYPE LN-INVERTED SCREW MOUNTING Locknut metal cans. Stud screw base mounting. High voltage single and multiple units. Wire pigtails. Low, intermedi-ate, and high voltage. TYPE IHC --- WAX IMPREG-NATED CARDBOARD TUBU-LARS Clamp mounting. Low and high voltage-multiple Units. for quick buying TUBULAR PAPER CONDENSERS and technical reference HIGH VOLTAGE BUFFER CONDENSERS throughout the year. Write For New Catalog Today! When buying, or requesting prod-ILLINOIS CONDENSER CO. uct information be sure to mention ELECTRONICS BUYERS' GUIDE. 1616 NORTH THROOP STREET . CHICAGO 22, ILL.

QUALITY COILS TO YOUR SPECIFICATIONS We manufacture quality coils for the radio and electronics industry. Universal, bank-wound, universalprogressive or solenoid coils made to JAN specifications. Let us know your requirements: We will **FUGLE-MILLER LABORATORIES** NEW JERSEY Me 6-2245 THIS BOOK .... The electronics **BIIYFRS**'

tells you

Keep it and use it

June, 1949 --- MID-MONTH --- ELECTRONICS BUYERS' GUIDE

# **Victoreen**—the Finest in Radiation Instrumentation

#### GAMMA RADIATION SURVEY METER-Model 247A

A compact portable instrument designed to cover four ranges of gamma radiation intensities, 2.5-25-250-2500 milliroentgens (1/1000 r) per hour. The most sensitive range approximates that of a Geiger instrument and is inherently more stable. The ionization chamber and meter are hermetically sealed, and the case is watertight. Die castings have been used wherever possible for unusual rugged construction.

The Minometer provides a prescription for computing daily, the amount of radiation exposure. It consists of a small compact string electrometer and an ionization chamber designed in the shape of a fountain pen to be carried conveniently in a coat pocket. The chamber value is 0.2 r full scale when checked against the calibrated scale in the electrometer.



#### BETA GAMMA SURVEY METER-Model 263B

VICTOREEN MINOMETER-Model 287



ALPHA SURVEY METER-Model 356

PROTEXIMETER **Roentgen Calibrated for visual** 

indicated of scattered radiation

A portable Alpha meter in which alpha radiation is measured by means of an air ionization chamber, and a vacuum tube amplifier circuit which operates an indicating meter--light, compact, and unusually stable.

A portable beta gamma survey meter capable of detecting individual ionizing particles. It uses the new 1B85 counter tube in a compact external probe, easily accessible. Probe and tube are watertight. The instrument has three full scale ranges of sensitivity, 20.0-2.0-0.2 milliroentgens per hour measured with gamma radiation from radium. Incorporates the recommendations of field tests.



#### THE NEW All Metal \*THYRODE 1885

Measures scattered radiation accumulatively to meet the need in radiation laboratories and in industrial x-ray applications where it is essential to have accurate knowledge of such accumulated radiation. Easy to operate and requires a minimum of service. The plug-in type ionization chamber contains a sub-miniature electrometer tube hermetically

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sealed in. Because of the plug-in design, several chambers can be used interchangeably with the same instrument to facilitate measurement at more than one location. The leakage across the chamber is so minute that it will not appreciably affect any reading. Standard flashlight batteries are used which, because of low tube drain, require infrequent replacement.

The 1B85 is a general purpose beta gamma counter tube designed to replace the thin-walled glass tube.

It is electronically interchangeable with the 1B67/VG-13 and other similar tubes. Greater uniformity and closer tolerances are maintained in the 1B85. The coaxial base fits Thyrode Socket No. 380. Tubes are easily replaceable even in water-tight probes. Resistance to vibration and mechanical shock is greater than that of the alass tubes.

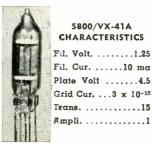
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OPERATING CONDITIONS Temp. --40 to 120° C Volt .001 to 1000 V Rel. humidity 0 to 98%

Higher

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14 and 20

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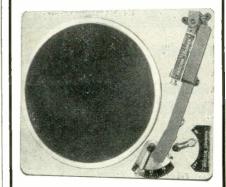
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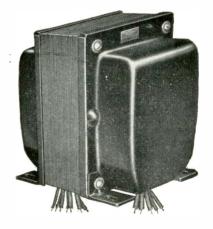
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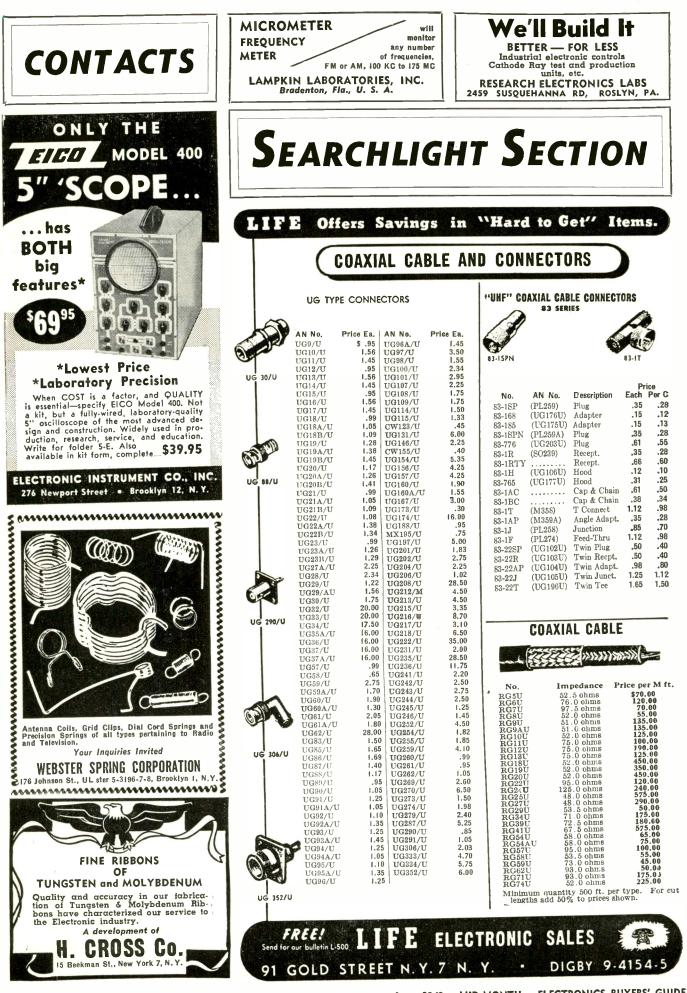
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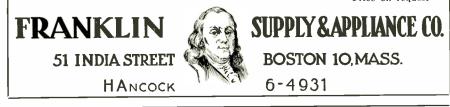
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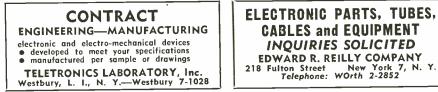


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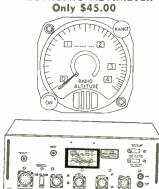
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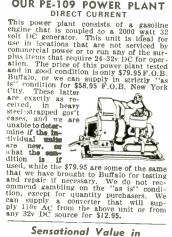


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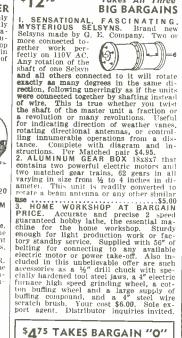
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#### (All three items below)

(All three items below) AUDIO AMPLIFIER — Brand new, Push-Pull stage triode amplifiers hav-ing 2 of the valuable and scarce ouncer type audio transformers that sell for over \$10.00 each. Neat aluminum case, fully enclosed (largest dimension 6 inches). Perfect for intercom system, phono amplifier, mike amplifier or sig-nal tracer amplifier for testing radio sets. A sensational bargain at only \$3.40 each

Sets. A seturational or solution of the seturation of the seturati

GENERAL ELECTRIC IS TUBE TRANS-MITTER-RECEIVER SET. This brand new 15 tube transmitter-receiver was de-signed for mobile storage, battery powered service. It will operate in the "Citizens" band where no anateur license to transmit is necessary. It's a cinch for any experi-menter to connect this unit for 110 VAC operation by following the instructions and diagrams supplied, which cover numerous applications, including television. For those intending to use on car or boat, a new dynamoter, exactly as originally sup-plied, costs only \$15.00. Don't fail to write for FILEE descriptive bulletin. Order our IRT-1248 for only \$229.95, or two for \$33.90. reserved to change prices and specifications.



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PORTABLE ELECTRIC DRILL

Not an intermittent duty drill, but a full size rugged tool. Most convenient type switch, natural grip handle, and balance like a six shooter. Precision cut gears-turbine type cooling blower-extra long brushes. No stalling under heaviest pres-sure because of powerful 110 Volt AC or DC motor and multiple ball bearing thrust. Other bearings self-aligning lifetime-lubri-cated Oilite type. Made for toughest year-in and year-out service in plant or on construction jobs. Amazing perpetual fac-tory guarantee assures you of a lifetime of trouble-free use.

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A mountain of valuable equipment that includes 3 separate communications Re-ceivers, covering up to 9.1 MC, 2 separate 40 watt Transmitters including crystals, 4-28v. Dynamotors (easily converted to 110v. A.C. operation). Preamplifier and Modulator, 2 Tuning Control Boxes, and Antenna Coupling Hox complete with R.F. Ammeter, 29 tubes supplied in all. Receivers and Transmitters instantly dc-tached from mounting racks for use in separate locations. Removed from unused aircraft and in guaranteed electrical con-dition. A super value at \$59.95 complete.

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Size 1/3" x 1" 1000 Mmfd., 1500 Mmfd., 2000 Mmfd. 400 Mmfd., 1000 Mmfd., 1500 Mmfd., 2000 Mmfd. 194, each. 100 assorted for \$15.00	
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GLASS, VACUUM SEALED         Within ½ of 1% minus tolerance. Each unit marked with exact value to the 6th place. With pigtal leads. 4.0 Megohms at 85¢, each. 10 for \$7.50         FERRULE TYPE RESISTORS         Supplied with clips for mounting. Well-known makes.         GLASS TYPES         15 Watts. 19¢, ea. 30 Watts. 35¢ ea. 90 Watts. 59¢         15 Watts. 19¢, ea. 30 Watts. 35¢ ea. 90 Watts. 59¢         2000 Ohms       400 Ohms	APR-1 RAD plete wit 38-4000 n TUNING U RECEIVE mc ampli
3000         Ohms         5000         Ohms         7500         Ohms           3150         Ohms         10,000         Ohms         15,000         Ohms           120         Watts	TN-17, ra TN-19, ra TN-54, ra X-BAND V complete reading V
OIL FILLED TUBULAR CONDENSERS Phenolic shell over metal case. Size 34" x 31/4". 8-32 screw terminals, .1 Mfd. 1250 V.D.C. Each 23¢. 10 for \$2.00 ROUND METAL CAN UPRIGHT	with gear terminatio carrying
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OAR SEARCH RECEIVER, comith tuning units for range of mc, 30 mc I.F., 2 mc wide.

INITS FOR APR-1 or APR-4 ERS (can be used with any 30 ifier):

ange 80-300 mc range 1000-2000 mc range 2000-4000 mc

VSWR TEST SET TS-12/AP, with linear amplifier, direct VSWR meter, slotted wave guide driven traveling probe, matched on and various adapters, with case, new.

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## **CHINERY** for NUFACTURING TRONIC TUBES

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LIN PRODUCTS CO. New York 10, N.Y. st St.

FOR SALE LITRON OSCILLATOR 7 mc—Special Laboratory Unit. and Practically New.—25% of FS-9046, Electronics 42nd Street, New York 18, N. Y.



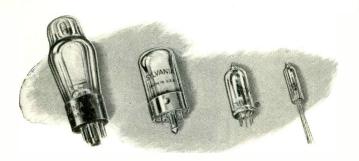
URGENTLY NEED R. F. Plumbing parts, elevation and azimuth ro-tary joints, choke coupling, dipole antenna and wobbler assemblies which were used on SCR-615-B. Electronic Engineering Co. of Calif. 2008 West 7th St. • Los Angeles 5, Calif. Telephone DRexel 8323

### SEARCHLIGHT SECTION



ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

# SYLVANIA RADIO AND TELEVISION TUBES



#### **RECEIVING TUBES**

Even the small parts that go into the manufacture of Sylvania radio tubes—from the famous Lock-In to the tiny subminiatures—are made by Sylvania in its own plants. Every step of the way is quality controlled. That's just one good reason why Sylvania tubes are so well known for quality and performance.

Sylvania research has brought about many important advances in radio receiving tubes, making it possible to offer you a complete line that is unsurpassed in quality.



#### TRANSMITTING TUBES

To augument its comprehensive line of top quality receiving tubes, Sylvania has marketed a line of 20 high quality transmitting tubes.

Typical of this comprehensive line is the 3D24 (above), a beam power tetrode amplifier and oscillator with 45 watt anode dissipation. Measuring just a little over four inches, the 3D24 is rated to supply as much as 140 watts output in continuous commercial service. This compactness, coupled with dependable performance, makes it ideal for police, fire department, forestry, marine, amateur and aircraft applications.



#### CATHODE RAY TUBES

The complete line of outstanding cathode ray tubes offered by Sylvania consists of 16 electrostatic types ranging in size from two- and three-inch diameters to five-, seven-, and ten-inch screens. In addition, the line includes magnetic type tubes in ten-, twelve- and sixteen-inch size screens.

Made for a variety of uses, from oscilloscope screens to high performance direct view television receivers, these tubes are manufactured under the very highest of standards, for excellent brightness and definition.

Detailed information on this entire cathode ray tube line, as well as on radio receiving tubes and transmitting, tubes, can be obtained promptly from the address below.

## SYLVANIA & ELECTRIC 500 Fifth Avenue, New York 18, N. Y.

# SYLVANIA TEST EQUIPMENT



Type 132 (Seven-inch Screen)

#### **OSCILLOSCOPES**

These modern Sylvania Oscilloscopes are ac-operated general purpose cathode ray instruments used to study waveforms, measure voltages and currents in various types of circuits. Excellent for television servicing, audio circuit analysis, transmitter monitoring, hum analysis, frequency comparisons.

Type 131 utilizes a type 3AP1 cathode ray tube having electrostatic deflection and focus. With horizontal and vertical amplifiers 0.5 volts rms gives 1-inch peak-to-peak deflection. Sweep generator variable from 15 to 40,000 cycles.

Two unique push-pull amplifiers give extra sensitive patterns on the 7 JP1 screen of the Sylvania Type 132 Oscilloscope. One inch peak-to-peak vertical deflection is obtained with .21 volts rms input. Z-axis input provided for intensity modulation applications. An excellent instrument for television servicing. Type 132 price: \$144.50; Type 131: \$89.50.



Type 131 (Three-inch Screen)



#### SIGNAL GENERATOR

To meet FM and AM service requirements, here's Sylvania's new Signal Generator Type 216! With it you can align the rf and if sections of all FM and AM receivers, adjust all types of FM and TV discriminators, and make overall receiver checks. Its high level output and

accurate calibration make it a valuable instrument for other service and laboratory uses requiring a high quality rf signal source. Beautifully styled! Dimensions:  $11-3/8'' \times 17-1/16'' \times 10-5/8''$ . Weight: 24-1/2 lbs. Priced at \$189.50.

#### TUBE TESTERS



Sylvania Tube Testers, made in both counter and portable types, are designed to handle standard, Lock-In and miniature types including 9-pin tubes.  $4\frac{1}{2}$ " meter dial—easy to read. Legible dial markings, fingertip controls for easy setting. Shorts

test is conducted at voltage low enough to prevent tube damage or faulty indications—high enough for full brilliance on shorts indicator. Provision for noise test. All tubes are tested under dynamic conditions, combining transconductance and emission tests. Either model: \$79.50.



#### **MODULATION METER**

You can now monitor modulation percentage and speech quality with Modulation Meter Type X-7018. Compact and economical. Helps you keep transmission efficient and at the same time comply with FCC overmodulation regulations. Also indicates carrier shift. Price: \$29.50.

#### AUDIO OSCILLATOR

This Audio Oscillator Type 145 is one of the most versatile and convenient test instruments made. Its powerful signal of known frequency provides an accurate pure tone source for checking radio receivers. It is ideal for response and distortion testing of audio amplifiers, pub-



lic address systems, juke boxes, wired music installations and individual speaker cones. An exceptionally valuable test instrument. Price: \$129.50.

#### POLYMETER

The Sylvania Polymeter Type 221 is a multi-purpose vacuum tube voltmeter that greatly simplifies the job of testing radio and television equipment. Tests dc and ac voltages to 1000 volts; direct current to 10 amperes; re-

sistance to 1000 megohms. Frequency response essentially flat to 300 mc.

This instrument utilizes authentic vacuum tube circuits for measuring ac, rf, dc volts and resistance. Price: \$99.50.

#### VOLTAGE MULTIPLIER PROBE

Add this new DC Voltage Multiplier Type 222 to the Sylvania Polymeter and the 1,000 vdc range setting will read 10,000 vdc full scale – you have a Kilovoltmeter for testing TV circuits and other high voltage applications. Price: \$9.95.



**ELECTRIC** 500 Fifth Avenue, New York 18, N. Y.

# 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 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. For additional balance, the forward resistances of each pair of varistor crystals are matched within 3 ohms.

1N40 and 1N42 are plug-in type; 1N41 is lug type.

Ratings shown in table are for each diode



**Sylvania Silicon Diodes** 1N21, 1N21A, 1N21B, 1N21C, 1N23, 1N23A, 1N23B, 1N25, 1N26 and 1N53 are used chiefly as first detectors in radar and other microwave superheterodyne receivers.

Type 1N22 is designed for use in microwave test probes, power indicators and other instruments.

Types 1N31 and 1N32 are used as high level video detectors.

#### GERMANIUM DIODES AND DUO-DIODES \*

Туре	Cont. Reverse Working Voltage	Peak Back Voltage *	Fwd. Curr. at +1v (ma min.)	Av. Anode Current (ma max.)	Recurrent Peal Anode Curr. (ma max.)	k Reverse Current (μα max.)
1N34	60v max.	75v min.	5.0	40	150	50 @ —10v 800 @ —50v
1N35**	50v max.	75v min.	7.5	22.5	60	10 @ —10v
1N38	100v max.	120v min.	3.0	40	150	6 @3v 625 @100v
1N39	200v max.	225v min.	3.0	40	150	200 @ -100v 800 @ -200v
1N54	35v max.	75v min.	5.0	40	150	10 @ -10v
1N55	150v max.	170v min.	3.0	40	150	300 @ -100v 800 @ -150v
1N56	40v max.	50v min.	15.0	50	200	300 @30v
1N57	80v max.	90v min.	4.0	40	150	500 @ —75v
1N58	100v max.	115v min.	4.0	40	150	800 @ -100v

\*For zero dynamic resistance.

\*\*Duo-diode consisting of two units matched in the forward direction at +1v so that the current flowing through the higher resistance unit is within 10% of that in the lower resistance unit. Ratings shown for each diode.

#### GERMANIUM VARISTORS

Туре	Cont. Reverse Working Voltage	Peak Back Voltage *	Fwd. Curr. at +1.5v (ma max.)	Av. Anode Current (ma max.)	Rec. Peak Anode Curr. (ma max.)	Reverse Current (µa max.)
1N40	25v max.	75v min.	12.75	22.5	60	50 @ -10v
1N41	25v max.	75v min.	12.75	22.5	60	50 @ —10v
1N42	50v max.	120v min.	12.75	22.5	60	6 @ —3v 625 @ —100v

\*For zero dynàmic resistance.

#### SILICON DIODES

Туре	Design Freq. (mc)	Max. Conv. Loss (db)	Max. Output Noise Ratio	Burnout Test	I. F. Imp. (ohms)
1N21	3,000	8.5	4.0	Bs=0.3 erg	200-800
1N21A	3,000	7.5	3.0	Bs=0.3 erg	200-800
1N21B	3,000	6.5	2.0	Bs=2.0 erg	200-800
1N21C	3,000	5.5	2.0	Bs = 2.0  erg	200-800
1N22	9,000	_	_	Bs = 0.3 erg	200-800
1N23	10,000	10.0	3.0	Bs=0.3 erg	150-600
1N23A	10,000	8.0	2.7	Bs=1.0 erg	150-600
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
1N29	20,000	Obsolete—use 1		<b>-</b>	
1N53	35,000	8.5	2.5	Bs≡0.15 erg	400-800
Туре	Min. Fig. of Merit	Video Imp. (ohms)	Burnout Test	Carrier Freq. (mc)	Video Freq.
1N27		Obsolete			
1N30		Obsolete	-use 1N31		
1N31	55	6,000-23,000	Bp=0.02 watt	10,000	500 cps-5 m
1N32	100	5,000-20,000	Bp=0.36 watt	3,000	500 cps-5 m

Bs=total energy in simulated spike of pulse from TR box in radar service. Bp=peak power pulse under pulsed conditions.

SYLVANIA SELECTRIC 500 Fifth Avenue, New York 18, N. Y.

# MICROWAVE COMPONENTS

#### MAGNETRONS



The Sylvania family of Magnetrons operates in the shf band at peak power levels ranging from 7 to 300 kw and at average power ranging from 14 to 300 watts. 2J42 and 2J42A are of the vane type; 3J31, rising sun; 4J50, 4J52 and 4J78, hole and slot. All except 3J31 are supplied with magnet. Write for bulletin EC-37.

Туре	Frequency Range (mc)	Pulsed Power Out (kw)	Avg. Power Out (watts)		
2J42	9345-9405	7-14	14		
2J42A	9345-9405	18-35	18		
3J31	23,744-24,224	30-54	15-27		
4J50	9345-9405	300	200		
4J52	9345-9405	65-120	65		
4J78	9003-9168	300	200		



#### **ROCKET TUBES**

Sylvania Rocket Tubes are planar-electrode disc-seal triodes for use as oscillators and amplifiers at frequencies up to 3300 mc. Design permits broad band operation. Tuning is simpler and covers a greater continuous range than that of many other types of uhf tubes.

2C36

2C36 is a pulse-modulated oscillator for frequencies up to 1200 mc.

2C37 is designed for use as a c.w. oscillator up to 3300 mc. Plate disc is flat, grid disc folded.

5764 is a pulse-modulated oscillator for use up to 3300 mc.

5765 is for use as a c.w. oscillator without external feedback in the range from 900 to 3000 mc.

5766 is a c.w. oscillator for use up to 3300 mc. Plate disc is folded, grid disc flat.

5767 is a c.w. oscillator for use up to 3300 mc. Both discs are folded.

5768 is intended for use as a c.w. amplifier-multiplier up to 3000 mc.

For complete information, write for bulletin ES-4810.



Sylvania Hydrogen Thyratrons are designed for pulsing service at high repetition frequencies, high peak currents and high voltages. An outstanding feature is very short de-

4C35

#### 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, write for bulletin ES-21C.



1B63A

Туре	Frequency Range (mc)	Insertion Loss (db)	Max. Recovery Time (µsec. at —3 db)
1824	8490-9600	0.85-1.50	4
1863	8565-9487 (1)	0.8	4
1863A	8490-9578 (2)	0.8 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 $\pm$ .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. SD-1103 and SD-1104 are suitable for either c.w. or pulsed operation. Data sheets are available.



Туре	Mode	Frequency Range (mc)
6BL6	1 3/4	1600-4000
	23⁄4	2100-4500
	3¾	4000-5500
6BM6	3/4	550-2300
	23⁄4	1100-3000
SD-1103	13/4	1600-4000
	2¾	2100-4500
	3¾	4000-5500
SD-1104	13/4	550-2300
	23⁄4	1100-3000

#### HYDROGEN THYRATRONS

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



#### **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

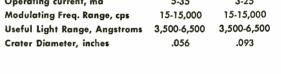
#### **GLOW MODULATOR TUBES**

Light output of Sylvania Glow Modulator Tubes varies in an essentially linear manner with the current passing through the tubes. Tubes are of the crater type, providing high ionization density.



	R1130B	R1131A
Operating Voltage, max.	150	135
Operating current, ma	5-35	3-25
Modulating Freq. Range, cps	15-15,000	15-15,000
Useful Light Range, Angstroms	3,500-6,500	3,500-6,500
Crater Diameter, inches	.056	.093

R1130B





#### **GEIGER-MUELLER TUBES**

These tubes are used for detecting and measuring radiations from radioactive materials in scientific, medical or industrial nuclear physics applications.

Both GG-304 and GG-306 are gamma-ray counters. GG-304 is especially useful for radiological safety and cosmic ray studies. GG-306 is a high-efficiency search head. Both are of the non-self-quench type employing an external quenching circuit.

#### GAS PRESSURE MEASURING TUBES

Sylvania Pirani Tube R1111 is used for measuring gas pressures in vacuum systems. Useful range of the tube is from 1 to 1,000 microns of Hg.

Tube operates on 1.5 volts. Cold resistance is 6.6 ohms. Hot resistance in an evacuated tube at 100 ma current is from 15.5 to 17.0 ohms.

Also available is Type R1111M, which consists of a pair of matched tubes Type R1111.



#### 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.



# MATERIALS SECTION

On the following pages are tabulated the important electrical, mechanical and other significant characteristics of most raw materials used by the electronic industry, for convenient use by designers of component parts, housings and complete equipment. The intent is to speed up initial choice of the most appropriate material for a particular application; this can in most cases be done simply by determining which characteristics are critical and then glancing down the columns for those characteristics to spot the most favorable values. Some of the tables are entirely new, while others are revisions of similar data in the June 1948 Mid-Month Electronics Buyers' Guide.

Typical trade names are listed, and are identified in another section of the directory. Either average values or ranges of values are given, since actual values vary widely with manufacturing methods and chemical compositions. Specific values of a particular material should be obtained from its manufacturer before final design.

The Editors

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ACOUSTIC MATERIALS perforated wood fiber, mineral wool, cork and other tiles used for noise reduction	M-2
<b>COATINGS FOR CONDUCTIVITY</b> fired-on and air-setting silver, platinum and graphite paints for printed circuits	M-4
COATINGS FOR PROTECTION AND DECORATION metallic, chemical, organic and inorganic	M-6
CERAMICS electrical porcelains, steatites, titanates, alumina, corderite and forsterite	M-10
FLUORESCENT COMPOUNDS phosphors for screens of television, radar and other cathode-ray tubes	M-11
GASES inorganic gases for tubes and organic insulating gases for transmission lines	M-12
GLASS compositions for insulators, tubes and metal-glass seals in electronic equipment	M-13
INSULATION FOR WIRES extrudable and tape-applied plastics used for insulation or jacket on wires	M-13
INSULATING SHEETS laminated thermosetting plastic, hard rubber, fiber and glass-bonded mica sheets	M-14
MAGNETIC CORE MATERIALS for laminated, solid and powdered metal cores and magnetic shields	M-16
METALS FOR CONTACTS bronzes, alloys of tungsten, silver and gold, and other alloys of copper	M-18
METALS FOR TUBES structural, conducting, emitting and gettering metals used in tube construction	M-19
METALS FOR WIRES pure metric alloys for conductors, heating elements and wire-wound resistors	M-20
PERMANENT MAGNET MATLE S carbon, tungsten, chrome and cobalt steels, alnicos and newer alloys	M-22
PLASTICS molding and casting thermoplastic and thermosetting materials with and without fillers	M-24
WAXES vegetable, mineral and petroleum waxes, hydrogenated castor oil, beeswax and DeKhotinsky cement	M-28
WAX COMPOUNDS microcrystalline petroleum wax and wax-resin bases for impregnating and dip coating	M-30
POTTING COMPOUNDS asphalt bases with and without filler, for moisture-proofing iron-core components.	M-30
SEALING COMPOUNDS synthetic resin, natural resin, polystyrene and pitch bases for terminal seals	M-30
RADIOACTIVE MATERIALS radium, uranium and radioactive. isotopes having industrial applications.	M-32

# ACOUSTIC MATERIALS

Matrial	uness	Mounting			ind-Ab Coeffic	osorptic cients	on		Noise Red. Coef.	Wt. lb per
Material	Thickness in.	Mour	128 cps	256 cps	512 cps	1,024 cps	2,048 cps	4,096 cps	(aver- age)	sq ft
Acousteel, enameled metal pan perforated 1,105 holes per sq ft, backed with mineral wool	1 1/4	3	.25	.52	.99	. 99	.81	. 60	.85	1.08
Acousticelotex, CS-1, perforated 441 holes per sq ft, painted before perforating	$\frac{1/2}{1/2}$	1 2	.09 .14	.15 .46	.61 .52	.77 .71	.70 .72	.64 .64	.55 .60	. 66
Acousticelotex, C-2, perforated 441 holes per sq ft, painted before perforating	5/8 5/8	$\frac{1}{2}$	.09 .12	.26 .51	. 69 . 65	.86 .73	.67	.62 .58	.60 .65	. 83
Acousticelotex, C-4, perforated 441 holes per sq ft, painted hefore perforating	$1 \frac{1}{1} \frac{1}{4}$	1 2 7	.14 .25 .53	.42 .58 .58	.99 .99 .93	.74 .75 .70	.60 .58 .55	.50 .50 .48	.70 .75 .70	1.34 1.34 1.58
Acousticelotex, C-6, perforated 441 holes per sq ft, painted after perforating	1 1/4	1 2	.15 .27	.34 .57	.99 .91	.94 .91	.61 .67	.61 .58	.70 .75	1.51 1.51
Acousticelotex, C-7, perforated 441 holes per sq ft, painted before perforating		7	.41	. 48	.68	.79	. 75	. 55	. 70	1.40
Acousticelotex, C-8, perforated 441 holes per sq ft, painted after perforating		2	. 25	. 49	. 69	.78	.61	.48	.65	1.54
Acousticelotex, C-9, perforated 441 holes per sq ft, painted before perforating	J/4	$\frac{1}{2}$	.11 .12	.23 .45	.80 .79	.93 .89	.58 .61	.50	.65 .70	.96 .96 1.31
Acousticelotex, M-1, perforated 676 holes per sq ft, painted after perforating	3/0	1 2	.07 .12	.21 .48	.64	.86 .79	.93 .93	.83 .82	.65 .70	1.31
Acousticelotex, M-2, perforated 676 holes per sq ft, painted after perforating	1	17	.08 .40	.27 .44	.92 .79	.95	.80	.71	.75 .75	1.81 2.23
Acoustifibre, perforated 441 holes per sq ft, painted	5/8 5/8	1 2	.10 .13	.16 .38	.62 .72	.97 .89	.81 .82	.73 .66	.65	.56
Acoustimetal enameled metal pan perforated 2,016 holes per sq ft, backed with mineral wool		3	.26	.47	.97	.99	.88	. 88	.85	.91
Acoustone F, fissured, painted	11/16 13/16 13/16 13/16	1 1 2 7	.08 .12 .23 .38	.25 .31 .50 .64	.76 .85 .72 .62	.84 .88 .77 .68	.78 .75 .74 .76	.73 .75 .69 .75	.65 .70 .70 .70 .70	$     \begin{array}{r}       1.35 \\       1.53 \\       1.54 \\       1.54 \\       1.54 \\       \end{array} $
Airacoustic, unpainted	1/2	6 6	.13 .29	.41 .51	.40 .70	.72 .82	.78 .79	.72 .80	.60 .70	.80 1.50
Arrestone, enameled metal pan perforated 484 holes per sq ft, backed with mineral wool	1 1/4	3	. 25	. 56	. 99	.99	.77	. 60	. 85	1.20
Auditone, slotted, painted	3/4 3/4 1 1	1 2 1 2	.09 .13 .13 .28	.28 .49 .33 .48	.68 .60 .79 .64	.80 .72 .85 .86	.79 .80 .85 .77	.81 .81 .72 .75	.65 .65 .70 .70	.91 .91 1.15 1.23
Corkoustic. cork tile, fissured surface, painted, moisture resistant, beveled or square edges	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12	.06 .18	. 16 . 41	.73 .70	.69 .51	. 56 . 58	. 89 . 65	.55 .55	.77 .77
Cushiontone A, wood fiber tile, perforated 484 holes per sq ft, painted, beveled edges	$\begin{array}{c c}     1/2 \\     1/2 \\     5/8 \\     5/8 \\     3/4 \\     3/4 \\     7/8 \\     7/8 \\     7/8 \\   \end{array}$	1 2 1 2 1 2 1 2 1 2	.05 .07 .09 .13 .10 .14 .09 .17	.18 .47 .25 .45 .28 .51 .28 .51	.56 .55 .60 .55 .66 .59 .74 .3	.76 .70 .80 .73 .91 .87 .98 .95	.77 .77 .78 .79 .82 .81 .78 .75	.69 .70 .70	.55 .60 .65 .65 .70 .70 .75	.79 .79 .92 .92 1.05 1.05 1.17 1.17
Cushiontone F, incombustible mineral wool tile, perforated 484 holes per sq ft, painted, beveled	i 3/4	1	.05	. 14	5	. 90	. 78	_	. 60	1.13
Econacoustic, painted	1 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/	$\begin{array}{c}1\\2\\1\end{array}$	.05 .09 .16	.17 .32 .41	.62 .75 .80	.83 .78 .78	.77 .74 .73	.78	.60 .65 .70	.40 .40 .77
Fiberglas, felted mineral tile, fiber surface, painted	3/4 3/4 3/4 1 1	1 2 9 1 2 9	.11	.32 .44 .65 .31 .40 .52	.75 .79 .83	.83 .83 .84 .94 .96 .87	.84 .85	.65 .81 .79 .83	.70 .75 .70	.67 .67 .94 .94 .90

Material	ness nting		Sound-Absorption Coefficients					Noise Red. Coef.	Wt. <i>lb</i>	
	Thickness in.	Mounting	128 cps	256 cps	512 cps	1,024 cps	2,048 cps	4,096 cps	(aver- age)	per sq fl
Fibracoustic, painted	1 1	1 2	.18 .25	.42	.81 .72	.75 .72	.71 .71	.72 .76	.65 .70	.54 .54
Fibretone, perforated 484 holes per sq ft, painted	$\frac{1/2}{13/16}$ 13/16	1 1 2	.08 .14 .18	.28 .37 .54	.58 .69 .72	.71 .80 .74	.68 .76 .71	.65 .73 .72	.55 .65 .70	.75 1.17 1.17
Muffletone, integrally colored, standard	1	1	.12	.30	.74	.76	.71	.67	. 65	1.80
Muffletone, integrally colored, fissured	1	1	.09	.29	. 83	.97	.77	.71	. 70	1.92
Sanacoustic, enameled metal pan perforated 4,608 holes per sq ft, backed with mineral wool	1 1/4	3	. 25	. 58	.96	.97	.85	.72	.85	1.28
Simpson acoustical tile, perforated 484 holes per sq ft, painted, beveled	$     \begin{array}{r}       1/2 \\       1/2 \\       5/8 \\       5/8 \\       1 \\       1     \end{array} $	$     \begin{array}{c}       1 \\       2 \\       1 \\       2 \\       1 \\       2 \\       1 \\       2     \end{array} $	.09 .07 .06 .14 .12 .22	.16 .37 .18 .50 .31 .51	.67 .71 .74 .70 .98 .89	.84 .75 .90 .83 .94 .98	.76 .77 .78 .78 .78 .70 .71	.72 .69 .70 .71 .64 .66	.60 .65 .65 .70 .75 .75	.60 .60 .80 .80 1.10 1.10
Sound Isolation Blanket, muslin-covered, unpainted	$\frac{1}{2}$	4 4	.22 .39	.46 .57	.86 .91	.98 .91	. 88 . 80	.77	.80	$1.20 \\ 2.00$
Transite Acoustical Panels, rock wool blanket, perforated 600 holes per sq ft, unpainted	$\frac{1}{2}$	5 8	.17 .29	. <b>49</b> . 57	.94	.90 .93	.70	.43 .48	.75 .80	$\begin{array}{c}1.20\\2.00\end{array}$
Transite Acoustical Unit, pad, perforated 576 holes per sq ft, painted	1	2	. 28	. 55	.83	.91	.76	.67	.75	2.20
Travertone, mineral wool tile, fissured surface, incombusti- ble, painted	3/4	1	.12	.27	.72	.79	.76	.77	.65	1.13

# MOUNTING METHODS: (1) Cemented to plaster board (2) Nailed to 1 × 3-inch wood furring 24 inches on center and filled in between furring with 1 × 2-inch wood furring (3) Attached to metal supports applied to 1 × 2-inch wood furring (4) Laid directly on laboratory floor **Absorption Coefficients of General Building Materials, Seats and Audiences** (5) Nailed to 1 × 3-inch wood furring 24 inches on center and filled in between furring with 1 × 2-inch wood furring (4) Laid directly on laboratory floor (5) Nailed to 1 × 3-inch wood furring 24 inches (6) Laid to 1 × 3-inch wood furring 24 inches (6) Laid on 24-gage sheet iron nailed to 1 × 2-inch wood furring (7) Attached to special metal supports mounted (9) Mechanically mounted to metal furring strips 24 inches on center 10½ inches from boundary (1) Attached to special metal supports mounted (1) Attached to special metal supports mounted (1) Attached to special metal supports mounted (2) Nailed to 1 × 2-(3) Attached to special metal supports mounted (4) Laid directly on laboratory floor (4) Laid directly on laboratory floor

Material	Coefficients				
×	128 cps	512 cps	2,048 cps		
Audience, seated, sabins per person	1.0-2.0	3.0-4.3	3.5-6.0		
Brick wall, painted	.012	.017	.023		
Brick wall, painted Brick wall, unpainted	.024	.03	.049		
arpet, unlined	. 09	. 20	. 27		
Carpet, felt lined	. 11	.37	.27		
Lhairs, metal or wood	.15	.17	. 20		
abrics, hung straight, light, 10 oz per sq yd	.04	.11	.30		
'abrics, hung straight, medium, 14 oz per sq yd	. 06	.13	. 40		
abrics, neavy, draped, 18 oz per sq yd	. 10	. 50	.82		
loors, concrete or terrazzo	.01	.015	.02		
loors, wood	.05	.03	.03		
loors, linoleum, asphalt, rubber or cork tile on concrete		.0308			
ilass	.035	.027	.02		
larble or glazed tile	. 01	.01	.015		
penings, stage, depending on furnishings		.2575			
penings, deep balcony, uphoistered seats		.50-1.00			
penings, grills, ventilating		.1550			
ew cushions	.75-1.1	1.45 - 1.90	1.4-1.7		
ew cushions laster, gypsum or lime, smooth finish on tile or brick	.013	.025	.04		
laster on lath	.02	.03	.04		
laster, gypsum or lime, rough finish on lath	.039	.06	.054		
heatre and auditorium chairs, wood veneer seat and back		.25			
heatre and auditorium chairs, upholstered in leatherette.		1.6	• • •		
heatre and auditorium chairs, heavily upholstered in plush or mohair		2.6-3.0	• • •		
Vood paneling	.08	.06	.06		
Vood pews		40			
OTE: Multiplying area by coeff. gives equivalent absorption in sabins. To get reverberation time ' in cu ft by 0.05 and divide result by total absorption a in sabins: $T = 0.05 V/a$ . (Equivalent ab erfectly absorbing surface that will produce same effect on reverberation time as does the surface in q	T . C	. 40			

# COATINGS FOR CONDUCTIVITY

Application Process	Conductive Material	Base Material	Adherence	Surface Quality	Uniformity of Thickness %	Thickness in.	Resistance ohm-cm
Vacuum evaporation	Ni-Cr Ni-Cr Ni-Cr Ni-Cr Ni-Cr Ag Ag	Bakelite Bakelite Glass Polystyrene Steatite Bakelite Glass	Excellent Excellent Fair Fair Fair Fair	Mirrorlike Mirrorlike Mirrorlike Mirrorlike Porous Mirrorlike Mirrorlike	1 1 1 1 1 1 1	0.00001 0.00005 0.00001 0.00001 0.00001 0.00001 0.00001	$\begin{array}{c} 0.26 \\ 0.05 \\ 0.25 \\ 0.25 \\ 0.5 \\ 0.12 \\ 0.11 \end{array}$
Sprayed metal using wire gun or powder	Zn Zn Zn Al Al Cu	Steatite Ground Glass Bakelite Glass Steatite Carbon	Good Poor Fair Good Excellent Excellent	Porous Porous Porous Porous Porous Smooth	25 25 25 25 25 25 25	0.002 0.002 0.002 0.002 0.002 0.002	$\begin{array}{c} 0.05 \\ 0.05 \\ 0.05 \\ 0.2 \\ 0.2 \\ \dots \end{array}$
Low melting point alloy flowed on (Woods metal)	Zn-Pb-I Zn-Pb-I Zn-Pb-I	Bakelite Glass Lucite	Excellent Excellent Poor	Porous Porous Porous	25 25 25	0.001 0.001 0.001	1.0 1.0 1.0
Silver or gold precipitation	Ag Au	Bakelite Bakelite	Fair Fair	Mirrorlike Mirrorlike	10 10	0.0001 0.0001	0.00008 0.0003
Graphite deposition by precipitation	С	Vinylite, polystyrene or cellulose acetate	Excellent	Smooth	2.5	0.0005	200
Electrochemical deposition	Cu Ag Cr Ni	Any of above coated with any metal but Al	Excellent	Smooth after buffing	5 5 5 5 5	0,002 0.002 0.002 0.002 0.002	

Note: Excellent adherence means the coating cannot be scratched off with finger nails, lifted off by Scotch tape, or rubbed off with vigorous treatment with a pencil eraser. Poor means that it fails on all three tests. Data given here is based on information presented in National Bureau of Standards Miscellanceus Publication 192, "New Advances in Printed Circuits," issued Nov. 22, 1948 and available at 40 cents from Supt. of Documents, U. S. Government Printing Office, Washington 25, D. C.

Conductive Coating Material	Base Material	Application Method	Characteristics	Thinners
DuPont 4351 fired-on silver paint	Porcelain, steatite and titanium bodies; ceramic capacitors	Brush, dip or spray. Firing temp. 1,100- 1,300 F. Firing cycle 10 min-6 hours, depending on base material and equipment	High Q; suitable for direct soldering	Butyl acetate
DuPont 4545 fired-on silver paint	Steatite; porcelain (bisque or glost)	Spray or brush. Firing temp. 1,220 F. Fir- ing cycle 20 min-6 hours, depending on equipment and size of ceramic. A copper flash on the fired silver film, sometimes fol- lowed by a tin dip or plate hefore soldering, gives best results in sealing metal to ceramics	Suitable for solder seal. Square resist- ance of all DuPont fired-on silver paints is less than 0.01 ohm	Turpentine; toluol
DuPont 4581 fired-on silver paint	Mica	Spray or screen stencil with hand-cut Pro- film screens. Firing temp. 1,058 F; may vary with plant conditions	Q of 6,000 or more, depending on quality of mica	Pine oil; squeegee medium
DuPont 4616 fired-on silver paint	Mica	Screen stencil, using photographic screens of gelatin or polyvinyl alcohol (Pro-film screen not suitable). Other conditions same as for DuPont 4581	Same as DuPont 4581	Butyl carbitol acetate
DuPont 4666 fired-on silver paint	Quartz crystals	Spray or brush. Firing temp. 850–950 F. Firing cycle 5–20 min.	Good stability; high conductivity; suitable for direct soldering	Butyl acetate
DuPont 4731 fired-on silver paint	Low-expansion bod- ies; ceramic capacitors	Brush. Firing temp. 1,250–1,350 F. Firing cycle 10 min–6 hours. For dip or spray use DuPont 4756	High Q; suitable for direct soldering	Turpentine; toluol; pine oil
DuPont 4760 fired-on silver paint	Glass	Spray or brush. Firing temp.: soft or low- melting glass 1,000 F; heat-resistant glass 1,100-1,200 F	Suitable for solder seal	toluol; pine oil
DuPont 4810 fired-on silver paint	Mica	Screen stencil, using photographic screens of gelatin or polyvinyl alcohol (Pro-film screen not suitable). Firing temp. 850–950 F; for spray use DuPont 4933 fired at 1,058 F	depending on quality	
DuPont 4822 fired-on silver paint	Very dense, low- expansion bodies (titanium)		High Q. Suitable for direct soldering. For ceramic capacitors	Turpentine; toluol; pine oil

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Conductive Coating Material	Base Material	Application Method	Characteristics	Thinners
DuPont 4887 fired-on silver paint	All types of base materials	Brush or spray. Firing temp. 750-850 F. Firing cycle 10 min-6 hours, depending on base materials and equipment	High conductivity; good bond at low bake temperatures	
DuPont 4989 fired-on silver paint	Steatite; porcelain (bisque or glost)	Spray or brush. Firing temp. 1,220 F. Firing cycle 20 min-6 hours, depending on equipment and size of ceramic	Particularly adapt- able to mass produc- tion	
DuPont 4990 fired-on silver paint	Glass	Squeegee. Other conditions same as for DuPont 4760	Suitable for solder seal	Turpentine; toluol; pine oil
DuPont 5026 fired-on silver paint	Ceramic capacitors; steatite; titanium	Dip or spray. Firing temp. 1,310 F. Firing cycle depends on equipment and base material	Water base medium. Suitable for direct soldering	Water
DuPont 5052 fired-on silver paint	Low-expansion bodies (steatite, titanium); ceramic capacitors	Squeegee with photographic screens of gelatin or polyvinyl alcohol (Pro-film screens not suitable). Firing temp. 1,250-1,350 F. Firing cycle 10 min-6 hours		Butyl carbitol acetate
Hanovia 38 fired-on silver paste	Glass	For brush painting. Firing temp. 580 C for soft glass; 600 C for lime glass; 650 C for pyrex or fused quartz. May be soft soldered directly on small area if done quickly	of c-r tubes and ele	ctrical contacts, or dipping, spot-
Hanovia 28 fired-on silver paste	All ceramics having natural temp. of ap- proximately 750 C	For brush painting. Fire at 750 to 800 C. Suitable for direct soft soldering	For mica and quartz Fire mica at 540 C	use Hanovia 63.
Hanovia 32A fired-on silver paste	Pyrex and ceramics	For brush painting. Fire pyrex at 680 C. ceramics at 750-800 C. Not recommended for direct soldering	Fired film can be el- with copper, then tin, large areas	ectroplated first for soldering to
DuPont 4548 air-set silver paint	Nonporous materials; glass; Bakelite	Spray. Dry at room temperature for several hours	Fair scratch resist- ance; suitable electro- plating base	Butyl alcohol
DuPont 4817 air-set silver paint	All types of base ma- terials. On porous bases, apply varnish or shellac first	Brush or spray. Air dry for 10-12 hours. Apply a copper flash prior to electroplating. On glass use DuPont 4916 for spray or dip and dry 10 min at 100-160 F	Good scratch resist- ance; excellent for static shielding	Butyl acetate
DuPont 4922 air-set silver paint	Wood; paper; plastics	Brush or spray. Air dry for 10-12 hours. Apply copper flash prior to electroplating. For squeegee use DuPont 4929 and dry 3-4 hours at 100-160 F	High conductivity; adaptable for plating on plastics and coat- ing radio shields	Butyl acetate
Metaplast M-13A and M-15A silver paint	General purpose; especially suited for methacrylate and cel- lulose plastics	M-13A for silk-screen printing; dry 3 hours at 122 F. M-15A for painting; dry 1 hour at 104 F or overnight at room temp.	50 to 60% silver by weight	Amyl acetate or cellosolve acetate
Metaplast M-13S and M-15S silver paint	Styrene and vinyl chloride plastics	M-13S for silk-screen printing; dry 3 hours at 122 F. M-15S for painting; dry 1 hour at 104 F or overnight at room temp.	50 to 60% silver by weight	Cellosolve or butyl cello- solve
Metaplast M-18A silver paint	General purpose	Spraying; dry 1 hour at 104 F or overnight at room temp. Especially suited for metha- crylate and cellulose plastics	Approx. 35% silver by weight	Xylol or butyl acetate
Metaplast M-18S silver paint	Styrene and vinyl chloride plastics	Spraying; dry 1 hour at 104 F or overnight at room temp.	Approx. 35% silver by weight	Methyl cello- solve
Hanovia 6 fired-on platinum alloy paste	Ceramics; hermetic sealing of ceramic boxes for crystals	Thin and apply by brush. On unglazed ceramics, fire at 750 C. On glazed ceramics use Hanovia 13; on glass, pyrex and fused quartz use 13A fired at 650 C; both can be tinned and soldered directly	Fired film requires copper plating before tinning and solder- joining	Turpentine
Hanovia 05 liquid bright platinum	Porcelain, glass and other ceramics	Apply with camel's-hair brush or by spray- ing; dries enough for handling in hour at room temp. Fire at 600 C for glass, 650 C for pyrex and 750-800 C for ceramics	Gives high-polish mir- ror film having good conductivity. Good adherence	Volatile oils
Aquadag colloidal graphite solution	Any base material	Conductive coating; minimizes secondary en- tric effects. Opaque matte surface excludes courages reflection of light. Used for second external shields directly on glass tubes, resistor	external light and dis- d anodes of c-r tubes,	Distilled water
Conductalute graphite-base paint	Any base material	Apply by stenciling or silk screen process. Harden by air-drying or baking	Conducts electricity; acids, solvents, oil and silver plated in cyanide	heat. Can be

# **COATINGS FOR PROTECTION**

Base Material	Coating	Remarks
Aluminum	Sat-N-Dip	Nonelectric process for producing smooth, uniform satin finish on wrought and extruded aluminum. Process obliterates minor surface scratches, discoloration, dirt, oil, lettering and oxides and develops passive surface forming excellent base for paint primers. Heliarc welds can be made without spitting or burning
Aluminum and its alloys	Alodizing	Nonelectric brush, spray, dip, tumbling barrel or flow process for producing a smooth tough coating ranging from iridescent blue-green to greenish yellow, suitable for final finish or as base for paint. Excellent corrosion resistance
	Alrok	Nonelectric dip oxidizing process giving yellow to green protective and decorative coating suitable for paint base. Film is nonconductive. Inferior to anodizing in abrasion and corrosion resistance, but inexpensive and applicable to assemblies having nonaluminum materials
	Alumatreet	Nonelectric immersion process for removing corrosion and forming a ductile, tightly adherent dulle matte-type corrosion-resistant phosphate coating. Excellent base for organic finishes
	Alumilite Process	Anodic oxidation in sulfuric acid solution, giving hard, abrasion and corrosion-resistant coating that is transparent when sealed with boiling water, and an attractive yellow with chromate sealers. Can be dyed any color. Normal coating is about 0.0004 inch. High dielectric strength. Excellent paint adhesion
	Alumon	Nonelectric process of depositing firmly adherent zinc-copper base for subsequent electro- deposition of Cd, Cu, Ni, Zn and Ag directly. Cr, Au and Sn require primary coats of Ni Cu or Cd. Unlimited throwing power. Can produce bright plating requiring no buffing
	Alumox	Simple immersion in heated solution produces hard, thin, corrosion-inhibiting coating varying from iridescent gray to deep greenish-gray. Relatively low abrasion resistance Excellent base for paint
	Alzak	Electrolytic process giving microrlike highly reflective and corrosion-resistant surface, with reflectivities of 85% for visible and 90% for infrared. Involves electrolytic polishing and brightening, followed by anodizing in sulfuric acid. Diffused surface obtained by chemica etching instead of polishing
	Anodizing, chromic acid	Anodic oxidation in chromic acid solution. Applicable to riveted and welded parts. Given negligibly thick, smooth, clear-gray coating that can be colored with water-soluble dyes Easily scratched; should be protected with organic finish. Coating has high dielectric value hence not suitable where conductivity is required. Highly corrosion-resistant
	Anodizing, phosphoric acid	Electrochemical anodizing in phosphoric acid electrolyte, giving coating that is ready to be plated directly with nickel and copper. Recommended for parts having relatively regula contours and small surface areas. Not suitable for pure aluminum, Al-Mg castings or die casting alloys. Coating has high electrical resistance
	Bonderite	Nonelectric spray or immersion process giving nonconducting dull gray to black phosphat coating having excellent paint bonding characteristics. Uses Bonderite 170 solution
	Zincate	Nonelectrolytic immersion in sodium zincate, producing an extremely thin adherent zincoating suitable for subsequent electrodeposition. Does not interpose electrically resistan layer and hence is suitable for applying silver coating to aluminum. Copper strike is usually applied before direct plating. Is self-arresting hence does not form objectionable rough deposits
Copper	Glass	Continuous coating of glass produced by dipping, spraying or dusting wire or any prepared metal shape with powdered glass, then heating in furnace at about 850 C to melt powde
Copper and copper alloys	Bright acid dip	Parts are brightened by immersion in nitric or sulfuric acid solution. Clear lacquer i applied by brushing, spraying or dipping to prevent tarnish. Electrostatic equipmen reduces lacquer consumption in automatic machine spraying, giving excellent finish at low cost
	Gold plate	Used on microwave components to obtain high-conductivity surface coating. Platin solution is sodium gold cyanide, sodium cyanide and sodium carbonate. Sometimes flashe with rhodium to improve corrosion resistance
Magnesium alloy	Dichromate treatment	Corrosion-preventative dichromate dip giving yellow color
Metals and nonmetals	Sprayed metal	Use of special spray gun that melts and atomizes desired protective metal in wire form for spraying on practically any desired surface. Roughening, as by sandblasting, is generally required to get good adhesion of deposited metal. Used for producing conductive coating on wood, plastics, carbon and other nonmetallic materials, for repairing damaged electron plated coatings on metals and for building up metal surfaces

# AND DECORATION

		The sector of th
Base Material	Coating	Remarks
Metals and nonmetals (Continued)	Varnish	Clear solution of drying oil and natural or synthetic resin. Drying takes place either by oxidation of oils, evaporation of solvent, or polymerization of resin and oil. Classified as air drying or baking, depending on method of drying. Used chiefly for protection of fabric, paper, wood and other fibrous insulation against mechanical damage and moisture, and for improving insulating properties, increasing heat transfer, providing a surface finish and bonding layers of laminated materials. Six major types of insulating varnishes are: (1) Clear Baking Varnish, used for armatures, field coils, transformers and instruments: (2) Black Baking Varnish, similarly used when greater resistance to moisture, acids and alkalies is required along with higher dielectric strength; (3) Clear or Black Air Drying Varnish, for applications where baking is not feasible; (4) Clear or Black Finishing Varnish, used over baking varnishes to improve appearance, give a harder surface, and protect against oil, moisture, dirt and metal dust; (5) Sticking Varnish, for cementing cloth, paper, mica, etc; (6) Core Plate Varnish, for insulating laminations of transformers and armatures. Oil varnishes are usually applied by hot dipping or vacuum impregnation, while finishing var- nishes are applied by brush or spray
Metals, any	Brass plate	Electroplate of copper and zinc, applied to brass where uniform appearance is desired, and to steel for appearance or when bonding to rubber is desired
	Brush plating	For plating small portions of assemblies that cannot conveniently be dismantled or safely immersed. Uses prepared compounds of jelly-like consistency, available for nickel, cad- mium, copper, silver, gold and chromium. After polishing, area is completely cleaned with special degreasing compounds that do not require immersion. Plating is done with ordinary paint brush having small anode at bristle end, that is dipped in prepared compound and moved over area in slow even strokes. Batteries or other d-c power source provide plating current
	Ceramic coatings	Crystalline porcelains, developed at NBS and still relatively new, have high dielectric and mechanical strength up to 2,000 F and high thermal shock resistance. Typical composition is 80% zirconia, 10% beryllia and 10% magnesia. Good for electrical insulators, radar transformers and spark plugs
	Chromium plating	Lustrous tarnish-resistant flash deposit of chrome electroplate about 0.00001 inch thick, applied by electroplating over nickel or copper plus nickel. Nickel is generally in form of plate over steel, copper or other base material. Plating is from bath containing chromic acid plus a sulfate or fluoride radical. Brilliance depends on condition of nickel surface. Modern bright nickel plating solutions sometimes permit omission of buffing and cleaning steps. Not for parts having deep recesses
	Copper plating	Most widely used as undercoating for nickel plating because of excellent throwing power, high deposition rate and good adhesion. Easily polished and buffed. Cyanide copper plating baths are most common for thin deposits prior to nickel plating. Proprietary plating baths give mirror-bright deposits. Copper plate tarnishes readily. Acid copper baths are used primarily for electroforming because they permit rapid buildup of thick deposits. Copper strike is required (rather than simpler cyanide dip) before plating from acid sulfate or fluoborate baths
	Enamel	Pigmented lacquer or varnish that can be air-dried or baked. Metals generally require cleaning and one of coatings listed here to get good adhesion. All materials listed under lacquer become enamels when color pigments are added
	Indium plating	Silver-white, extremely soft, malleable and ductile metal, tarnish-resistant, with unusual ability to harden and improve surface properties of nonferrous metals. Steel must first be plated with a nonferrous metal such as copper, silver or brass. Plating is from cyanide, sulfate, fluoborate and sulfamate solutions, with cyanide preferred. After plating, diffusion is achieved by oven baking for 2 hours at 350 F to obtain improvement in surface properties
	Lacquer, air dry	Used clear as lacquers and with thermoplastic color pigments as enamels, for protection and decoration. Always soluble in solvents in which originally mixed. Applied by brushing, hand or automatic spraying, machine or basket bulk dipping, centrifuging and barrel tumbling. Electrostatic equipment greatly reduces material consumption in automatic spraying. Types most extensively used are:
	Cellulose-aceta Better resist compatible v Cellulose aceta Durable outo protection fo Ethyl-cellulose Good resistan Polyvinyl resin Resistant to Shellac and oth	te with resins and solvents, nearly colorless, cheap, quick drying, most widely used of all thermo- ers. Maximum solids content for spraying is 35%, and 40% if hot te resin ance to heat and light than cellulose nitrate, low flammability, but has few solvents and is with few resins; used as wire insulation te-butyrate resin doors, but high in cost and compatible with few resins; non-yellowing, and provides excellent r metals resin noce to alkalies, stable to heat and light, flexible even at low temperature and has many solvents

## COATINGS FOR PROTECTION AND DECORATION (Continued)

Base Material	Coating	Remarks								
Metals, any (continued)	Methacrylates Excellent clarity but high cost Polystyrene resins									
	Good elect Polyethylene	rical properties, soluble in hydrocarbons								
	Nation	rt, heat-resistant, flexible, good electrical properties st, hence used for specialty work chiefly; wires are being nylon coated at rate of mile a minu								
	Lacquer baking	Used clear as lacquers and with color pigments as enamels, for protection and decoration Thermosetting. After baking, not soluble in original solvents since baking polymeriz coating in insoluble condition. Can be applied in patterns by roller coating, screen stencilir and printing. Cheaper than air drying usually because fewer coats are needed to get san film thickness. Can be sprayed with solids content up to 50%. Rubbing-type paste wax improve durability of finish. First three of following types are used most extensively:								
	than urea f	ebyde rless, resistant to chemicals, good electrical properties, fast curing, but less adhesion to plast films								
	Durable ou generally o Phenol-forma	utdoors, excellent adhesion, but slightly yellow in color and not as hard as urea-formaldehyd ombined with other resins aldehyde								
	Resistant Melamine	to chemicals, but darkens in light resistant to alkalies and high temperature, but high in cost								
	Vinyl coating Synthetic : coats. Dr coating wi water-clean is 400 sq f insulation flushing or convection									
	Nickel plating	Applied directly on base metal or on preliminary copper plate, for protection from corrosi Does not protect steel from galvanic corrosion. If nickel plating is broken, corrosion base metal is accelerated. Generally followed by thin chrome plate to provide abrasion a tarnish resistance. Protection is directly proportional to thickness of nickel. Steel ite may be buffed after copper or nickel plating; nonferrous items are generally complet buffed before cleaning. Not for parts having deep recesses								
	Rhodium plating	High-priced metal but widely plated because of hardness, brilliant blue-white color w exceptional reflectivity as required for searchlight mirrors, and excellent tarnish and corros resistance. Best applied over good nickel deposit. Generally plated from sulphate phosphate-type solution								
	Silicones	Hard, resistant to 600 F, sprays freely with up to 60% solids. Good insulating propertiused as insulation on wires								
	Silver plating	Frosted appearance, brightened by buffing. Plating solution is silver nitrate and sodi cyanide. Tarnishes readily. For electrical contacts, improving conductivity, and reflect								
	Strip coatings	Based on vinyl chloride-acetate resins such as Vinylite. Applied by spray, dip or brush form continuous film having low adhesion to permit subsequent stripping. Affords ma mum protection against weathering, scuffing, corrosion and mechanical abrasion, particula during forming and other manufacturing operations								
	Tin dip or plate	Excellent corrosion resistance if coating is unbroken. Tin-plated parts can be sever worked and deformed without rupture of plating. Used extensively for copper, brass a bronze parts and wire that must be soldered								
Plastics	Metal plating	Initial copper film is applied to any plastic object by reduction of copper from Fehli solution having metallo-organic derivative of sodium hydrosulfite. Intermediate layer copper or silver can then be applied conventionally by electroplating, followed by final lay of desired metal								
Silver	Electro- polishing	Reverse electroplating process for producing luster equal to that obtained by hand buffi with much less removal of silver. Polishing time is about 15 seconds in alkaline cyan solution at 5 volts d-c with work as anode								
Steel	Black oxide dip	Nonmetallic chemical black oxidizing treatment for steel, cast iron and wrought iron. Pabrasion resistance and inferior to plating								
	Bluing	Immerse cleaned and polished steel in heated saltpeter or carbonaceous material and with linseed oil. Inexpensive, but poor corrosion resistance								

Base Material	Coating	Remarks
steel (Continued	Bonderizing )	Spray or immersion process producing gray crystalline phosphate coating. Widely used fo finishing metal cabinets, light fixtures, switch boxes and machine parts. Inhibits corrosion and increases adherence of paint. Typical application sequence involves emulsion cleane spray, two water rinses, spraying with Bonderite solution, water rinse, acid rinse, drying at 250 F for 1½ minutes, and spraying with zinc chromate primer
	Bower-Barff finish	Corrosion-resistant oxide finish produced by heating pieces in closed retort to 1,600 F an alternately injecting superheated steam and carbon monoxide
	Cadmium plating	Widely used for radio and electrical parts because easily soldered and has good conductivity Coating is attractive but relatively soft and relatively high in price. Plating is from cyanid baths, with addition agents to produce bright or semibright deposits. Dip in dilute chromi acid or various proprietary chromate or phosphate solutions to get good paint adhesion
	Calorizing	Application of aluminum coating by cementation process involving packing steel articles i container with mixture of aluminum oxide, powdered aluminum and ammonium chlorid and heating in inert atmosphere like hydrogen while container is slowly rotated. Coatin is resistant to sulphur and does not oxidize
	Chromizing	Diffusion process for forming alloy of chromium and iron on surface to give corrosion resist ance of high-chromium steels. Steel objects are packed in closed container with chromium powder and alumina and heated to about 1,400 C in hydrogen atmosphere
	Corronizing	Nickel and zinc layers are separately plated on steel or codeposited and composite coatin is heated to temperature at which zinc and nickel form an alloy
	Galvanizing	Dip in molten zinc. Low cost, but generally inferior to cadmium plate and poorer adherenc than zinc electroplating. Poor appearance and poor wear resistance
	Granodizing	Cold-spray process of applying nonmetallic crystalline phosphate coating that tends t suppress galvanic action, so rust or corrosion does not spread beyond area where accidents scratching exposes bare metal. Typical sequence involves using alkaline-emulsion spray a cleaner, rinsing, coating with Granodine and rinsing
	Lohmannizing	Immersion of iron or steel sheets in bath containing amalgamating salt, followed by picklin and dipping in two different baths of molten alloys of lead, tin and zinc to produce protectiv metal coating
	Parco Lubrizing	Chemical method of producing phosphate coating to prevent wear, involving immersion of cleaned articles for about 15 minutes in near-boiling solution of Parco Lubrite. Finish i matte black and does not alter magnetic properties or impair elasticity. Coating absorb and retains oil, permitting rapid break-in of wearing parts and retarding wear and corrosion
	Parkerizing	Production of corrosion-resistant phosphate coating by immersing in solution of manganes dihydrogen phosphate and heating until effervescence ceases. Used chiefly as base fo enamels and paints. Oiling gives appearance of gun metal
	Phosphate treatment	Nonmetallic chemical treatment for steel and iron. Good paint base and suitable for protection of internal surfaces of hollow parts, but inferior to plating and poor abrasion resistance
	Sherardizing	Application of thin zinc coating by tumbling parts in mixture of zinc dust at about 800 F Zinc adheres by a form of amalgamation process. Preliminary cleaning required
	Tin-zinc coating	Most successful with 50 to 80% tin. Widely used on steel chassis blanks for radio sets and electronic equipment and on steel housings for electrical equipment to protect agains rusting. Can also serve as foundation for nickel-chromium plating not intended for high temperatures
	Zinc plating	One of most widely used protective finishes for small steel articles because it is economical in initial cost and application, decorative and highly corrosion resistant. Recently developed aftertreatments maintain brilliance, prevent tarnish; these include afterdip in proprietary chromate or phosphate solutions. Steps include degrease (trend is toward trichlorethylene and perchlorethylene degreasers), alkali clean, acid pickle, plate and afterdip. Acid zind plating baths are used where bright deposit is not required or where rust resistance is more important than decorative effect; throwing power is poor hence acid baths are not recom- mended for irregular objects. Cyanide baths with suitable addition agents have greatly superior throwing power and give bright lustrous deposits
teel, stainless	Passivating treatment	Nitric acid immunizing dip
in	Protectatin	Immersion process for applying thin invisible oxide film to tinplate to provide good base for paint or to protect against staining and rusting. Tinplate is dipped for about 20 seconds in hot alkaline phosphate dichromate solution containing suitable wetting or penetrating agent

# CERAMICS

Material	Alumina (Aluminum Oxide)	Corderite (Magne- sium Aluminum Silicate)	Forsterite (2 MgO- SiO <sub>2</sub> )	Porcelain, Low- Voltage (Dry Process)	Porcelain, High- Voltage (Wet Process)	Porcelain, Zircon	Steatite (Magne- sium Silicate)	Titanates (of Ba, Sr, Ca, Mg & Pb)	Titanium Dioxide (Rutile)
Dielec. Const. 1 mc	4.5- 8.4	4.5- 5.4	6.2	6.0- 8.0	6.0- 7.0	7.1– 10.5	5.5- 7.5	15- 12,000	14- 110
Power Factor 1 mc	0.0002- 0.01	0.004 0.012	0.0004	0.003- 0.02	0.006- 0.01	0.0002- 0.008	0.0002- 0.004	0.0001- 0.02	0.0002- 0.005
Dielec. Strength v/mil	40- 160	40- 250	240	40- 240	<sup>90–</sup> 400	250- 400	200- 400	50- 300	100- 210
Resistivity meg-cm	10 <sup>5</sup> - 10 <sup>8</sup>	10 <sup>6</sup>	108	10 <sup>6</sup>	10 <sup>6</sup> 10 <sup>8</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>2</sup> - 10 <sup>9</sup>	10 <sup>7</sup> -10 <sup>12</sup>
Tensile Strength lb/sq in.	700- 3,000	1,000- 4,000	10,000	1,000– 3,500	3,000- 8,000	10,000- 15,000	7,500- 10,000	4,000- 12,000	4,000- 8,000
Compress. Strength lb/sq in.	11,000- 60,000	20,000- 45,000	85,000	25,000- 50,000	25,000- 70,000	70,000- 150,000	65,000- 130,000	40,000- 120,000	40,000- 160,000
Flexural Strength lb/sq in.	1,500- 10,000	1,500- 8,000	20,000	3,500- 6,000		20,000- 35,000	16,000- 24,000	10,000- 22,000	18,000 - 22,000
Impact Strength <i>Charpy</i>	0.17- 3.0	0.2-2.5	4.0	0.2-2.0	0.2-2.2	0.4– 1.2	0.3- 5.0	0.3- 0.5	1.7- 3.1
Thermal Expans. <i>Coeff</i> .	2.2-7	1.5- 3.0	9.1- 10.6	3.0- 6.5	3.0- 6.8	3.0- 5.5	6.0- 10.5	6- 10	7-9.2
Te Value $^{\circ}C$	400- 835	400- 780	1,000	275- 400	300- 500	700	440- 1,000	200- 400	550
Safe Temp. °C	1,300- 1,600	1,200- 1,250	1,000	900	1,000	1,000- 1,200	980- 1,100		1,000
Water Absorp. %	0.00-20	0.5- 15	0.00- 0.05	0.5-2	0.00- 0.5	0.00- 0.5		0.00	0.00
Spec. Grav.	2.2- 3.2	1.6- 2.3	2.8	2.2- 2.5	2.3- 2.5	3.0- 3.8	2.5- 2.8	3.1- 8.9	3.9- 7.2
Typical Uses	Insulation in vacuum tubes; spark plug cores	Resistor and coil forms; thermo- couple insulators	Insulators for high frequency applica- tions	Switch bases, resistor forms	Terminal blocks, resistor forms	Coaxial cable insulators, resistor forms	High-freq. insulation for coils, tubes, coaxial cables		pcomp. ca- piezoelectric ups
Remarks	Extremely hard; easy to degass	Highly resistant to heat shock		Usually glazed	Usually glazed	Resistant to heat shock; low loss	Called Lava in natural form	with comp	vary greatly position and ring processes

NOTES Dielectric properties vary with composition of material and with treatment during the manu-facturing process, as well as with conditions under which the material is used, hence specific values should always be obtained from the manufacturer of the chosen ceramic prior to actual design. In general, the dielectric constant changes only slightly with frequency. Zircon porcelain shows the greatest change, dropping from 7.6 at 1 kc to 6.9 at 100 mc for one grade. All resistivity values are for room temp. 25C.

Impact strength is given in foot-pounds per square inch as obtained on a  $\frac{1}{2}$ -inch rod by the Charpy test. Here again manufacturers' data should be consulted for actual values; some values given here were obtained by ASTM test D667-42T and some by D256-43T, while others were not identified as to test procedure. The coefficient of linear thermal expansion is for the range from 20 to 100C, and is given in inches per inch per degree C  $\times 10^{-4}$  (multiply values in this column by  $10^{-4}$ ).

The Te value is the temperature in degrees G at which a 1-centimeter cube has a resistance of one megohm. This is a convenient method for comparison of volume resistivity at elevated tem-peratures, since ceramic dielectric materials de-crease their volume resistivity as temperature goes up (negative temperature coefficient of resistance). Hardness of ceramics ranges from 6 to 9 on the Mohs scale, wherein the specimen is rubbed against sample minerals of varying hardness, each identified with a number.

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# FLUORESCENT COMPOUNDS

Compound	Activator	Fluores- cent Color	in Ca	ous Eff. andles tt below 6 KV	Applications and Remarks
Cadmium borate	manganese	red	1	3	Night viewing navigation indicators, short persistence, not sensitive to ultraviolet rays and so used in airplane cockpits
Cadmium sulfide CdS:Cu	copper	deep red			Not very active. CdS:Ag used with ZnS:Ag gives bright yellow used for radar in daylight without filter and with tricolor red filter at night
Cadmium tungstate CdWO4	none		0.3	<mark>0</mark> .8	Fluoresces without activator, but of little importance in c-r tubes. Very sensitive to ultraviolet. Activated by Mn
Calcium phosphate	dysprosium	white	0.4	1.5	Long persistence, not sensitive to ultraviolet rays and so used in cockpits where other instruments are illuminated by ultraviolet light shining on their fluorescent dials
Calcium tungstate CaWO4:Mn	manganese	blue	0.3	1	Stable photographic screen. Without an activator CaWO <sub>4</sub> is RMA-P5 used for observing and photographing transients; blue-violet, very short persistence (5 microseconds). Also used in intensifying screens for x-ray
Zinc beryllium silicate ZnBeSiO <sub>4</sub> :Mn	manganese	yellow- green	1.2	5	Alternate to $Zn_2SiO_4$ for general use, medium persistence RMA-P3 used in early television tubes
Zinc cadmium sulfide ZnCdS:Cu	copper	orange- yellow	1.5	6	Medium to long persistence, phosphorescent, component of RMA-P7 radar screen. Has orange afterglow. Used for night viewing but not in cockpits
Zinc cadmium sulfide ZnCdS:Ag	silver	yellow	2.5	10	Short persistence, for daylight viewing and photography. Component of RMA-P6
Zinc orthosilicate (2ZnO-SiO <sub>2</sub> ):Mn	manganese	green	3.5	9	Commonly called willemite. Used in RMA-P1 screen, popular for scopes, because of high light output, stability and ease of maintaining uniform characteristics in production. High efficiency at low voltages. Less apt to burn under electron bombardment than sulfides. Adding about 0.4% arsenic oxide and 3% Mn activator increases persistence. Used for daylight viewing, and used in cockpits because insensitive to ultraviolet
Zinc phosphate	manganese	red			Sometimes used as special-purpose persistent screen in tubes for cardiographs
Zinc sulfide ZnS	none	pale blue			Sulfides are the most important of materials used for c-r tube screens. Unactivated ZnS is relatively inefficient. Activity depends chiefly on impurities
Zinc sulfide ZnS:Cu	copper	yellow- green	2	12	Addition of 0.001% copper gives long-persistence RMA-P2 screen for daylight-viewing oscilloscopes, for photography of traces and for holding transient images
Zinc sulfide ZnS:Mn	manganese	orange	1.5	1,5	For low-voltage tubes
Zinc sulfide ZnS:Ag	silver	actinic blue	2	0.4	As little as 0.00001% silver gives short-persistence screen most suitable for photographic recording. Used with ZnCdS:Ag in RMA-P6 white medium-persistence screen. Used with ZnCdS:Cu in RMA-P7 to give medium persistence in blue and long persistence in yellow (known as AB screen in England). Used with Ni quencher in RMA-P11 10- microsecond persistence screen
Zinc silicate (2ZnO-SiO <sub>2</sub> - H <sub>2</sub> O):Mn	manganese	green	3.5	9	Medium persistence for general oscilloscopic work; commonly called calamine

# GASES

Inorganic Gas	Molecu- lar Weight	Density at 0° C 760 mm Hg gm/liter	Thermal Conduc- tivity at 0° C cal/cm/sec/ deg C×10-6	Specific Heat at Constant Pressure cal/gm/ deg C	Velocity of Sound at 0° C meters per sec	Resonance <sup>a</sup> Potential volts		onizing tentials volts II		Wavelengths of Principal Spectral Lines angstrom units	
Air, dry		1.2929	56.8	0.2374	331.7						
Argon	39.94	1.782	40.6	0.1252		11.56	15.69	27.8	36.8	1,048.26 6,965.430 7,503.867	1,066.70 7,067.217 8,115.311
Helium	4.00	0.1785	336.3	1.251		20.91	24.5	54.1		584.4 5,875.618	3,888.646
Hydrogen	2.02	0.0899	327	3.389	1,269.5	10.2	13.5	_		1,215.7 6,562.79	4,861.327
Krypton	83.70	3.708	21.2	0.0597		9.98	13.94	26.4	31.2	5,570.290	5,870.916
Mercury Vapor	200.61					4.87	10.38	18.7		1,849.68 3,650.146 3,663.276 4,358.35	2,536.519 3,654.833 4,046.561 5,460.740
Neon	20.18	0.9002	109.2	0.2455		16.58	21.47	40.9	63.2	735.95 5,400.562 5,852.488	743.73 5,832.488 6,402.246
Nitrogen	28.04	1.2506	52.4	0.2447		6.3	14.48	29.5	47.4	1,199.5 4,099.94	1,200.2 4,109.98
Oxygen	32.00	1.4290	56.3	0.2178	317.2	9.11	13.55	34.9	54.9	1,302.27 1,306.12 7,774.138	1.304.96 7,771.928 7,775.433
Sodium Vapor	23.00					2.1	5.12	47.5	70.8	3,302.323 5,682.657 5,889.953	3,302.988 5,688.224 5,895.923
Xenon	131.30	5.851	12.4	0.0382		8.39	12.08	21.1	28.5	1,295.8 4,500.977 4,671.226	1,469.9 4,624.276

<sup>a</sup> Resonance potential represents the energy a bombarding electron must have to impart the next higher energy level to the outer electron of a gas atom. <sup>b</sup> Ionizing potentials I, II and III represent the energy bombarding electrons must have to remove completely successive outer electrons of a gas atom.

Insulating Gas (23°C; 760 mm	Relative Boiling Dielectric Point Strength deg C			Absorption cients	Diele Cons		Remarks NOTE: Dielectric strength	
total pressure)	for D-C	ucy C	9,430 mc	24,200 mc	9,430 mc	24,200 mc		
Trichloromonofluoromethane CCl <sub>3</sub> F	3.0	24.1					Freon 11. Vapor-nitrogen mixture	
$\begin{array}{c} Dichlorotetrafluoroethane \\ C_2 Cl_2 F_4 \end{array}$	2.8	3.8					Freon 114	
$\begin{array}{c} {\bf Trichlorotrifluoroethane} \\ {\bf C}_2 {\bf C} l_3 {\bf F}_3 \end{array}$	2.6	47.2					Freon 113. Vapor-nitrogen mixture	
$\frac{\text{Dichlorodifluoromethane}}{\text{CCl}_2\text{F}_2}$	2.4	-28.0	0.00003	0.00031	1.00029	1.00031	Freon 12	
Sulfur Dioxide SO <sub>2</sub>	1.9	10 . 0	0.00011	0.00050	1,00075	1,00086	Corrosive when wet	
Carbon Tetrachloride CCl <sub>4</sub> (Vapor-nitrogen mixture)	1.65	76.74					Nonflammable. Toxic	
Dichlorofluoromethane CHCl₂F	1.33	14.5	0.00052	0.00106	1.00049	1.00052	Freon 22	
Hydrogen Sulfide H <sub>2</sub> S	1.30	-60.75	≌0	<b>≌</b> 0.00003	1.00030	1.00035	Toxic. Corrosive when wet	
Ethylamine C <sub>2</sub> H <sub>5</sub> NH <sub>2</sub>	1.06	16.51	0.00031	0.00102	1.00053	1.00045	Flammable	
Methyl Chloride CH <sub>3</sub> Cl	1.06	-24.4	0.00055	0.00080	1.00094	1.00099	Moderately flammable	
Dimethylamine (CH <sub>3</sub> ) <sub>2</sub> NH	1.04	7.4	<del></del> -	0.00070		1.00040	Irritating. Flammable	
Methyl Bromide CH <sub>3</sub> Br	1.02	3.7	0.00042	0.00062	1.00095	1.00100	Nonflammable. Toxic	

# GLASS

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Trade Name & No.	Type of Silicate Glass	Coeff. of Therm. Ex- pansion ppm/°C	Density grams per cu cm	Soft. Pt. °C	Anneal Pt. °C	Vol. Resistiv. at 350 C megohm- cm	Diel. Const. room temp. 100 mc	Loss Tang. room temp. 100 mc	Remarks
Corning 0010	Potash-soda-lead	9.1	2.85	626	428	10	6.32	0.0024	Lamp tubing
Corning 0080	Soda-lime	9.2	2.47	696	510	0.13	6.75	0.0085	Lamp bulbs
Corning 0120	Potash-soda-lead	8.9	3.05	.630	433	100	6.65	0.0018	Lamp tubing
<b>Pyrex 1710</b>	Lime-alumina	4.2	2.53	915	712	2,500	6.00	0.0042	High temp.
Pyrex 3320	Soda-potash-boro	4.0	2.27	780	535		4.71	0.0041	Sealing
Pyrex 7040	Soda-potash-boro	4.8	2.24	702	484	80	4.65	0.0028	Metal sealing
<b>Pyrex 7050</b>	Soda-borosilicate	4.6	2.25	703	496	16	4.77	0.0035	Series sealing; W seals
Pyrex 7052	Mixed alkali boro	4.6	2.28	708	475	25	5.07	0.0037	Kovar sealing
Pyrex 7060	Soda-boro	5.0	2.23	690	495	13	4.70	0.0038	Metal sealing
Pyrex 7070	Low-alkali boro	3.2	2.13		490	1,300	4.00	0.0012	Low loss
Vycor 7230	Alumina-boro	1.4		1,160	750		3.83	0.0016	Quartz-tungsten seal
Pyrex 7720	Soda-lead-boro	3.6	2.35	755	518	16	4.50	0.0031	Tungsten sealing
Pyrex 7740	Sodo-boro	3.2	2.23	820	555	4	5.00	0.0080	Low expansion; general
Pyrex 7750	Soda-boro	4.1	2.19	704	467	50	4.28	0.0025	Sealing
<b>Pyrex 7760</b>	Borosilicate	3.4	2.23	780	515	50	(4.5)	(0.0018)	Electrical
Vycor 7900	96% silica	0.8	2.18	1,500	910	130	3.9	0.0006	High temp., low loss
Vycor 7910	96% silica, uv transm.	0.8	2.18	1,500	910	1,600	(3.8)	(0.00024)	High temp., low loss
Vycor 7911	96% silica, uv transm.	0.8	2.18	1,500	910	4,000	(3.8)	(0.00019)	High temp., low loss
Corning 8870	High lead content	9.1	4.28	580	429	5,000	(9.5)	(0.0009)	Sealing or electrical
GE	Silica glass, clear	0.6	2.20	1,667	1,140	4,000- 30,000	3.81	0.0001	High-temp. insulator

Softening and annealing points are subject to normal manufacturing variations. Data on dielectric constant and loss tangent at 100 mc are from A. von Hippel's Laboratory for Insulation Research at MIT except data in brackets, which is for 1 mc at room temperature and taken at the Corning Glass Works. Loss tangent is loss factor divided by real dielectric constant. The tensile strength of commercial glasses, as measured for one-quarter inch diameter rods of annealed rods of glass in prolonged bending tests, is approximately 4000 psi. By tempering, this value can be increased to 10,000 psi and upwards, depending upon the degree of tempering. In designing articles of glass for various applications it is important, as with other materials, to use appropriate safety factors.

# **INSULATION FOR WIRES**

	1	Dielec-	Chem.	Resist-	Physi- cal	Non-	Oil	
1	Type of	prop-	prop-	ozone,	prop-	flamma-	resist-	Trade names
Material	use	erties	erties	sunlight	erties	bility	ance	and remarks
Butadiene-styrene copolymer	Insulation or jacket	G	G	F	G	Р	F	Buna S—vulcanizable; rubber-like; extrudable
Cellulose acetate- butyrate	Insulation	F	G	G	G	F	G	Tenite II;Kodapak—thermoplastic; extrudable or applicable as tapes
Cellulose ethyl ether	Insulation	F	G	G	G	F	G	Ethyl cellulose-thermoplastic; ex- trudable
Chloroprene polymer	Jacket	Р	E	E	G	E	G	Neoprene—vulcanizable; rubber- like, extrudable or calendered strips; several types
Ethylene polymer	Insulation	Е	È	E	E	Р	F	Polythene-thermoplastic; extrud- able
Isobutylene-diolefin copolymer	Insulation	G	E	G	G	Р	Р	Butyl rubber-vulcanizable; rubber-like; extrudable
Isobutylene polymer	Insulation	E	E	E	F	P	Р	Polybutenenot vulcanizable; rubber-like; mixed with resins or rubber; extrudable
Organic polysulfides	Jacket	Р	G	E	F	Р	E	Thiokol—both thermoplastic and vulcanizable types; extrudable
Plasticized vinyl chloride polymer	Insulation or jacket	F	E	E	G	E	E	Koroseal—thermoplastic; extrud- able; several types
Plasticized vinyl chloride-vinyl ace- tate copolymer	Insulation or jacket	F	E	E	G	Е	E	Vinylite—thermoplastic; extrud- able; available in many types
Vinylidene chloride- vinyl chloride copolymer	Insulation	F	E	Е	G	E	Е	Saran-thermoplastic; applicable as threads or tapes
NOTE: E-excellent	; G—good; F—fs	ir; P—poor						

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

# **INSULATING SHEETS**

Laminating Resin and Base	NEMA Grade	Power Factor 1 mc	Dielec. Con- stant	Short	c Strength		Flexural Strength	Com- pressive Strength	Tensile
	Grade	1 mc	1 mc	Time	Step by	Izou	psi	psi	psi
Lignin Plastic		0.041	6.0	200	170	0.7	12,500	27,500	7,500
Melamine Formaldehyde, Asbestos Paper		0.18	9.0	125	70	1.2	21,000	37,000	9,000
Melamine Formaldehyde, Cellulose Paper		0.4	8.0	550	325	0.9	28,000	40,000	17,000
Melamine Formaldehyde, Cotton Fabric		0.4	7.0	350	300	1.4	20,000	40,000	15,000
Melamine Formaldehyde, Glass Fabric	G-5	0.01	7.2	500	360	30	39,000	65,000	45,000
Mica, glass-bonded				_	430	1.8	22,000	45,000	13,000
Phenol Formaldehyde, Asbestos Fabric	AA	0.44	6.8	50	30	3.5	20,000	38,000	10,000
Phenol Formaldehyde, Asbestos Felt				70	50	4	34,000	35,000	23,000
Phenol Formaldehyde, Asbestos Paper	A	0.115	5.2	160	95	1.8	16,000	36,000	8,00
Phenol Formaldehyde, Cellulose Paper	X	0.06	6.0	500	360	1.3	23,000	35,000	14,00
Phenol Formaldehyde, Cellulose Paper	Р	0.06	6.0	500	360	1.1	15,000	22,000	8,00
Phenol Formaldehyde, Cellulose Paper	XX	0.04	5.0	500	360	1.0	16,000	34,000	9,00
Phenol Formaldehyde, Cellulose Paper	XXP	0.04	5.0	500	360	3.0	16,000	25,000	8,00
Phenol Formaldehyde, Cellulose Paper	XXX	0.032	4.8	470	320	0.8	15,000	32,000	7,00
Phenol Formaldehyde, Cellulose Paper	XXXP	0.027	4.5	470	320	0.5	15,000	25,000	7,00
Phenol Formaldehyde, Cotton Fabric	С	0.1	7.0	150	90	3.2	20,000	38,000	9,50
Phenol Formaldehyde, Cotton Fabric	CE	0.055	5.5	360	220	2.3	17,000	36,000	8,00
Phenol Formaldehyde, Cotton Fabric	L	0.10	7.0	150	90	2.5	20,000	35,000	9,00
Phenol Formaldehyde, Cloth	LE	0.045	5.0	360	220	1.8	19,000	37,000	8,50
Phenol Formaldehyde, Glass Fabric	G-1	0.02	4.5	550	400	4.0	24,000	45,000	25,00
Phenol Formaldehyde, Glass Fabric	G-3	·		500	395	10			
Phenol Formaldehyde, Glass Fabric		0.028	5.0	300	200	8.5	22,000		14,80
Phenol Formaldehyde, Nylon Fabric		0.03	3.5	475	375	4.5	21,500	31,000	9,00
Phenol Formaldehyde, Wood		0.05	5	350		6	32,000	16,000	24,00
Rubber, hard		0.6	3.7	415			15,000		
Silicone, Asbestos Fabric				100	75	7.5	14,000	45,000	
Silicone, Glass Fabric		0.0015		300	250	10	14,000	35,000	13,00
Vinyl chloride-acetate, unplasticized		0.018	3.1	425	_	0.5	14,000	11,000	8,40
V. L			4 7	900		4	16,000	26 000	9 =1
Vulcanized Fiber		·	4.7	200		4	16,000	26,000	8,50

Average values are given throughout; actual

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Hard- ness Rock- well	Specific Gravity	Linear Expan- sion	Water Absorp- tion %	Typical Trade Names and Remarks							
<b>M9</b> 0	1.4	2.3	0.8	Benelex. Natural resin used by itself or with phenolics as laminates and in molding compounds. Good up to 175F.							
M115	1.8		3.0	Dilecto. For arc and flame resistant applications. For temp. up to 245F. Gray color All melamine laminates are TS.							
M125	1.5		0.5	Dilecto; Panelyte. Unlimited colors, tough, strong, low water absorption, good chemica resistance. Good up to 260F.							
M115	1.5		0.8	Formica. Good chemical resistance, tough, excellent machining qualities. For table tops panel boards, etc.							
M120	1.9		1.1	Formica; Lamicoid; Micarta; Phenolite; Taylor; Textolite. Strong, flame-resistant, fo combat ship insulation.							
	3.2		0.002	G-E Mycalex 2821; Mycalex. Low dielectric power losses at high frequencies, high mechanical strength.							
<b>M100</b>	1.7	1.8	0.85	Phenol Fibre; Dilecto. Good resistance to heat and flame because of high inorganic content							
M115	1.6		0.85	tabric is tougher, stronger, and more resistant than paper grade. For low-voltage applications only. All phenol formaldehyde laminates are thermosetting. Low water absorption							
M100	1.7	1.0	0.85	and minimum dimensional change when exposed to moisture.							
M100	1.4	2.0	2.3								
M101	1.37	1.4	1.9	Consoweld; Farlite Compreg; Formica; Inderon; Insurok; Lamitex; Panelyte; Pregwood							
M102	L.35	1.7	0.95	Phenol Fibre; Spauldite; Synthane. In general, paper-base grades have high dielectric an mechanical strength, low moisture absorption, and are suitable for hot-punching. Or							
M105	1.35	1.9	0.95	major use is for insulation in radio and electronic equipment. Grade X is for mecha applications where electrical properties are secondary; P is primarily intended for punc XX is suitable for usual electrical applications, while XXP is similar but better suite hot-punching; XXX is suitable for r-f work and high-humidity jobs, while XXXP is si- but with lower dielectric losses and is better for hot-punching. Unlimited colors.							
M109	1.35	1.7	0.70								
M114	1.30	1.8	0.70								
M100	1.35	2.0	1.70	Dilecto; Farlite; Formica; Insurok; Lamicoid; Micarta; Moldarta; Panelyte; Phenol							
M104	1.35	1.8	1.2	Phenolite; Spauldite; Synthane; Textolite. Tough, good machining, opaque, limited range of colors; sunlight lowers surface resistance; very low burning rate. NEMA grade C							
M100	1.36	1.4	1.4	tough and strong for gears, and has high impact strength; CE is tougher; L is from fine cotton fabric, not so tough, while LE is similar but tougher, with good moisture resistance							
M105	1.34	1.8	0.9	All four grades are unsuited for electrical applications except at low voltages. Certai other cloth-base grades can be post-formed.							
M109	1.6	1.5	1.5	Copolon: Formica, Used primarily for resistance to heat, chemicals, and fatigue. Hig							
M119	1.7	1.8	2.0	strength and high modulus of elasticity. Some types are good up to 400F. All are general purpose heat-resisting grades, G-1 being from staple-fiber-type glass cloth and the other							
	1.67		2.2	continuous-filament-type glass cloth. Unlimited colors.							
M110	1.15		0.2	Dilecto. Excellent electrical insulating properties, resistance to fungi and strength for rade and electronic insulation.							
M100	1.3	0.6	7.0	Pregwood. Low burning rate. Limited range of colors. Good machining. Used for making propellers, insulation, etc.							
123-80	1.27		0.08	Ace X-2-B. High strength and high dielectric quality. Easily punched and machined Noninflammable. Good insulator.							
	1.75		1.3	Formica; Textolite. Withstands temperatures over 480F, with unusual properties that ofte							
M100	1.7		0.6	justify its high cost. Limited range of opaque colors. Not affected by sunlight. Does no burn. Good machining qualities.							
	1.4	6.9	0.08	Vinylite Plastic rigid sheets, 0.01 or 0.015 inch thick; also in rolls. When heated, takes deep draw. Readily machined, spun, punched, formed. Bonds by heat or solvent sealing Readily printed. Exceptional dimensional stability for scales, dials, and dial window. Available in transparent, translucent, opaque and opaque high-impact grades.							
R80	1.3		40	Diamond Fibre; National; Taylor; Vulcoid; Wilmington Fibre. Not a true laminate; value shown here for comparison.							
nd chem	ical compos	sitions, hen-	cturing me ce specific v ifacturers b	alues used in obtaining the average values given. Linear expansion is in inches per inch per degre							

# **MAGNETIC CORE MATERIALS**

Magnetic Material	Chemical Composition (Balance Iron)	Typical Heat Treatment °C	Initial Permeability	Maximum Permeability	Sat <mark>uration,</mark> gauss
Hydrogen Reduced Iron	0.02 impurity	1,480 H <sub>2</sub> and 880 H <sub>2</sub>	25,000	275,000	21,500
Cobalt	99 Co	1,000 anneal	70	240	18,000
Nickel	99 Ni, 0.2 Cu	1,000 anneal	110	600	6,100
COMMERCIAL MATERIALS Cast Iron	2 Si, 3 C	As cast	100	600	
Magnetic Iron	0.1 impurity	950 anneal	250	5,500	21,500
Armature Steel	0.5 Si	950 anneal		5,50 <mark>0</mark>	21,400
Electrical Steel	1 Si	950 anneal	400	6,000	21,100
Motor Steel	2.5 Si	800 anneal		6,000	20,500
Dynamo Steel	3.25 Si	800 anneal	600	6,000	20,000
Transformer 72	3.6 Si	800 anneal	500	6,500	19,900
Transformer 65	4.0 Si	800 anneal		7,000	19,700
Transformer 58	3.6 Si	800 anneal			19,900
Transformer 52	4.5 Si	800 anneal		9,000	19,400
Grain-Oriented Steel	3.0 Si	800 anneal	1,500	30,000	20,000
Temperature Compensator	29.5–32.5 Ni				4,200
45 Permalloy	45 Ni	1,050 anneal	2,500	25,000	16,500
Monimax	47 Ni 3 Mo	1,125 H <sub>2</sub>	2,000	25,000	15,000
Sinimax	47 Ni 3 Si	1,125 H <sub>2</sub>	3,000	25,000	11,000
45 Permalloy, H <sub>2</sub> Ann.	45 Ni	1,200 H <sub>2</sub>	4,000	50,000	16,500
Permenorm*	50 Ni	1,075 H <sub>2</sub>			16,000
1040 Alloy*	71 Ni, 15 Cu, 3 Mo	1,100 H <sub>2</sub>	40,000	100,000	6,000
Supermalloy	79 Ni, 5 Mo	1,300 H <sub>2</sub>	100,000	800,000	8,000
Mumetal	75 Ni, 2 Cr, 5 Cu	1,175 H <sub>2</sub>	20,000	100,000	6,500
4–79 Mo-Permalloy	79 Ni, 4 Mo	1,100 anneal	20,000	100,000	8,700
78 Permalloy	78.5 Ni	1,050 ann. 600 Q.	8,000	100,000	10,700
Hiperco	34 Co, 0.5 Cr	850 anneal	650	10,000	24,200
Permendur	50 Co	800 anneal	800	5,000	24,200
2-V Permendur	49 Co, 2 V	800 anneal	800	4,500	24,000
	45 Ni, 25 Co				
45–25 Perminvar* 7.5–45 Perminvar*	45 Ni, 25 Co, 7.5 Mo	1,000 and bake 1,000 and bake	<u>365</u> 550	1,800	15,500 10,300
Heusler Alloy*	61 Co, 26 Mn, 13 Al	1,000 ann. bake		250	5,500
Sendust*	9 Si, 5 Al	As cast	30,000	120,000	10,000
COMPRESSED POWDER CORES Grade B Electrolyt. Iron*		Insul. and press	35	55	
Carbonyl Iron 70		Insul. and press	70		
Carbonyl Iron 40L		Insul. and press	40		
Carbonyl Iron 16.5E	91 N; 9 Mo	Insul. and press	16.5	120	
2–81 Mo-Permalloy Sendust*	81 Ni, 2 Mo 9 Si, 5 Al	In., pr. and 650 ann. Insul. and press	125 65	130	
Ferrite	Zn, Mn, Ni oxides	Press and fire	15-1,200	100-1,500	1,300-4,200
* Not commercially available in U. S. A.			-,		

\* Not commercially available in U.S.A.

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	Density lb/in³	Electrical Resis- tivity μ ohm-cm	Coercive Force oersted	Residual Flux Density gauss	Hysteresis Loss at Sat. erg/cm <sup>8</sup> / cycle
	0,28	10	0.05	13,600	300
	0.32	9	10.	5,000	2,000
	0.32	8	3.4	3,600	3,000
		30	4.6	5,300	20,000
1	0.28	10	1.0	13,000	5,000
	0.28	18	0.9		
	0.28	25	0.85	12,000	
	0.28	42	0.75		
(1)	0.27	<u>50</u>	0.65	·	
	0.27	56	0.6		
	0.27	59	0.5	12,000	3,500
	0.27	56	0.4		
]	0.27	64	0.3		
} ( <b>2</b> )	0.27	47	0.15		
} (3)		80			
} (4)	0.29	45	0.3	8,000	1,200
)	0.30	80			
<b>(5)</b>	0.28	90		·	
} (6)	0.29	45	0.07		
} (7)	0.29	50	0.2	14,000-	
1	0.32	55	0.014	2,500	200
	0.32	60	0.002		
(8)	0.31	42	0.05		200
	0.32	55	0.05	5,000	200
}	0.31	16	0.05	6,000	200
}	0.29	25	1.0		
(9)	0.30	7	2.00	14,000	12,000
J	0.30	26	2.0	14,000	12,000
)	0.31	19	1.4	3,300	4,000
(10)	0.32	80	0.6	4,300	2,600
, 					
	0.26	80	0.05	5,000	100
)	0.23	_			
	0.27	_			
(11)	0.25				
)	0.29				
			0.5-3.5	00-3,500	7
<b>(12)</b>					

#### NOTES

General. Tabulated data are for materials in the form of bars, rods, wire or sheet, unless otherwise indicated. Permeability values are in many instances only approximate. They are appreciably affected by variations in composition, and manu-facturing process. Permeability decreases and hysteresis loss increases appreciably if materials are mechanically stressed after final anneal

(1). Commonly called electrical steels. Values are for 29 gage sheets (0.014 inch thick). For coiled strip, permeabilities are slightly higher than given here. Magnetic iron and Armature grades age slightly (coercive force grows). First four grades are used chiefly for core laminations of motors, generators, reactors, power transformers, and other power frequency applications. Transformer grades are used for audio transformers as well as for small or high grade power transformers or motors. The number identifying types gives the percentage of a watt core loss for 29 gage sheet operated at 60 cps and 10,000 gauss. Special thin transformer sheet steels, down to 0.001 in. thick, are available for higher-frequency applications

(2). Values are for 29 gage, measured in direction of rolling. With flux transverse to rolling direction, core loss increases considerably, and permeability decreases to about one-fourth the tabulated value. This material is used for spiral cores, with butt joints so that flux is always in rolling direction. Typical trade names are Hipersil, Silectron, Corosil

(3). Thermomagnetic (permeability decreases as temperature increases) in usable temperature range. Used as temperature-compensating magnetic shunt for permanent magnets, in air-plane tachometers, watthour meters, voltage regulators and contenters. plane tach contactors

(4). Alloys with nickel content ranging from 35 to 90% are generally called permalloys, but are marketed under a variety of trade names. Used chiefly for transformer laminations. 45 permalloy has highest magnetostriction of the series

(5). Used as spiral tape cores for pulse transformers

(6). Equivalent materials-Hipernik, Allegheny 4750, Nicaloi

(7). Equivalent materials—Hipernik V, Orthonol X, Delta-max, Permanite. These materials are purified and highly oriented by rolling and heat treating control. Have nearly rectangular hysteresis loops, with residual flux close to satura-tion. Used for cores of coils for magnetic amplifiers, reactors for mechanical rectifiers

(8). Permalloys characterized by high initial permeability, low hysteresis loss, minimum magnetostriction. Widely used for cores of audio, radio, video transformers, sensitive relays, magnetic shields

(9). Iron-cobalt alloys having high saturation flux density, coupled with high permeability. Used for transformers, motors, electromagnets and pole pieces. Addition of vanadium permits rolling to sheets a few thousandths of an inch thick. Used for telephone receiver diaphragms

(10). Iron-cobalt-nickel alloys have remarkably constant permeability in low magnetic fields

(11). Powdered materials, available in wide range of particle sizes and compressed or cast to desired core shape for loading coils and high-frequency coils. Density varies with molding pressure, which ranges from 10 to 100 tons per sq in. Per-meability value is controlled largely by binder used for particle insulation. insulation

(12). Equivalent materials—Ferroxcube; similar material— Ferramic. Oxides of iron and other materials mixed, com-pressed, and fired much like ceramic materials to form cubic ferrite. Used in place of powdered iron cores

# METALS FOR CONTACTS

	Material	Composition	Tens. Strength <i>lb/sq in.</i>	Applications and Remarks
	Electronics Bronze	98.75 Cu, 1.25 Sn	77,000	Spring-type contacts
ģ	Government Bronze	95 Cu, 5 Sn	50,000	Springs, contacts, diaphragms
Red Bronzes	Riverside No. 105	95 Cu, 4 Zn, 1 Sn	38,000	Fuse clips, electrical contacts, 38% conductivity
Brc	Spring Oreide	92 Cu, 8 Sn	55,000	Spring contacts, switches, diaphragms
ed	Sheet Gun Metal	90 Cu, 10 Sn	1	Corrosion-resistant electrical contacts
R	Lubalov	90 Cu, 1.75 Sn, 8.25 Zn	81,000	Contact springs, radio tube sockets
	Super-X, Grade A, E	96.5 Cu, 3.5 Sn, P	79,500	Fuse clips, springs, switches, diaphragms
	Omega Brand, No. 30	95.5 Cu, 4.3 Sn, 0.2 P	160,000	Light springs and contacts
Phosphor Bronzes	Riverside No. 30	94.4 min Cu, 3.8–4.8 Sn, 0.05–0.35 P, 0.3 Zn	88,000- 40,000	Light springs and contacts, resists corrosion from salt water, Brinell hardness No. 100
BI	Hard Phosphor Bronze	92.8 Cu, 7 Sn, 0.2 P		
sphor	Super-X, Grade C	92 Cu, 8 Sn, P	93,500- 57,000	Spring contacts requiring good fatigue resistance
Pho	Riverside No. 47	91 min Cu, 7.5–8.5 Sn, 0.05–0.25 P, 0.2 Zn	101,000- 53,000	Spring contacts, fuse clips, used to meet severe forming and endurance requirements, resists salt water corrosion
	Anaconda Beryllium Copper	2–2.25 Be, 0.25– 0.5 Ni, rest is Cu	196,000- 50,000	Springs, high fatigue and strong parts, fuse clips, switch blades
ys	Beraloy No. 25	97.75 Cu, 2 Be, 0.25 Co	175,000- 66,000	Springs, electrical contacts, valve diaphragms
Other Copper Alloys	Silvel	Cu, Zn, and Ni or Mn and Sn, and Fe	130,000 - 73,000	German silver, electrical contact springs
Coppe	Super-X 18% Nickel Silver Grade B	55 Cu, 18 Ni, 27 Zn	99,500- 50,000	Tarnish-resistant springs and switch blades
ther (	Best German Silver	50–46 Cu, 31–20 Ni, 34–29 Zn		
0	Cupaloy	Cu-Cr alloy	60,000	Commutators, slip rings, high conductivity
	Steb Metal	Ag on Cu		Silver rolled into copper
	Combarloy	Ag and Cu alloy		High-conductivity commutator bars
	Elkonite	Ag-WC or 40 Ag, 60 Mo		Contactors, high conductivity, easily machined, Brinell hardness No. 110–150
	Elkonium No. 1	Ag alloy		Substitute for fine silver contacts
	Fasaloy	Ag, Cu, Co		
ys	Gibsaloy Grade A	95–50 Ag, 5–50 Ni		Sintered powder electrical contacts
Allo	Gibsaloy Grade C	99-93 Ag, 1-7 graphite		
ilver Alloys	Gibsaloy Grade NM	1–35 Ni, 1–30 Mo, rest is Ag		Contacts for high current densities
20	Gibsaloy Grade NW	1-35 Ni, 1-30 W, rest is Ag		Contacts for high current densities
	Fastell	Silver alloy		Electrical contacts, various grades are made by alloying Ag with various hardening metals
	Mallory D-50	Silver alloys	30,000	
	Elkonite (10-W-3)	77 W, 23 Cu	55,000	Sintered alloy; does not respond to heat treatment; Brinell hardness No. 225
	Mallory HA & HB Metal	W-alloy		
oys	Wilcoloy	WC		Telegraph relays (tungsten carbide)
ΝI	Milwaloy 18	Fe, Ni, Mn		Nonmagnetic for use in circuit breakers
her	Aeralloy	Pt alloy		
Ot	Elkonium No. 13	Pd alloy		Brinell hardness No. 240
Tungsten & Other Alloys	Paliney	Pd, Pt, Ag, Cu, Ni or Au	170,000	Nonmagnetic contacts, pivots, bearings, springs, grade No. 6 (Brinell H. No. 240) can be heat treated. Grade No. 7 (Brinell, hardness No. 280) is corrosion and wear resistant
	No. 712 Alloy	29 Os, 40-50 Ir, rest is Pt		
	Electrical Gold Alloy	70 Au, 25 Ag, 5 Ni		
ļ				

# METALS FOR TUBES

Name	Composition	Typical Applications and Remarks
Aluminum	99.94 Al	Work hardens, melts at 1,220 F
Baral	Up to 50 Ba, rest is Al	Getters, stable in air
Barium	100 Ba	Malleable and lustrous
Beryllium	100 Be	Windows for x-ray tubes, light metal, coef. of exp. of cast iron
Brass	Cu, Zn	Base pins, grid caps; usually nickel-plated
Calloy Strontium-	Up to 50 Sr, rest is Al	Getters, stable in air
Aluminum		
Columbium	100 Cb	Lowest work function of pure refractory metals, melts at 1,950 ( Getter, stable in air
Copper	Cu	Pure copper melts at 1,981 F; in various forms copper is used for com
Électrolytic Copper Lake Copper	99.9 Cu 99.9 Cu	ponents of electronic tubes requiring high conductivity, but because a
Arsenical Lake Copper	99.9 Cu 99.4 Cu, 0.3 As, 0.2 O <sub>2</sub>	its softness it is frequently coated or plated on a structural meta OFHC copper is used for magnetron anodes and conductors
Casting Copper	98.5–99.8 Cu	or the copper is used for magnetron anodes and conductors
Deoxidized Copper	99.95 Cu, Ag, P	
Gallium	100 Ga	Photoelectric cells and tubes, melts at 29.9 C, coef. of exp. 0.000018
Gold	100 Au	Plated on grids and other parts: high conductivity, melts at 1,945 F
Graphite (Carbon)	99.997 C	Anodes in high-power vacuum tubes
Iron	Fe	Pure iron is not used commercially, but it is frequently an alloying
		metal, melts at 2,786 F
Radiohm	12–13 Cr, 4–5 Al, bal. Fe	Tube parts, resistant to heat to 1,000 C
D-H No. 42 Alloy Platinite	41.5-43 Ni, rest Fe	Glass-metal seals, coef, of exp. of glasses, max, operating temp 400 (
1 latimite	54–58 Fe, 46–42 Ni, 0.15 C	To replace Pt in electronic tubes, heat resistant, coef. of exp. of glasses
Dilver	54–58 Fe, 42–46 Ni	glass-metal seals Heating elements, properties similar to Platinite
Dumet	54 Fe, 46 Ni, plated with	Resistance alloy for sealing in glass bulbs; Platinite with an oxidized
	Cu	Cu plated coating
Fernico	54 Fe, 28 Ni, 18 Co	Metal-glass joints, same coef, of exp. as glasses
Kovar	30 Ni, 15 Co, 0.2 Mn,	Low expansion alloy for hard glass-metal seals, mean expansivity
Fernichrome	balance is Fe 37 Fe, 30 Ni, 25 Co, 8 Cr	(25-400 C) is 0.0000045
Nilstain 416	23-30 Cr, 0.35 C (max),	Metal seals to soft glass, substitute for Dumet Glass sealing wire, heat resistant
	balance is Fe	Glass sealing wire, near resistant
Molymet	45 Fe, 45 Ni, 10 Mo	Grid wire
Magnesium	99.9 Mg	Commercial Mg is 99.9 percent pure; getter material for $O_2$
Barmay	35 Ba, balance is Mg	Getters
Revere Magnesium M	Mn and Mg	Tube parts and resistances
Misch Metal	50 Ce, 45 La, 5 others	Getters
Nickel	Ni	Pure nickel has a high temp. coef. of resis., melts at 2,616 F
Hoskins 651 A Nickel	100 Ni	Base pins of miniature tubes
A IVICKEI	99 Ni & Co (min), 0.25 Cu, 0.3 Fe, 0.35 Mn, 0.2	Constructional parts of electronic tubes, base pins, support wires and
	C, 0.2 Si, 0.008 S (max)	rods, grid side rods, getter tabs, shields, thyratron grids
220 Nickel	99 Ni & Co (min), 0.2	Hot cathodes (225 Nickel, having higher Si content, can be used where
	Cu, 0.2 Fe, 0.2 Mn, 0.15 C, 0.01–0.05 Si,	liberation of appreciable Ba is not objectionable): this grade is used if
	0.15 C, 0.01–0.05 Si, 0.008 S (max)	liberation of Ba is to be minimized
330 Nickel	99 Ni & Co (min), 0.15	Anodos cold optimate and structured used
	Cu, 0.2 Fe, 0.2 Mn, 0.15	Anodes, cold cathodes and structural parts
	C, $0.1$ Si, $0.008$ S (max)	
Alloy No. 484	98 Ni, 2 Mn	Sparking electrodes
Tantalum-Nickel	Ni plus Ta	Less expensive substitute for tantalum
Gridnic A-F Mangrid D, E	4 5 on 20 Mm hal Mr	Grid wires and other wire parts
Filnic, H-K	4.5 or 20 Mn, bal. Ni Ni, Co, Ti, Fe, Si	Vacuum-tube grid wire; magnetic
D-H No. 52 Alloy	51-52 Ni, balance is Fe	Resistance metal for filaments and heaters Glass-metal seals and grid wires, max. operating temp. 500 C
Sylvaloy	97 Ni. 3 Si	Vacuum-tube filaments
Tensite	98 Ni, 2 Al	Vacuum-tube filaments
Konel	73.07 Ni, 16 Co, 8.8 Ti,	Filaments, substitute for platinum, heat and corrosion resistant, hot
alladium	0.55 Si, 0.26 Al	short above 1,250 C
latinum	100 Pd	Malleable, ductile, hard, melts at 2,822 F
	100 Pt	Melts at 1,773 C (3,191 F); for soft glass seals
ilver	100 Au	Melts at 1,761 F, used for high-conductive coating as on tube base pins
antalum	100 Ta	Electrodes, melts at 2,996 C, corrosion resistant, nonmagnetic, second-
		ary emission comparable to W, work function is lower used for gride
		in tubes having thoriated tungsten filaments, electron emission at
		2,100 K is comparable to that from tungsten at 2,500 K
	100 W	Filaments and heaters, melts at high temperature of 6,152 F (3,370 C),
un <mark>gsten</mark>	100 11	in the second component of 0,10 I (0,040 (1).
lungsten	100 11	nonmagnetic, oxidizes when heated in air, used for electron emitters
'ungsten	100 11	nonmagnetic, oxidizes when heated in air, used for electron emitters. targets in x-ray tubes, arcing contacts because of its low vapor pressure
	0.5–0.75 ThO <sub>2</sub> , bal. W	targets in x-ray tubes, arcing contacts because of its low vapor pressure
ungsten ungsten, Thoriated		nonmagnetic, oxidizes when heated in air, used for electron emitters

# METALS FOR WIRES

		Specific R at 20° C		Temperature of Resi		Specific Heat
Material	Composition	Microhm- cm	Ohms Per Cir. Mil-foot	Temp. Coeff.	Diff. in Temp. Deg C	gram- calories
Evanohm	20 Cr, 75 Ni, 2.5 Al, 2.5 Cu	133	800	0.00002	-50-100	0.107
Radiohm	16.5 Cr, 5 Al, bal. Fe	133	800	0.00007	20-500	
Alferon	14.25 Cr, 3.5 Al, bal. Fe	112	675	0.00016	20-500	0.172
Nichrome	61 Ni, 15 Cr, bal. Fe	112	675	0.00017	20-500	0.107
Nichrome V	80 Ni, 20 Cr	108	650	0.00013	20-500	0.104
Chromax	35 Ni, 20 Cr, bal. Fe	100	600	0.00031	20-500	0.110
Nirex (Inconel)	13 Cr, 8 Fe, bal. Ni	98.1	590 570	0.000125	20-500 20-500	0.109
Comet	30 Ni, 4.75 Cr, bal. Fe	95	560	0,0025	20-500	0.114
14 Alloy	42 Ni, 5.5 Cr, bal. Fe	93.1 80.5	484	0.00135	20-100	0.123
Nilvar	36 Ni, bal. Fe			0.00094	20-500	0.117
Stainless Type 304	18 Cr, 8 Ni, bal. Fe	73	438			_
42 Alloy	42 Ni, bal. Fe	66.5	400	0.0012	20-500	0.119
Advance	43 Ni, bal. Cu	49	294	$\pm 0.00002$	20-100	0.094
Manganin	13 Mn, bal. Cu	48.2	290	$\pm 0.000015$	15-35	
Lucero	70 Ni, 30 Cu	48.2	290	0.0010	20-250	0.127
46 Alloy	46 Ni, bal. Fe	45.7	275	0.0027	20-500	0.117
52 Alloy	51 Ni, bal. Fe	43.2	260	0.0029	20-500	0.115
Filnic "F"	Ni-Co-Ti	41	250	0.00179	20-400	
Midohm	23 Ni, bal. Cu	30	180	0.00018	20-100	0.092
	4 Mn, 1 Si, bal. Ni	25	150	0,0027	20-250	0.126
R-63 Alloy			120	0.0045	20-100	0.125
Hytemco	72 Ni, bal. Fe	20				
Magno	4.5 Mn, bal. Ni	20	120	0.0036	20-100	0.127
95 Alloy	11 Ni, bal. Cu	15	90	0.00049	20-100	0.092
Manganese Nickel	2 Mn, bal. Ni	14	85	0.0045	20-100	0.129
Z Nickel	Ni, other metals	14	85	0.0043	30-500	0.130
Tantalum	Та	12.4	75	0.00382		0.036
Platinum		10.610	63.80	0.00300	20	0.0324
Iron	Fe	10,000	60.14	0.0050	20	0,1065
Gr. "A" Nickel	99 Ni	10	60	0.0050	0–100	0.130
	6 Ni, bal. Cu	10	60	0.00071	20-100	0.092
Lohm ·				0,0016	0-100	0.088
High Brass	Cu-Zn	8.3	50			_
99 Alloy	99.8 Ni		48	0.0060	0-100	0.130
Low Brass	Cu-Zn	7.0	40	0.0017	0-100	0.090
Zinc		5.916	35.58	0.00347		0.0931
Molybdenum		5.7	34.27	0,0033	20	0.0647
Tungsten		5,523	33.22	0.0045	18	0.0336
30 Alloy	2.25 Ni, bal. Cu	5	30	0.0013	20-100	0.092
Com. Bronze	Cu-Zn	4.2	25	0.0020	0-100	0.091
Aluminum		2.670	16.06	0.00446		0.214
		2.42	14.55	0.0034	20	0.0316
Gold				0.00393	20	0.0921
Copper		1.724	10.37			
Silver Alloys having similar p Constaloy, Excelsior, Consta		1.629	9.796	0.0038	20	0.0559

Alloys having similar properties and compositions: Nichrome V, Tophet A, Chromel A, Superior, Chronin and Nichrome III; Advance, Cupron, Constaloy, Excelsior, Constantan and Ideal; Manganin and Tarnac; Midohm and 180 Alloy.

Thermal Conductivity	Approx. Melting	Linear	icient of Expansion	Tensile Stre	ngth at 20° C per sq in.		
walls per cu cm	Point deg C	Coeff. of Linear Exp.	Diff. in Temp. deg C	Max	Min	Specific Gravity	Density pounds per cubic inch
0.152		0.000014		225,000	90,000	8.1	0,292
	1,480	0.0000155	20-1,000	175,000	90,000	7.30	0.263
0.02	1,480	0.0000114	20-100	150,000	70,000	7.31	0.264
0.132	1,350	0.000017	20-1,000	175,000	95,000	8.247	0.2979
0.136	1,400	0.000017	20-1,000	200,000	100,000	8.412	0.3039
0.130	1,380	0.0000158	20-500	150,000	70,000	7.95	0.2872
0.136	1,395	0.0000161	20-750	175,000	80,000	8.55	0.3089
0.135	1,480	0.000015	20-500	160,000	75,000	8.15	0.294
0.130	1,425	0.0000108	25-425	150,000	70,000	8.10	0.292
0.200	1,425	0.000001	20-100	150,000	70,000	8.08	0.292
0.160		0.000020	0-1,000	300,000	100,000	7.93	0.286
	1,425	0.0000053	20-400	150,000	70,000	8.12	0.293
0.218	1,210	0.0000149	20-100	135,000	60,000	8.9	0.321
	1,020	0.0000187	15-35	90,000	40,000	8.192	0.296
0.250	1,350	0.0000125	20-100	150,000	70,000	8.90	0.3215
0.153	1,425	0.000008	25-425	150,000	70,000	8.17	0.295
0.167	1,425	0.000095	20-500	150,000	70,000	8.247	
	1,450	0.0000143	20-500	175,000			0.2979
	1,100	0.0000175	20-500		95,000	8.590	0.3103
0.385	1,425	0.0000152	20-500	100,000	50,000	8.9	0.321
0.289	1,425	0.000015		175,000	70,000	8.72	0.315
0.271	1,435		20-1,000	150,000	70,000	8.46	0.305
0.145		0.0000143	20-500	135,000	60,000	8.750	0.316
	1,100	0.0000175	20-500	75,000	35,000	8.9	0.321
0.272	1,435	0.0000146	20-500	135,000	60,000	8.813	0.3184
0.270	1,450	0.000014	30-1,000	230,000	90,000	8.75	0.316
	2,996	0.000065		180,000	50,000	16.6	0.6
0.695	1,773	0.0000089	20	50,000		21.45	0.7750
<mark>0.619</mark>	1,535	0.0000117	20	120,000	50,000	7.86	0.2840
0.615	1,450	0.000015	20-500	135,000	60,000	8.9	
0.21	1,100	0.000018	20-500	100,000			0.321
1.29	930	0.0000202	25-300		50,000	8.9	0.321
			20 000	125,000	55,000	8. <u>53</u>	0.306
1.55	1,000	0.0000101	05 000				
1.12		0.0000191	25-300	120,000	47,000	8.6	0.313
L.12 L.46	419	0.000033	20	30,000	22,000	7.14	0.2579
	2,625	0.000005	20	313,000	100,000	10.2	0.3685
1.60	$3,410\pm20$	0.000004	20	940,000	490,000	19.3	0.6973
0.387	1,100	0.0000175	20-500	60,000	30,000	8.9	0.321
2.11	1,040	0.0000184	25-300	75,000	37,000	8.7	0.318
2.03	660	0.000024	20	45,000	35,000	2.7	0.0975
2.96	1,063	0.0000142	20	20,000		19.3	
3.88	1,083	0.0000166	20	60,000	35 000		0.6973
4.19	960	0.0000189		00,000	35,000	8.92	0.3223

# PERMANENT MAGNET MATERIALS

						_	0.0.0
Permanent Magnet Alloy	Chemical Composition (Balance is Fe)	Residual Flux Density B <sub>R</sub> gauss	Coercive Force Hc oersteds	Maxi- mum Energy Product (BH)max	Bo gauss at (BH)max	Density lb/cu in.	Coef. of Temp. Expansion (20–300 C) <i>in./in./°C</i>
		10,000	42	180,000	6,500	0.283	13.3x10-6
0.65% Carbon Steel	0.65 C, 0.85 Mn	9,000	<u>42</u> 51	200,000	5,900	0.282	12.4x10 <sup>-6</sup>
1% Carbon Steel	1 C, 0.50 Mn	10,500	70	330,000	7,000	0.292	13.5x10-6
5% Tungsten Steel	5 W, 0.70 C 6 W, 0.70 C, 0.50 Mn, 0.50 Cr	9,500	74	330,000	6,500	0.294	14.5x10-6
6% Tungsten Steel 1% Chrome Steel	0.90 Cr, 0.60 C, 0.45 Mn	9,500	52	230,000	6,500	0.282	13.4x10-6
2% Chrome Steel	2.15 Cr, 0.90 C	9,300	60	260,000	6,300	0.282	13.1x10 <sup>-6</sup>
3½% Chrome Steel	3.5 Cr, 1 C, 0.50 Mn	9,500	66	290,000	6,500	0.281	12.6x10 <sup>-6</sup>
6% Chrome Steel	6 Cr, 1.1 C, 0.40 Mn	9,500	74	300,000	6,200	0.281	12.2x10 <sup>-6</sup>
9% Cobalt Steel	9 Co, 0.90 C, 1.25 W, 5 Cr	7,800	122	410,000	5,100	0.286	14.0x10 <sup>-6</sup>
17% Cobalt Steel	17 Co, 0.70 C, 8.25 W, 2.5 Cr	9,000	170	<i>6</i> 50,000	5,900	0.302	15.9x10-6
36% Cobalt Steel	36 Co, 0.80 C, 3.75 W, 5.75 Cr	9,600	228	930,000	6,300	0.296	17.2x10 <sup>-6</sup>
40% Cobalt Steel	40 Co, 0.70 C, 5 W, 4.25 Cr	10,000	242	1,030,000	6,500	0.296	17.4x10-6
	12 Al, 22.5 Ni, 5 Co	6,600	540	1,400,000	4,100	0.249	12.6x10 <sup>-6</sup>
Alnico IA	12 Al, 21 Ni, 5 Co	7,100	450	1,400,000	4,700	0.249	12.6x10-6
Alnico IB		7,000	630	1,600,000	4,200	0.256	12.4x10 <sup>-6</sup>
Alnico IIA	10 Al, 18 Ni, 12.5 Co, 6 Cu		560	1,600,000	4,600	0.256	12.4x10-6
Alnico IIB	10 Al, 17 Ni, 12.5 Co, 6 Cu	7,500		1,500,000	4,400	0.249	12.4x10-6
Sintered Alnico II	10 Al, 17 Ni, 12.5 Co, 6 Cu	7,200	550		4,000	0.249	13.0x10 <sup>-6</sup>
Alnico IIIA	12 Al, 26 Ni	6,500	560	1,350,000			13.0x10 <sup>-6</sup>
Alnico IIIB	12 Al, 25 Ni	7,000	470	1,350,000	4,500	0.249	
Alnico IIIC	12 Al, 24 Ni	7,500	400	1,350,000	5,000	0.249	13.0x10 <sup>-6</sup>
Alnico IVA	12 Al, 28 Ni, 5 Co	5,500	730	1,250,000	3,100	0.253	13.1x10 <sup>-6</sup>
Alnico IVB	12 Al, 27 Ni, 5 Co	6,000	660	1,300,000	3,400	0.253	13.1x10-6
Sintered Alnico IV	12 Al, 28 Ni, 5 Co	5,500	730	1,250,000	3,100	0.232	13.1x10-6
Alnico V	8 Al, 14 Ni, 24 Co, 3 Cu	12,700	650	5,500,000	10,400	0.264	11.3x10-6
Sintered Alnico V	8 Al, 14 Ni, 25 Co, 3 Cu, 1 Ti	10,000	575	3,500,000		0.260	11.3
Alnico VIB	8 Al, 15 Ni, 24 Co, 3 Cu, 1 Ti	10,500	760	3,650,000	7,100	0.268	11.4x10-6
Alnico VIC	8 Al, 15 Ni, 24 Co, 3 Cu, 0.5 Ti	11,000	700	4,000,000	7,900	0.268	11.4x10 <sup>-6</sup>
Alnico XII	6 Al, 18 Ni, 35 Co, 8 Ti	6,100	1,000	1,650,000	3,200	0.264	11.0x10-6
	12 Al, 30 Ni, 0.4 Ti	5,600	660	1,340,000	3,400	0.249	13.0x10 <sup>-6</sup>
Nipermag	50 Cu, 21 Ni, 29 Co	3,400	710	850,000		0.300	
Cunico I		5,300	450	990,000	3,400	0.300	
Cunico II	35 Cu, 24 Ni, 41 Co	5,700	590	1,850,000		0.311.	
*Cunife I	60 Cu, 20 Ni	7,300	260	780,000		0.311	
*Cunife II	50 Cu, 20 Ni, 2.5 Co			1,100,000		0.295	
Remalloy; Comol	12 Co, 17 Mo	10,000	230			0.293	
Indaloy (Sintered)	Mo, Co	9,000	240	9,000,000			
*Vectolite	30 Fe <sub>2</sub> 0 <sub>3</sub> , 55 Fe <sub>3</sub> 0 <sub>4</sub> , 2.5 Co <sub>2</sub> 0 <sub>3</sub>	1,600	900	500,000		0.113	20 x10 <sup>-6</sup>
Silmanal	86.75 Ag, 8.8 Mn, 4.45 Al	590	6,300	83,000		0.325	
Vicalloy I	9.5 Va, 52 Co	9,000	300	1,000,000		0.296	11.2x10 <sup>-6</sup>
*Vicalloy II	13 Va, 52 Co	10,000	450	3,000,000	_	0.293	11.2x10-6
Platinum Alloys	{ 77.8 Pt, 22.2 Fe 76.7 Pt, 23.3 Co	5,830 4,500	1,570 2,700	3,070,000 4,000,000	0 2,600		$\frac{10 \text{ x}10^{-6}}{11 \text{ x}10^{-6}}$
New KS	3.7 Al, 17.7 Ni, 27.2 Co, 6.7 Ti, ba	l. Fe 7,150	785	2,030,000	0 4,300	0.27	12 x10 <sup>-6</sup>
PF 1	Pure Fe powder, pressed	6,000	470	1,100,00	0		
PF 2	Fe + 30% Co, powder	8,600	410	1,600,000	0		
			44				

Tensile Strength	Hardness (as used) BR-Brinell	Mechanical	
(as used) lb/sq in.	(RC- Rockwell)	Properties	
300,000	60-65 RC	H, M, F, P	
300,000	60-65 RC	H, M, F, P	
300,000	60-65 RC	H, M, F, P	
300,000	60-65 RC	H, MA, F, P	
300,000	6065 RC	H, MA, F, P	
300,000	60-65 RC	H, MA, F, P	1
300,000	6065 RC	<b>H</b> , <b>MA</b> , <b>F</b> , <b>P</b>	
300,000	6065 RC	H, MA, F, P	
300,000	60-65 RC	H, MA, F, P	
300,000	60-65 RC	H, MA, F, P	
300,000	6065 RC	H, MA, F, P	
300,000	60-65 RC	H, MA, F, P	
4,000	45 RC	H, B	)
4,000	45 RC	H, B	
3,000	45 RC	H, B	
3,000	45 RC	Н, В	
65,000	43 RC	H	
12,000	45 RC	Н, В	
12,000	45 RC	H, B	
12,000			
	45 RC	H, B	
9,000	45 RC	H, B	2
9,000	45 RC	Н, В	
60,000	42 RC	Н	
5,450	50 RC	Н, В	
50,000		H, B	
23,000	56 RC	H, B	
23,000	56 RC	H, B	
39,500	58 RC	H, B	
10,500	45 RC	H, B	
100,000	200 BR	D, M	
100,000	200 BR	D, M	3
100,000	200 BR	D, M	
100,000	200 BR	D, M	4
	60 RC	H, P, M, F	5
	_		
nil		B	6
110,000	230 BR	D, M	. 7
	60 RC	D, M	
260.000 (00.07 Pod.)			8
360,000 (90% Red.)	60 RC		
103,000	210 BR		
Very low		B )	
Very low		B	9

#### REMARKS

NOTE: Values given are in many instances approximate and appreciably affected by variations in composition and manufacturing processes. Mechanical properties are specified as follows: H—hard; B—brittle; D—ductile; P—punchable; M—machinable; MA—machinable after annealing; F—hot-forgeable.

1. So-called magnet steels, usually cast in ingots and hot-rolled into bars and strips. As-rolled hardness (depending upon section, steel, and treatment) varies from approximately 25 RC to approximately 55 RC and material is ordinarily suitable for hot forming and punching operations but not for cold forming or machining operations unless carbide tools are used. Material may be annealed to 25-35 Rockwell C in the case of cobalt steels, and to approximately 15 RC in all other cases. This will permit ordinary cold machining operations but the anneal is detrimental to magnetic properties and should be kept as light as possible. After forming, material is hardened (depending on steel) by either water or oil quench from hardening temperature. Intricate shapes may be cast.

2. So-called cast magnets, though Alnico II, IV and V can also be sintered. The Alnicos are always provided in final form and heat-treated by the manuacturer. Grinding, which is the only finishing or machining operation practical, may be performed by either consumer or manufacturer. Cast of final shape in sand molds from induction furnaces, Alnico is a hard, weak, and brittle material but possesses sufficient strength for successful use in almost all permanent magnet applications. May be precision cast. Alnicos V and VI heat-treated in magnetic field possess properties indicated only in direction established by this field. Transverse modulus of rupture in lb/sq in. ranges from 7,200 for cast Alnico II to 50,000 for Alnico XII, with sintered Alnicos going above 75,000.

3. Ordinarily chill cast in small bars, which may then be cold-rolled to strip and punched, or the bars may be machined and cut to size. (Material not hot workable as of date.) Readily machinable both before and after its final heat treatment (which will ordinarily be performed by the manufacturer). Intricate shapes may be precision cast or sand cast. As cast, hardness is 180 BR. May also be sintered.

4. Sand cast in small bars and cold-drawn or rolled to wire or strip sizes. Magnetic properties depend upon severe cold reduction, and those specified are in direction of drawing or rolling only. Machinable both before and after final heat treatment. As cast, hardness is 135BR. Material not hot-forgeable. Used for magnets less than 0.25 inch in diameter.

5. Cast in ingot form and hot-rolled to bars and strips, which may then be hot-bent, hammered, sheared, punched, or cold-machined, but not coldformed or rolled. As cast, hardness is 20-40 RC. Heat-treated after forming or machining operations, after which it may be only ground. Quite fragile and brittle. Intricate shapes may be sand cast and machined before heat treatment.

6. Component oxides are mixed, pressed to final shape, and sintered in oxidizing atmosphere, after which material is heat-treated in a magnetic field. The magnetic properties indicated are in direction of this field only. Material very weak physically but may be ground with proper technique. Nonconducting. Light in weight.

7. Cast in very small ingots, homogenized, and cold swaged or rolled (preferably swaged) to small bars. Material not hot-workable. Cold-working necessary to development of magnetic properties, although material not directional. Machinable both before and after final heat treatment. Hardness as cast is 100 BR; after homogenizing or solution treatment—60 BR; after cold swaging—150 BR. Value of 6,300 is intrinsic coercive force  $H_{ei}$ .

8. Ordinarily cast in small bars and hot-rolled to bars or strips. As cast or hot-rolled, hardness is 25-30 RC. Material may be readily hot or cold-rolled, formed, or machined. Hardness after cold rolling is 40 RC. Heat-treated after rolling or machining, after which material may only be ground. Vicalloy II is severely cold reduced (usually to 0.002 inch tape) before heat treatment, and magnetic properties indicated are in direction of rolling.

9. Extremely finely divided metals, obtained by chemical precipitation<sup>\*</sup> compressed. Not commercially available in U. S. A.

# PLASTICS

		Р	ower Facto	r	Diele	ctric Cons	itant	Diel.	Volume Resis-
Molding or Casting Material	Туре	60 cps	l kc	1 mc	60 cps	1 kc	1 mc	Strength v/mil	tivity meg-cm
Alkyd Resin	TS	_			6.2- 6.7	_	5.0	390 400	
Allyl Resin, Cast	TS	0.019	0.01- 0.018	0.06	3.45	3.25- 3.8	3.6	570- 1,275	>10*
Aniline Formaldehyde Resin No Filler	ТР	0.002	0.004	0.006- 0.008	3.7- <b>3.8</b>	3.7	3.5- 3.6	600 650	10 <sup>10</sup>
Casein	-			0.052			6.1- 6.8	400	
Cellulose Acetate, Molding	ТР	0.01- 0.06	0.01- 0.06	0.01- 0.1	3.5- 7.5	3.5- 7.0	3.0- 7.0	250– 365	104- 107
Cellulose Acetate Butyrate	TP	0.04	0.01- 0.06	0.01- 0.05	6.4		3.2 - 6.2	250- 400	104 106
Cellulose Nitrate (Nitrocellulose; Pyroxylin)	TP	0.06- 0.2	0.3	0.06- 0.1	11.2	7.0	6.0	280- 600	104- 105
Cellulose Propionate	TP		0.007- 0.016	0.012- 0.022		3.6- 3.9	3.3- 3.6	440 450	10 <sup>6</sup>
Cold-Molded Compound, Inorganic (Refractory Ceramic)	TS		_					50- 75	
Cold-Molded Compound, Organic (Nonrefractory)	TS	0.2		0.07	15		6	85	1.3 × 10
Ethyl Cellulose	ТР	0.01- 0.02	0.008- 0.03	0.02- 0.04	3.8- 4.0	3.4- 4.0	3.0 - 3.7	400- 600	10 <sup>6</sup>
Glass-Bonded Mica	TS	0.003- 0.007	0.001-0.002		7.5- 7.6	7.4- 9.2	7.0	30 <u>0</u> 500	10 <sup>7</sup>
Glyceryl Phthalate Resin		0.003- 0.004	0.006- 0.008	0.025- 0.035	4.0- 4.5	4.0- 4.5	3.7- 4.0	300- 350	108
Melamine Formaldehyde Asbestos Filler	TS	0.08	0.05	0.03	8.0	7.3	6.7	300	105
Melamine Formaldehyde Cellulose Filled	TS	0.08	0.05	0.06	9.5	9.0	8.2	300	105
Methyl Methacrylate (Acrylic)	TP	0.06- 0.07	0.05- 0.06	0.03-0.04	3.5- 4.0	3.3- 4.0	3.0 3.5	400	10 <sup>8</sup>
Nylon (Polyamide)	ΤP	0.02- 0.04	0.02- 0.04	0.03- 0.04	4.0- 4.6	4.0 4.5	3.4- 3.5	350- 470	10 <sup>7</sup>
Phenol Formaldehyde No Filler (PF <sub>1</sub> )	TS	0.10	0.08	0.03	6.5	6.0	5.0	300	105
Phenol Formaldehyde Wood Flour Filler (PF <sub>2</sub> )	TS	0.12	0.06	0.06	7.0	6.0	5.5	300	103
Phenol Formaldehyde Cellulose Filler (PF3, 4, 5, 6)	TS	0.20- 0.25	0.08-0.1	0.06	9. <b>0</b> 10	8.0	6.0	200 300	10 <sup>3</sup>
Phenol Formaldehyde Mineral Filler (PF <sub>7, 8</sub> )	TS	0.025- 0.05	0.02- 0.03	0.01- 0.02	6.0	5.5	5.0	350	10 <sup>5</sup>
Phenol Formaldehyde Mineral Filler (PF <sub>9, 10</sub> )	TS	0.35- 0.42	0.25- 0.4	0.1-0.2	15– 50	12- 30	7- 8	200- 300	10 <sup>3</sup>
Phenol Formaldehyde, Cast	TS	0.025- 0.5	0.01-0.3	0.01-0.2	6.5- 30	5.5- 30	5- 15	75– 450	10 <sup>3</sup>
Polydichlorostyrene	ТР	0.0003- 0.0008	0.0002	0.0002	2.64- 2.66	2.62	2.62	370	
Polyethylene	ТР	0.0002-0.0005	0.0002- 0.0005	0.00 <mark>02-</mark> 0.0005	2.25- 2.3	2.25 - 2.3	2.25- 2.3	460- 470	10 <sup>10</sup>
Polystyrene	TР	0.0001- 0.0005	0.0001- 0.0005	0.0001- 0.001	2.6- 2.75	2.4- 2.75	2.4- 2.75	450- 600	10 <sup>9</sup>

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Heat Distort. Temp. °F	Max. Service Temp. °F	Impact Strengt Izod fl lb/in.	h Tensile Strength	Hardness Rockwell		Linear Expans in./in. /°C×10	Typical Trade Names and Ramarka
350- 400		0.18	3,000- 4,000		2.2		Plaskon Alkyd. High heat resistance, excellent electrical properties even after immersion or long exposure to moisture. Short curing time.
140- 200	212– 225	0.3- 0.4	5,000- 6,000	M95- M115	1.32- 1.40	5.5- 10	Allymer; Kriston. Used as or in molding, casting and coating com- positions. Transparent but readily colored. Withstands heat.
210- 245	180- 190	0.32	8,500- 10,000	M115- 0 M120	1.22- 1.25	5- 6	Cibanite; Dilectene. High dielectric strength and weather resistance. Used for radio insulators.
300	300- 325	1.0	10,000	M70- M100	1.35	4.1- 6.8	Ameroid; Galorn. Cheap and easy to mold. Hardened by formalde- hyde or similar agent, and seasoned by drying.
100- 150	12 <b>0</b> 210	0.5- 6.0	2,000- 8,000	R52– R123	1.27- 1.34	8- 16	Bakelite; Koppers; Fibestos; Hercules flake; Kodapak; Lumarith; Nixon; Plastacele; Tenite; Vuepak. Light, tough; many colors.
100- 180	120- 130	0.6- 7.3	1,400- 6,500	M15- M72	1.18- 1.23	11– 17	Tenite II; Hercose, Also called acetobutyrate. Better moisture resistance and dimensional stability than cellulose acetate.
120– 165	140	2- 8.5	3,000- 10,000	R90- R120	1.35- 1.57	9 16	Celluloid; Hercules flake; Nitron; Nixonoid; Nixon; Pyralin. Highly inflammable; excellent molding qualities.
120- 160	120- 140	0.8- 11.4	2,000- 6,500	R63– R104	1.16- 1.22	13- 16	Forticel. Used for radio and telephone housings and cabinets. Tough; high impact strength; stable over wide range of heat and humidity.
	700- 1,300	0.4		M35- M65	1.8- 1.9	0.8	Aico; Hemit; Textolite. Ceramic type, thermosetting after baking. Resists heat and arcing. Gray, black only.
	400– 500	0.4		M35 M65	1.87- 2.15	1.4	Aico; Amerine; Garit; Gummon; Textolite; Thermoplax. Becomes TS during baking. Resists heat, arcing. Low cost. Dark colors.
110- 150	150	2.5- 11.6	2,700- 8,000	R20- R100	1.09- 1.19	10– 15	Celcon; Koppers; Ethocel; Ethofoil; Hercules flake; Lumarith; Nixon. Tough, durable, resistant to sun and chemicals.
300	300- 400	0.6- 1.8	5,000- 16,000	K80- K105	2.6- 3.9	1.0-	Mycalex; Mykroy.
175– 195	250	0.45- 0.55	8,500- 10,500	M115- M120	1.4	5.5-6.0	Bakelite. Widely used as ingredient in commercial finishes.
270	210	0.2	5,000	M109	2.2	4.5	Melmac; Plaskon; Resimene. Resistant to heat, arcing, surface track-
300	260	0.2	6,000	M112- M122	1.55	2- 4.5	ing, water, chemicals. For insulation, radio cabinets. Properties vary with filler used; cellulose filler gives 125-sec arc resistance for uses like connector inserts.
130- 190	120- 160	0.1- 0.5	5,000- 9,500	M87- M105	1.2	7-11	Lucite; Plexiglas. Used to pipe light; for solid and liquid-filled lenses; dials, escutcheons. Easily colored. Softens in hot water.
130- 170		1.5 - 2.7	7,000-11,000	R111– R118	1.09- 1.15	10.0- 15.0	Marketed under generic name nylon. Widely used for injection mold- ing; tough; strong; can be boiled; can be molded in thin sections.
230	250	0.3	6,000	M124	1.30		Bakelite; Catapak; Co-Ro-Lite; Drackett; Durez; Durite; Heresite; Indur; Insurok; Makalot; Micarta; Neillite; P-C-1; Besinox; Textolite
260	300	0.2	6,000	M115	1.45	3.5	Values given apply also to phenol-furfural and furfural-aldehyde-phenol molding materials. Phenolics are available in many different types for molding or casting, coatings, laminating materials, and adhesives.
250	250- 300	0.3- 4.0	5,000- 6,000	M110	1.42- 1.45	2.0- 3.3	Phenolics are relatively inexpensive; widely used for radio cabinets, appliance housings, knobs, electrical plugs, telephone handsets, com- ponent parts, switch plates, insulation.
250	250- 300	0.3	5,000	M100	2.0	1.9	Mineral filler (Mica or asbestos) gives low-loss insulating qualities for
250- 280	260- 400	0.2-0.7	4,000	M95- M100	2.0	2.0- 2.12	high-frequency applications. Difficult to machine. Low shrinkage. Will withstand up to 450 deg F intermittently.
95- 175	160	0.25-0.6	2,000- 9,000	M20- M120	1.26- 1.78	5- 15	Bakelite; Catalin; Gemstone; Marblette; Prystal. Unlimited colors For radio and clock cabinets, meter windows.
230- 250	212- 230	0.3-0.5			1.38-		Mathieson DCS. Modification of polystyrene having higher heat
122	140-	>3	1,700-	R35-	1.4 0.92	18-	distortion point, lower water absorption. Cost is high. Bakelite: Polythene. Excellent electrical properties nearly constant up
170- 200	200 150	0.3-			1.05-	6.8-	to 3,000 mc. No known solvents at room temp. Low-priced. It floats. Bakelite; Koppers; Loalin; Lustrex; Lustron; Plexene; Styron; Texto-
		0.45	9,500	M80	1.07	8	lite. Good high-frequency insulator up to 3,000 mc. Low cost.

## **PLASTICS** (continued)

		I	Power Facto	r	Diele	ectric Const	tant	Diel.	Volume Resis-
Molding or Casting Material	Туре	60 cps	1 kc	1 mc	60 cps	1 kc	1 mc	Strength v/mil	tivity meg-cm
Polystyrene with Chlorinated Diphenyls	ТР	0.002	0.003	0.001	2.8	2.8	2.8	400	1013
Polyvinyl Carbazole	ТР	0.0005- 0.001	0.0004- 0.001	0.0004- 0.001	3.0	3.0	3.0	750- 1,000	10 <sup>9</sup>
Shellac Compound	ТР	0.004-0.04	0.05		3- 4	4- 5	—	200- 600	$1.8 \times 10^{\circ}$
Silicone Rubber			0.002- 0.006	0.0007- 0.005		3- 10	3.1 - 7.4	330- 1,000	$1.5 \times 10^{5}$
Styrene Copolymer Cross Linked	TS	0.00 <b>03</b>	0.00015	0.00025	2.4- 3.0	2.4- 3.0	2.4- 3.0	325- 550	>5 × 10 <sup>1</sup>
Styrene Elastomer	ТР	0.0012	0.0005	0.001	2.4	2.5	2.5	600	10 <sup>9</sup>
Styrene Resin, Modified	-			0.0003- 0.0006			2.7- 2.9		109
Tetrafluorethylene	TP	0.0005	0.0005	0.0005	2.0	2.0	2.0	480	109
Urea Formaldehyde Alpha Cellulose Filler	TS	0.10	0.055-0.06	0.04	9.5	9.0	7.5	300	106
Vinyl Butyral Resin Flexible, Filled	ТР	0.057	0.040	0.045	6.5	6.1	5.0	350	$2 \times 10^{5}$
Vinyl Butyral Resin Flexible, No Filler	ТР	0.115	0.057	0.060	5.60	5.10	3.92	175– 375	$5 \times 10^{4}$ $10 \times 10^{4}$
Vinyl Butyral Resin Rigid	TP	0.007	0.0075	0.0065	3.61	3,58	3.33	400	>108
Vinyl Butyral Resin Thermosetting	TS		0.01- 0.1	0.02- 0.1		4- 13	4- 10	175– 375	
Vinyl Chloride Resin Plasticized	ТР	0.10- 0.15	0.09- 0.16	0.09- 0.10	5.8- 6.4	4.2- 5.5	3.3- 3.5	325– 425	$1 \times 10^{3}$ $50 \times 10^{3}$
Vinylidene Chloride	TP	0.042	0.075	0.065	6.0	5.0	4.0	350	108
Vinyl Chloride Acetate Rigid	TP	0.007-0.01	0.011- 0.013	0,018- 0.019	3.2- 3.3	3.1- 3.2	3.0- 3.1	400- 425	108
Vinyl Chloride Acetate Flexible, Filled	TP	0.055	0.063		8.1- 8.3	6.9- 8.4		340- 400	$2 \times 10$
Vinyl Chloride Acetate Flexible, No Filler	TP	0.084	0.123	0.100	8.1- 8.3	6.9- 8.4	4.2	$\begin{array}{r}150-\\300\end{array}$	$5 \times 10$
Vinyl Formal	TP	0.007	0.01	0.02	3.6	3.3	3.0	300- 600	

NOTES

Properties have in most cases been determined by ASTM (American Society for Testing Materials) test methods, at room temperature under standard test conditions. Values will generally be appreciably different above or below room temperature, hence this variation must be carefully considered if the application involves wide temperature ranges.

PF designations in parentheses for phenolics are from the SPI Handhook (Society of the Plastics Industry, Inc., 295 Madison Ave., New York, N. Y.).

Values differ widely for identical plastics in many cases because small variations in manufacturing methods, in composition and in molding conditions cause wide variations in certain properties. The ranges shown therefore constitute the limits of values given in various sources.

Manufacturers should always be consulted before making a definite choice of material. This tabulation is intended as a guide to relative properties of the various commercially available plastics.

Type Designations: TP—thermoplastic; can be repeatedly softened by heat and reformed; TS—thermosetting; becomes inlusible when heated during or after molding, and cannot be appreciably softened when heat is reapplied.

Power Factor: Determined by ASTM D 150-42T Test Method. Maximum values are given. Dielectric Constant: Determined by ASTM D 150-42T Test Method. Maximum values are given. For electronic applications it is desirable that values be low for dielectric constant and power factor.

Dielectric Strength: Determined by Short Time method in ASTM D 149-44T Test Method for 1/4" thickness. Minimum values are given expressed in volts per mil of thickness. For high-voltage electronic applications, high values are desirable here.

Volume Resistivity: Determined by ASTM D 257-38, which involves measuring the resistance in megohms between two electrodes covering opposite faces of a centimeter cube of the material. Minimum values are given.

Heat Distort. Temp. °F	Max. Service Temp. °F	Impact Strength Izod ft lb/in.	Tensile Strength lb/sq in.	Hardness Rockwell		Linear Expans in./in. /°C×10	. Typical Trade Names and Bemarks
180		0.2	3,000		1.4		Styramic. Higher heat distortion value than polystyrene and com parable strength and cost, and almost as good electrically.
210- 320		0.5- 1.0	4,000- 6,000		1.2	5- 8	Polectron. High heat distortion point. Retains excellent electrics characteristics up to 3,000 mc even at high temp.
	150- 190	2.6- 2.9	900- 2,000		1.1 - 2.7		Complac; Compo-Site. Animal resin used in making molding com pounds used for phonograph records, insulators.
	520		20 <b>0</b> - 650		$\begin{array}{c} 1.4-\\2.0 \end{array}$		Silastic. High and constant surface resistivity; difficult for water film to form on surface; high heat resistance; flexible down to $-70^{\circ}$ F.
217– 235		0.25- 0.35	7,000- 10,000	M68– M95	1.04	5.9- 9	Plexene; Textolite. High heat resistance, low power factor, good chemical and weather resistance. For r-f coil forms.
140- 150	140- 200	1.5 - 2.0	900- 1,200		0.95- 0.97	18– 23	Styraloy; Styron. Low specific gravity; floats. Can be used at up to 435° F. Rubberlike, flexible; for cable sheathing.
117– 126		0.28	4,800		1.05		Marbon. Used principally with synthetic rubbers for wire and cable insulation. Light amber in color. Low-priced.
140– 270	400	2.0- 4.5	1,100- 1,800	D55	2.1- 2.3	5.5	Teflon. Nonflammable, weather-resistant, resistant to all chemical except molten alkali metals. For insulators and wire insulation.
270	170	0.2	6,000	M110	1.55	3.0	Beetle; Plaskon; Rhonite; Synvarol; Uformite; Urac. Electrically nontracking. For radio cabinets, insulators.
			500- 3,500		1.1- 1.5		
			500- 3,500		1.05		Butacite. Tough; resistant to light, heat, and water. Hetains flexi- bility and toughness over wide temperature range. Impact strengtl varies with type and amount of plasticizer. One modified type is
115– 140	115	0.8- 1.2	4,000- 8,500		1.07- 1.2	22	thermosetting. Used as safety glass interlayer, for fabric impregnation and coating, and as plywood adhesive. Slow burning rate. Acids and alkalies have slight effect. Unlimited colors, from transparent for
	100- 140		500- 3,500		1.1-1.5	36	opaque. Also called vinyl butyral. Available in sheets and flakes.
	150- 175		1,000- 9,000		1.2 - 1.6	- (	Chemaco; Geon. Excellent chemical resistance, low water absorp- ion. For extruded wire covering and tubing.
150	150	0.5	4,000	M50	1.75	19 8	Saran. High tensile strength. Practically inert chemically. Excel- ent molding qualities.
120- 130	130	0.2- 0.3	4,000- 7,000		1.35- 1.4	7	Chemaco; Tygon; Vinylite. Varying composition and degree of poly-
	125		850		1.7		merization gives wide range of properties for extrusion, molding, casting and surface coating. High gloss. Used for insulation, radio dials and windows, transcription records, unbreakable home records, groupings
	150		1,000- 9,000		1.2- 1.6		and name plates. Unlimited range of colors. Elastomeric (flexible like rubber).
160- 170		0.5- 1.0	9,000- 12,000	M80	1.2 - 1.3	7.7 F	Formvar. Vinyl-base resin used for extrusions, castings and in mold_ ag compounds. For wire insulation, coatings.

Heat Distortion Temperature: Determined by ASTM D 648-41T at 264 pounds per square inch fiber stress, and represents temperature at which a centrally loaded simple beam will deflect 0.010 inch when subjected to temperature rise in standard time-temperature-time increments. Values for polyethylene and polytetralluoroethylene were obtained at 66 psi since these materials are generally suitable only for low-stress applications.

Maximum Continuous Service Temperature: Maximum values recommended for molded parts under no stress for long and short time. Some are higher and some lower than corresponding heat-distortion temperatures, hence both columns should be closely studied when considering applications subject to heat. These temperatures do not apply to parts immersed in water, chemical solutions, or solvents.

Impact Strength Izod: Minimum value in footpounds per inch notch, determined by ASTM D 256-I3T, which is one of the most widely used tests for plastics. It represents energy required to break a bar of plastic held in cantilever fashion.

Tensile Strength: Amount of load in pounds per square inch of cross-section, required to pull a test specimen apart. Used principally as guide in applications primarily structural, and is valuable identification test for the soft thermoplastics where impact test is not practical.

Hardness: Minimum value obtained by Rockwell test. The M scale involves a ¼-inch diameter steel ball with 100-kilogram major load, while the R scale uses a  $\frac{1}{2}$ -inch ball and 60kilogram load. The higher the value, the greater is the hardness.

Specific Gravity: Maximum value obtained by ASTM D 792-44T.

Coefficient of Thermal Expansion, Linear: Maximum value, giving inches expansion per inch of length per degree centigrade change in temperature (multiply values given by  $10^{-5}$ ). Important when plastics are used in conjunction with metal inserts or metal components in final assembly.

Trade Names: Representative examples are given, and in most cases there are many others. Trade names are identified as to manufacturer elsewhere in this directory (in Trade Name Index).

# WAXES

Characteristics	Acrawax C, A-355	Amber	Apiezon I Wax W	Beeswax, 1 White	Beeswax, Yellow	Cerese Wax, Brown, G	Ceresine 135/8 std Yellow, Syn.	Cenco Sealstix 11430	Halowax 1001	Halowax 1013
Dielectric Constant at 1 megacycle	2.4	2.65	2.65	2.5	2.9	2.27	2.25	3.22	3.7	4.5
Loss Tangent <sup>A</sup> at 1 megacycle	0.002	0.0056	0.0025	0.01	0.01	0.0011	0.0005	0.024	0.0038	0.008
at 10 megacycles	0.0015	0.0068	0.002	0.006	0.0095	0.0006	0.0005	0.027	0.04	0.078
at 100 megacycles	0.0012	0.008	0.0016	0.005	0.0095	0.0004	0.0005	0.025	0.13	0.12
Density at 25 C	0.975	1.06		0.95	0.946	0.922 <sup>B</sup>	0.881 <sup>B</sup>	1.19	1.54	1.65
Melting Point, C	137			62	45-64	76.7	138			
Femperature, Soft, C		200	80-90	62-65			57	80-85	91	119-122
Flash Point, C	285					237.8	202		Does not burn	Does not burn
Chemical Resistance to water	Excellent	Excellent				Excellent		Excellent	Good	Good
to alcohols	Good	Poor						Poor		
to hydrocarbons	Poor	Poor							Poor	Poor
to acids			<u> </u>			Good			Good	Good
to alkalies		Good		_		Excellent		Poor	Good	Good
to oxygen						Good			Good	Good
Appearance	Hard, brown	Clear- yellow red brown	Black	White	Yellow, opaque	Brown, trans- lucent solid	Yellow and opaque	Light brown	White to pale yellow	Light straw
Composition	Cetyl aceta- mide	Fossil resin		Blanched beeswax, U. S. P.		Petrol- eum wax	Vegetable and min- eral waxes	tinsky	Chlor- inated naphtha- lene	Chlor- inated naphtha lene
Acid Value	<10			18-24		0.01	·			
Saponification Value				90-101		0.01				
Solvents				Ether, carbon tetrachl., naphtha, turpen- tine		Benzene, toluene, petrol- eum solvents				
Methods of Handling			(Import- ed as six- inch sticks)			Pouring, flash dip impreg- nate, surface coating in solu- tion	,			
Uses	Insula- tion, stop-off for plat- ing, im- prove resistance of var- nish to salt spray and	æ	Sealing wax in vacuum systems	Leather dressing, polishes, molding		Insula- tion, moisture proofing		Rigid cement for instru- ments, apparatus	Dielectric in paper capacitors	tions

<sup>a</sup> Loss 1 angent = Loss ractor/Dielectric Constant. <sup>B</sup> Approximately 15C. Abridged from Tables of Dielectric Materials, Report V, Laboratory for Insulation Research, MIT, NDRC Contract OEMsr-191.

Halowax 1014	Halowax 11-314	Opalwax	Ozokerite Wax	Parowax	Permafil C26A2	Plicene Cement 11441	135 A. M. P. Wax	132° ASTM Paraffin
4.4	2.94	3.1	2.3	2.25	3.75	2.49	2.25	2.03
0.008	0.00032	0.11	0.00 <mark>0</mark> 8	0.0002	0.030	0.0025	0.0001	0.00012
0.058	0.00068	0.055	0.0007	0.0002	0.033	0.0021	0.0001	0.00011
0.6	0.0025	0.0027	0.0006	0.0002	0.034	0.0016	0.0001	0.00013
1.76		0.98	0.9	0.892 B	1.31	1.02	0.81 B	
	35-63	86	53	50		80	56	56
136-139					None	60-65		36
Does not burn	Self- extinguishing		Flammability high	200			213	204-218
Good	Excellent		Excellent	Excellent	Good	Excellent	Excellent	Excellent
			<u> </u>			Good	Good	
Poor					. <u> </u>		Poor	
Good	Good		Excellent	Good	Good	Excellent	Good	
Good	Good		Excellent	Excellent	Good	Excellent	Good	Good
Good	Good	<u> </u>	Good	Good	Good			Good
ale yellow	White, crystalline, opaque	Pearl white	Opaque, brown- black	White	Amber, transparent	Opaque, black	Yellow	White solid translucen
Chlorinated aphthalene	Dichloro- naphthalene	Hydrogen- ated castor oil	Native paraffin	Petroleum wax	Cross-linked addition polymer		Low-loss paraffin	Paraffin wax
		<2		Nil				Nil
		175-185		Nil				Nil
				Benzene toluene, petroleum solvents				Hydrocar- bons and chlorinated solvents
		Surface coats; emulsify, spread and dry		Pour, flash dip, impreg- nate; com- pression molding, sur- face coating	Casting or impregnation		Pour, flash dip, impreg- nate, com- pression molding	Surface coat, impregnate
pplications here resis- ance to urning hemical esistance ad high oftening point quired		Insulation, make fibrous materials grease, oil and water- proof		Coating and sealing	Coil impreg- nation, laminated materials		Temporary sealing, paper impregna- tion	Water- repellant coatings, impregnate fibrous materials

# WAX COMPOUNDS

	M-R	M-R	M-R	M-R	M-R	M-R				
Material	3309	896 EX	1283 EX	1271 EX	1067 EX	1281 EX				
Composition		Microcrystalline petroleum wax base								
*	167-172	174-179	180-185	180-185	184-189	204-208				
Melting Point (Drip) °F	165-170	169-174	170-175	170-175	180-185	205-210				
Cold Flow °F	16-18	12-14	9-11	9-11	9-11	14-16				
Penetration 32 F, 200 gm, 60 sec		15-16	11-13	11-13	11-13	14-16				
in tenths 77 F, 100 gm, 5 sec	20-24		16-18	16-18	16-18	39-43				
of mm 115 F, 50 gm, 5 sec	42-44	41-43		Yellow	Lt. Brown	Lt, Brown				
Color	Brown	Lt. Brown	Dk. Brown	225-275	225-275	350-400				
Pouring Temp. °F	225 - 275	225-275	225-275			0.93				
Spec. Grav.	0.93	0.92	0.93	0.93	0.93	0.95				
Viscosity in sec (ASTM)	40-44	34-38	46-50	46-50	40-44	500				
Flash Point °F	525	470	500	500	520	520				
Chief Functions	General impr	egnating and di	p coating			Dip coating				
Typical Uses	Moisture pro	ofing coils, tra	nsformers and	egnating		Dipping air- core coils				
Remarks Note: Viscosity is for flow through Unversal orifice at mean pour. temp.	Low M. P.	Low viscosity impreg.	, ideal for rapic	Un general, lo	Operating temp	s Tough coat- ing; supports coil turns				

# POTTING COMPOUNDS

		M-R	M-R	M-R	M-R	Pot neau	803 EX
M	aterial	860 EX	868 EX	3193	1399 EX	No. 63	
C	nposition	1	Mineral-filled	asphalt base		Asphalt base	
		215-220	230-240	245-255	270-275	126-128	175 - 185
Softening Point °	H				5-6	3	33-36
Penetration	32 F, 200 gm, 60 sec	25 - 27	25 - 27	2-3			
	77 F, 100 gm, 5 sec	38-42	38-42	4-5	6-7	10 - 12	56-60
in tenths		53-56	53-56	5-6	13-14	31-33	105 - 115
of mm	115 F, 50 gm, 5 sec				450	220	350
Pouring Temp. °	7 ·	400	425	450			
		Black	Black	Black	Black	Black	Black
Color		1.69	2.03	1.70	1.69	0.96	1.00
Spec. Grav.		1.09				380	460
Flash Point °F		475	475	520	590		
Chief Functions		Potting for m	oisture proofing	, providing m	echanical supp	ort inside cases	and absorbing
Chief r unctions		0.11	1 la mination				

Potting for moisture proofing, providing mechanical support inside cases and absorbing noise of vibrating laminations
Potting small iron-core transformers and choke coils

Typical Uses Remarks

Mineral filler provides higher thermal conductivity, raises 803 EX also used for storage softening point slightly and greatly increases viscosity battery seals

# SEALING COMPOUNDS

	MD	M-R	M-R	M-R	M-R	M-R	M-R	M-R	M-K
Material	M-R 1366 EX	1600 EX	1601 EX	1602 EX	1603 EX		1437 EX		
Composition	1000 1212			e with mine	ral filler		Synth.	Polystyr	ene base
Composition							resin		
Cold Flow °F	238-243	253-258	245-250	225-230	265-270	228-233	228 - 233	237-242	245-250
	250-255	248-253	255-260	238-243	270-275	238-243	235-240	229-234	236 - 241
Softening Point (R & B) °F	350-400	350-400	350-400	350-400	350-400	280-330	260-300	275 - 325	320-380
Pouring Temp. °F	 Tan	Tan	Brown	Brown	Tan	Tan	Brown	Lt. Cream	Cream
Color	Satisf.	Good	Good	Good	Satisf.	Excellent	Excellent	Good	Good
Adhesion		0	0	0	0	0-1	1-2	0-1	0
Penetration in 0.1 mm	0	1.56	1.57	1.56	1.57	1.53	1.06	1.05	1.05
Spec. Grav.	1.55		480	480	520	400	400	500	500
Flash Point °F	450	490	480						
Chief Functions	Moisture 1	proofing and	providing	mechanical	support for	leaus of co	mponents		
	Capacitor	and cools							
	Capacitor	end sears							
Typical Uses									100
Remarks	Chloride (	content belo	w 4 parts	per million.		Also for	r Low pour	ring temp.	and S. G.
Note: Penetration is a	t and 1602	EX have hig	gh mineral o	oil resistance	e		e Combinin	g with cellu oves toughn	nose pory-
77F/100gm/5 sec						fillers	mer impr	oves tougin	033

MB

Lload

M-R 1462 EX	M-R 3732	M-R 3733	M-R 3734	M-R 1475 EX	M-R 1476 EX	M-R 1477 EX	M-R 3760
	Petroleum v	vax-resin base			icrocrystalline pe		
243-248	244-249	241-246	231-236	262-267	260-265	258-263	260-265
235-240	215-220	210-215	170-175	240-245	225-230	171-176	250-255
6-7	6-7	8-9	7-8	13-15	15-16	16-17	15-16
12-13	7-8	10-11	8-9	17-19	20-22	21-23	13-10
42-44	10-12	34-36	25-27	32-34	33-36	34-37	20-22
Lt. Gray	Tan	Tan	Tan	Tan	Tan	Tan	Tan
275-300	300-325	275-300	285-310	285-310	275-300	275-300	300-350
1,05	1.00	1.00	1.00	0.93	0.93	0.93	0.90
70	103	76	85	44	42	42	41
435	490	400	400	520	520	520	500
Impregnating and	dip-coating w	ork requiring high	drip melting p	oint and high col	d flow temperat	ure	Moist., corona
	Impregnating formers	windings of ir	on-core trans-	Impregnating an capacitors	nd dipping high-	voltage coils, o	lip-coating small
Good electrical properties	Stays hard a 115 F	than M-R 3732	and lower cost		R 3760 has good	l low-temp, fle	but vary in cold xibility; will not

Diamond		M-R	M-R	M-R	Leverite	Rubberseal	Rubberseal	Rubberseal	Rubberseal
H	1316 EX	250 S.C.	1460 EX	2846	-	No. 1	No. 2	No. 3	No. 4
			As		Asphalt compound				
180-195	205-215	235 - 250	265-275	285-295	285-295	145-150	165-170	180-185	225-230
2-3	25-27	1-2	15-20	2	0	40-50	25-30	10-15	1-3
10-12	38-42	8-10	20-28	4	0.5	55-60	35-40	20-25	5-7
31-33	53-56	11-13	40-43	9-11	1.0	85-90	85-90	30-35	14-17
400	350	425	400	500	475	325	350	375	400
Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
1.01	1,00	1.03	1.00	1.03	1.00	1.01	1.01	1.02	1.03
500	480	475	475	610	570	400	410	415	430
	rew hole filling		-			Moisture proofing where flexibility and good adhesion are needed. Noncorrosive			
	all iron-core ti			Potting iron-core transformers, sealing cable connec- tions. First three also for storage battery seals					
Used when thermal conductivity is not a prime requisite but high melting Dielectric strength is 700 volts									
point aiju k	ow viscosity a	re desired				rubbery, elast	ic, bituminous	s compounds	

M-R	MD	1 MID	3 6 75			_					
1648 EX	M-R 1649 EX	M-R	M-R	M-R	M-R	M-R	M-R	M-R	M-R	M-R	M-R
		1322 EX		1	1303 EX		3081	2835	773 EX	2867	2885
	resin,		Resin bas			Natural resi	n base with	mineral fil	ler	Pitch	Pitch base.
	eral fill	wit	h mineral	filler						base	min. fill
270-275					150 - 155	175-180	178-183	215-220			
275-280		174-178	182-186	220-225	172-176	180-185	198-202	253-258	185-190	220-225	210-215
410-460		325-350	300-350	375-400	350-375	375-400	350-375	400-425	325-350	400-425	425-450
	Lt. Brown		Green	Black	Black	Dk.Brown	Bl, Gray, F	R W, R, Br,	Bl Dk.Br	Black	Black
Fair	Fair	Good	Satisf.	Fair	Good	Satisf.	Satisf.	Satisf.	Good	Good	Fair
0	0	0	0	0	0	0	0	0	0-1	0-1	0
1.41	1.41	1.57	1.52	1.50	1.63	1.69	1.58	1.72	1.51	1.16	1.51
520	520	410	415	420	415	410	410	420	430	400	465
	by casting		proof	insulating	Poured	insulating	coverings	over screv	Mineral-o	il resistant	
or low-pre		seals			heads that	at might give	e a shock		oil-filled u	nits and for	notting
Encasing	paper ca-	Sealing to	ops of dry	batteries	Screw ho	le fillers, ce	menting la	mp sockets	Seals on c	il-filled can	acitors and
pacitors					and (exce	ept 2199) dr	y battery se	eals	transform	ers	actions and
11.											
High	1 m p a c t	1322 EX	has good	moisture	Wide ra	nge of cha	aracteristics	s. 3081 is	Mineral	filler gives	improved
Servingen	LOID LA	i constante	, improve	d impact	standard	general-pu	rpose batt	ery sealing	thermal co	onductivity	
resists min	neral oll	strength			material						
									1		

# **RADIOACTIVE MATERIALS**

Source	Half-life hours, days	Emission	Maximum Radi in million ele		Typical Applications
Source	or years	12111351011	$\alpha \text{ or } \beta$	γ-Ray	
Argon A <sup>37</sup>	34 d	β	K		Determining volatile constituents in distillation
Arsenic As <sup>76</sup>	26.8 h	β, γ	1.1, 1.7, 2.7	0.57, 1.25	
Arsenic As <sup>77</sup>	40 h	β	0.8		Corrosion studies on arsenical brasses
	12 d		K, e-	1.2	
Barium Ba <sup>131</sup>		β, γ		1,4	
Bismuth Bi <sup>210</sup>	5 d	β	1.17		
Bromium Br <sup>82</sup>	34 h	$\beta-, \gamma$	0.47	0.55, 0.78	Analysis of chemical mixtures
Calcium Ca <sup>41</sup>	8.5 d	γ		1.1	
Calcium Ca45	180 d	β-, γ	0.2-0.9	0.7	Plant nutrition, bone formation; check efficiency of water purification, recovery of minerals, and con- centration of sugar
Carbon C <sup>14</sup>	5,300 y	$\beta-$ , no $\gamma$	0.145		Cancer research, plant physiology; studying aging of metals, exchange reactions, distillation processes and crystallization
Cesium Cs134	2 у	β, γ	0.75	0.8	Check efficiency of water purification, recovery of minerals and concentration of sugar
Chlorine Cl <sup>36</sup>	1,000,000 y	β	0.66		Corrosion studies of stainless steel; analysis of mixtures
Cobalt Co <sup>60</sup>	5.3 y	β-, γ	0.3	1.1, 1.3	Detecting flaws in metals, plastics, welds
Copper Cu <sup>64</sup>	12.8 h	β	0.58+, 0.66-		Same as iron
Iodine I <sup>130</sup>	12.6 h	$\beta - , \gamma$	0.61-1.03	0.6	
Iodine I <sup>131</sup>	8 d	$\beta -, \gamma$	0.6	0.37, 0.08	Plant hormones
				0.01, 0.00	
Ionium Io	$8.3 \times 10^4 \text{ y}$	α, γ	4.66-4.81		Anemia; wear of bearings; thickness measurements
Iron Fe <sup>55</sup>	4 y	β+	0.15		other chemical processes; tracing water pollution inspection of welds; metallurgical research; dif
Iron Fe <sup>59</sup>	44 d	β, γ	0.26, 0.46	1.1, 1.3	fusion research
Nickel Ni <sup>59</sup>	15 y	β	K		Electroplating and chemical process control; mag net research
Phosphorus P <sup>32</sup>	14 d	$\beta-$ , no $\gamma$	1.7		Circulatory diseases, metabolism; steelmaking an adsorption research
Polonium Po <sup>210</sup>	140 d	α, β, γ	$5.3\alpha, e-, 0.8\beta$	8 0.8	
Potassium K <sup>42</sup>	12.4 h	β-	3.5		Heart and nervous diseases; tracing toxic fumes
Radium Ra	1,590 у	α, γ	4.79	0.19	
Radium RaD	22 y	$\beta-, \gamma$	0.03	0.05	Radiography, neutron sources, luminous dial
Radium RaE	5.0 d	β-	1.17		<ul> <li>static eliminators, radioactive resistors, measuring</li> </ul>
Radium RaF	140 d	α, γ	5.3		liquid levels, medical applications
Radon Rn	3.85 d	α	5.49	14.00	Heart research gangrane
Sodium Na <sup>24</sup>	14.8 h	$\beta -, \gamma$	1.4	1.4, 2.8	Heart research, gangrene
Strontium Sr <sup>89</sup>	53 d	β	1.5		Dissipating static charges on machinery (Polonius now used commercially for this purpose)
Strontium Sr <sup>90</sup>	25 y	$\beta$ -, no $\gamma$	0.6		Penicillin action; steelmaking research; adsorption
Sulphur S35	87 d	β-	0.17		and distillation studies
Titanium Ti <sup>51</sup>	72 d	β, γ	0.36	1.0	Measuring Ti content of iron alloys
Tungsten W <sup>185</sup>	77 d	β	0.55		Tracing sources of water pollution; alloy research
Uranium U1	$4.51  imes 10^9 y$	α	4.15-4.23		
Uranium UX1	24.5 d	β-, γ	0.11-0.30	0.92	Same as radium
Uranium Un	$2.69  imes 10^{5}$		4.71-4.78		
Zinc Zn <sup>65</sup>	250 d	$\beta+, \gamma$	0.4	0.45-1.14	
Zinc Zn <sup>69</sup>	13.8 h	γ	1.0.000	0.44	
Zirconium Zr <sup>95</sup>	65 d	β, γ	1.0, 0.39	0.73	

### COMPILED BY THE RESEARCH DEPARTMENT OF ELECTRONICS

**DIRECTORY SECTION** OF THE 1949-1950 electronics **BUYERS' GUIDE** 

In the preparation of ELECTRONICS BUYERS' GUIDE, every effort was made to insure the completeness and accuracy of the Directory 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, telephonebook 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 Directory Section of this issue. Simply push out and fold under. It will then serve as a tab mark to indicate where the listings start.

PUSH OUT AND FOLD

Directory Section

# **Alphabetical Listings Of All COMPONENTS - COMPLETE UNITS - ALLIED PRODUCTS Used in Electronic Equipment for All Purposes**

The complete product lines of more than 3,000 companies in electronic fields are arranged and indexed in the following listings in a simple, alphabetical, easy-to-use, telephone-book style.

Products are arranged alphabetically by the generic name followed by the descriptive or type name if there is one, as: ADAPTERS - Battery, For example: To find the manufacturers of wax impregnated capacitors you would turn to the generic heading CAPACITORS. Listed alphabetically under it you would find CAPACITORS - Wax Impregnated.

The only exceptions are: INSULATION COM-POUNDS; INSULATION MATERIALS; INSULATION PARTS; METALS; PLASTIC MATERIALS; and TUBE PARTS. Products in these classifications are arranged alphabetically under those six generic headings.

Cross references are provided wherever necessary to cover names, other than the standard one. that are sometimes used.

Advertisers in this issue are boldfaced with the page numbers of their advertisements shown.

#### ABRASIVES

- Borden Co., Chemical Div., Durite Plastics, 5000
   Summerdale Ave., Phila. 24, Pa.
   Carborundum Co., The, Globar Div., Niagara Falls, N. Y.
- Faits, N. Y.
  Do All Co., 254 No. Laurel Ave., Des Plaines, Ill.
  Eraser Co., Inc., The, Industrial Products Div., 104 S. State St., Syracuse, N. Y.
  Ideal Industries, Inc., Park & Borden Aves.,
- Sycamore, III. Linde Air Products Co., Unit of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
- 17, N. Y.
  Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio
  MICO INSTRUMENT CO., 80 Trowbridge St., Cambridge 38, Mass. SEE ADV. PG. 170.
  Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
  Norton Co., 1 New Bond St., Worcester 6, Mass.
  Sittler Corporation, 18 N. Ada St., Chicago 7, Ill.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.

#### ACCELEROMETERS

- Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
   Calidyne Co., The, 751 Main St., Winchester,
- Mass.
- Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif. Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Flight Research Engineering Corp., P. O. Box 1-F,
- Richmond I, Va. Giannini & Co., Inc., 285 W. Colorado St., Pasadena I, Calif.
- Hastings Infrument Co., Box 1275, Hampton, Va. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. Massa Laboratories, 3868 Carnegie St., Cleve-
- land, Ohio Miller Corp., Wm., 363 W. Colorado St., Pasa-
- dena, Calif.
- Schottland, Frederick D., 104-18 Metropolitan Ave., Forest Hills, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y SEE ADV. PGS.
- 240.944 TRANS-SONICS, INC., Bedford Airport, Bedford, M SEE ADV., PG. 132.

#### ADAPTERS-Battery

- Acrolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Eby Inc., Hugh H., 4700 Stenton Ave., Phila.
- 44, Pa. F. D. MFG: C0., 6101-23 Sixteenth Ave., Brooklyn, N. Y: SEE ADV. PG. 112.

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#### ADAPTERS—Foreign

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y. Kulka Electric Mfg. Co., Inc., 30 South St., Mt.
- Vernon, N.
- Wood Electric Co., Inc., C. D., 70-17 83rd St., Glendale, N. Y.

#### ADAPTERS-Panoramic

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213.

### ADAPTERS-Short Wave for Radio

- ABC Radio Labs., 3334 N. New Jersey St., Indianapolis 5, Ind.
- Aermotive Equipment Corp., 1632-8 Central St.,
- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
  Radio Transceiver Labs., 116-23 Jamaica Ave., Richmond Hill 18, N. Y.
  Waterproof Electric Co., 72 E. Verdugo Ave., Burbank, Calif.

#### ADAPTERS-Test

- Alden Products Co., 117 No. Main St., Brockton 64. Mass.
- Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
   Industrial Devices, Inc., 22 State Road, Edge-
- N water POLYTECHNIC RESEARCH & DEVELOPMENT
- CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
- Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y. Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
- Selectar Industries, Inc., 401 E. 138th St., New
- Vork 54, N. Y. United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.

#### ADAPTERS\_Tube

- Alden Products Co., 117 No. Main St., Brockton
- 64, Mass.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  J.F.D. MFG. CO., 6101-23 Sixteenth Ave., Brook-lyn, N. Y. SEE ADV. PG. 112.
  Precision Apparatus Co. Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

- 5th Ave., Nev PGS. 240-244.

#### ADHESIVES

- American Marietta Co. Adhesive, Resins & Chem-ical Div., 3400 13th Ave. S. W., Seattle 4, Wash.
- American Products Mfg. Corp., Oleander & Dub-lin Sts., New Orleans 18, La.
  American Resinous Chemical Co., 103 Foster St.,
- Peabody, Mass. Armstrong Cork Co., Lancaster, Pa. Bakelite 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. Centro Research Laboratories, Inc., Briarcliff
- Manor, N.
- Manor, N. X. Dolph Co., John C., Monmouth Junction, N. J. Durez Plastics & Chemicals Inc., 1921 Walck Rd., N. Tonawanda, N. Y. du Pont de Nemours & Co., Inc., E. I., Wil-mington 98, Del.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-III.

- ford, Ill.
  GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18.
  Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 Market St., Akron 16, Ohio
  INSULATION MFRS. CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
  Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa.
  Maas & Waldstein Co., 438 Riverside Avc., Newark 4, N. J.
  Marbon Corp., Gary, Indiana

- Newark 4, N. J. Marbon Corp., Gary, Indiana Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn. Monsanto Chemical Co., Plastics Div., Spring-field 2, Mass. Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, 10

- Paisiey Products, Inc., 1110 Canaport Lice, Chicago 16, Ill.
  Reichhold Chemicals, Inc., 601-707 Woodward Heights Blvd., Detroit 20, Mich.
  Rohm & Haas Co., Washington Square, Phila 5, Detroit 20, Mich.
- Pa
- Pa.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Technical Specialties Co., P. O. Box 1468, Wil-mington, Del.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.

#### ADHESIVES—Waterproof & Corrosion **Proof Compounds**

- American Marietta Co., Adhesive, Resin & Chem-ical Div., 3400 13th Ave., SW., Seattle 4, Wash. American Resinous Chemical Co., 103 Foster American

- American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
  Armstrong Cork Co., Lancaster, Pa.
  Borden Co., The Chemical Div., 350 Madison Ave., New York 17, N. Y.
  Durez Plastics & Chemicals Inc., 1921 Walck Road, North Tonawanda, N. Y.

## AIR CLEANERS

Con

- General Cement Mfg. Co., 919 Taylor Ave., Rock-

- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
  Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
  Insulatine Co., 1 Broadway, New York, N. Y.
  Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa.
  Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.
  Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  U. S. Stoneware Co., The, Akron 9, Ohio

### AIR CLEANERS-Electrostatic

FERRANTI ELECTRIC INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66 67 66, 67.

#### ALARM SYSTEMS

See Controls, Alarm System

### ALPHA RAY SOURCES

See Isotopes

#### ALUMINUM OXIDE

See Insulation Materials

#### AMMETERS

See also Microammeters Micro-Microammeters Milliammeters

- Assembly Products, Inc., Chagrin Falls 6, Ohio Associated Research Inc., 3758 W. Belmont, Chicago 18, Ill. Beede Electrical Instrument Co., Inc., Penacook,
- N. H. Bradshaw Instruments Co., 348 Livingston St.,
- Brooklyn 17, N. Y. Burlington Instrument Co., Burlington, Iowa Cole Instrument Co., 1320 S. Grand Ave., Los
- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio
  DeJur-Amsco Corp., Northern Blvd., at 45th St., Long Island City 1, N. Y.
  Electric Auto-Lite Co., The, Toledo 1, Ohio
  Electric Design & Mfg. Corp., Burlington, Iowa
  Electro-Mechanical Instrument Co., 812 Chest-nut St., Perkasie, Pa.
  Electroic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska

- Omaha 11, Nebraska Esterline-Angus Co., Inc., P. O. Box 596, Indian-
- FERRANTI ELECTRIC CO., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
   Fluke Engineering Co., John, Box 755, Springdale,

- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
- Ave., Cleveland, Onlo
  International Instruments Inc., 331 East St., New Haven 11, Conn.
  J. B. T. INSTRUMENTS INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG, 229.
  Lewis Engineering Co., 52 Rubber Ave., Nauga-tude Conn.
- tuck, Conn.
- tuck, Conn.
  McMurdo Silver Co., Inc., 1240 Main St., Hartford 3, Conn.
  MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79.
  Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio
  Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.
  Norton Electrical Instrument Co. 59 Hilliard St.
- Norton Electrical Instrument Co., 59 Hilliard St.,
- Norton Electrical Instrument Co., 59 Hillard St., Manchester, Conn.
  Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
  Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
  Roller-Smith, Bethlehem, Pa.
  Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.

D-2

- SHURITE METERS, 61 Hamilton St., New Haven 8, Conn. SEE ADV. PG. 225.
  STERLING MFG. CO., 9205 Detroit Ave., Cleve-land 2, Ohio. SEE ADV. PG. 232.
  Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey P'kwy., Chicago 14, Ill.
  Sun Electric Corp., 6323 Avondale Ave., Chi-cago 31, Ul. cago 31, Ill.
- cago 31, Ill. Supreme, Inc., Greenwood, Miss. Triplett Electrical Instrument Co., 286 Harmon Road, Bluffton, Ohio U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa. Wallace & Tiernan Products, Inc., Belleville 9,
- N.J.
- Welch Scientific Co., W. M., 1515 Sedgwick St.,
- Chicago 10, III. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67, WESTON ELECTRICAL INSTRUMENT CORP.,
- 618 Frelinghuysen Ave., Newark 5, N. SEE ADV. PG. 193.

#### AMMETERS-----

- Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Assembly Products, Inc., Chagrin Falls 6, Ohio Burlington Instrument Co., Burlington, Iowa Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles 15, Calif. Electric Design & Mfg. Corp., Burlington, Iowa Electronic Development Co., 4420 N. 23rd St.,
- Omaha 11, Nebraska GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio
- Ave., Cleveland, Onto International Instruments, Inc., 331 East St., New Haven 11, Conn. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind. Poller Swith Bethleham, Po
- 20, Ind. Roller-Smith, Bethlehem, Pa. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Triplett Electrical Instrument Co., 286 Harmon
- Road, Bluffton, Ohio WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, 67.
- WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

### AMPLIFIERS-Audio Frequency

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Acro Products Co., 5330 Baltimore Ave., Phila. Pa. Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa

- Pa. Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md. Allied Radio Corp., 833 W. Jackson Blvd., Chi-
- cago 7, Ill.
- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
- American Communications Corp., 306 Broadway, New York 7, N. Y. Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
- Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Audar Inc., Argos, Indiana
- Audio Equipment Co., 80-20 45th Ave., Elmhurst, N. Y.
- AVIOMETER DIV. OF ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV.
- Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  Barber & Howard, East Ave., Westerly, R. I.
  Bardwell & McAlister, Inc., P. O. Box 1310, Holly-wood, Calif.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bell Sound Systems, Inc., 555 Marion Rd., Col-umbus 7, Ohio
  Bendix Radio Div., Bendix Aviation Corp., Balti-

- Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
- Bernut-Bach Inc., 7377 Beverly Blvd., Los Angeles, Calif. Bogen Co., David, 663 Broadway, New York 12, N. Y.

Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.

1949-1950 DIRECTORY of

- Brociner Electronics Lab., 1546 Second Ave., New York 28, N. Y. Brook Electronics, Inc., 34 DeHart Place, Eliza-
- beth, N. J. BROWNING LABORATORIES, INC., 750 Main BROWNING LABORATORIES, 100 MAIN BR
- St., Winchester, Mass. SEE ADV. PG. 179. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
- Burbank, Calif. Clarke Instrument Corp., 910 King St., Silver Spring, Md. Collins Audio Products Co., P. O. Box 368, West-field, N. J. Collins Radio Co., Cedar Rapids, Iowa Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Commercial Radia Sound Corp. 575 Lavington

- Kansas City 8, Mo. Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y. Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich. Communication Equipment & Engineering Co., 5646 W. Race St., Chicago 44, Ill. Concord Radio Corp., 901 W. Jackson Blvd., Chi-cago 7, Ill. Conn Ltd., C. G., Electronics Div., Elkhart, Ind. Continental Electronics, Ltd., 252 Norman Ave., Brooklyn 22, N. Y.
- Brooklyn 22, N. Y. Cook Laboratories, 139 Gordon Blvd., Floral

- Cook Laboratories, 139 Gordon Blvd., Fioral Park, N. Y. \*
  Dalmo Victor Co., San Carlos, Calif.
  Dilks Co., Seymour, Conn.
  Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 25, Mass.
  Eckstein Radio & Television Co., LeRoy, Minn.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teter-boro, N. J.
  Fleetto-Physical Labs., Inc., 290-8 Dyckman St.,

Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y. New York 34, N. Y. **ELECTRODYNE COMPANY**, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. Electronic Systems Co., 201 N. Wells St., Chi-cago 1, 111. Electronice

Electronics Contracting Co., 122 Chambers St., New York 7, N. Y. Ellinwood Industries, 150 W. Slauson Ave., Los

Angeles 3, Calif. EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189. Espey Mfg. Co., Inc., 528 E. 72nd St., New York 19, N. Y.

Executone, Inc., 415 Lexington Ave., New York 17, N. Y.

Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa.
Federal Instrument Corp., 1402 Broadway, Long Island City 2, N. Y.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill.

Feiler Engineering Co., 543 W. decige O.M. Car cago 14, Ill.
FERRANTI ELECTRIC INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
Fidelity Amplifier Co., 1632 N. Halsted St., Chi-cago 14, Ill.
Comparison of the set 47th St. New York.

Fisher Radio Corp., 41 East 47th St., New York, N. Y. Five Star Radio Co., 416 Broadway, Cambridge,

Furst Electronics, 10A S. Jefferson St., Chicago

Gates Radio Co., Quincy, Ill. Gaveco Labs. Inc., 2 East End Ave., New York 21, N. Y.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

Globe Phone Mfg. Co., 2 Linden St., Wing,

Mass. Gray Mfg. Co., 16 Arbor St., Hartford, Conn. Heath Co., Benton Harbor, Mich. Hoffman Radio Corp., 3716 S. Hill St., Lo Angeles 7, Calif. Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y. Inductive Equipment Co., Gett burg, Pa. Islip Radio Mfg. Corp., Beech S. Islip, N. Y. Kalbfell Labs. Inc., 1076 Morena Blvd., San Diego 10, Calif.

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Ill. 6.

AMPLIFIERS-Audio Frequency

Keithley Instruments, 1507 Warrensville Center Rd., Cleveland 21, Ohio

**ELECTRONIC** and **ALLIED PRODUCTS** 

- Langevin Manufacturing Corp., 37 W. 65th St.,
- Langevin Manufacturing Corp., 37 W. 65th St., New York 23, N. Y.
  LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182.
  Lincrophone Inc., 226 Lansing St., Utica, N. Y.
  Loge Sound Engineers, J. M., 2171 W. Wash-ington Blvd., Los Angeles 7, Calif.
  Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
  Lyman Electronic Corp., 12 Cass St., Spring-field. Mass.
- field, Mass MacLeod & Hanopol, 10 Joiner St., Charlestown
- 29, Mass. M. P. Concert Installations, Fairfield 10, Conn.
- Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
- Maguire Industries Inc., Electronics Dept., Bridge-port, Conn. Measurement Engineering Ltd., Arnprior, Ontario,
- Canada Meck Industries, John, Liberty at Pennsylvania,

- Canada
  Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.
  Mellaphone Corp., Rochester 2, N. Y.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  National Intercommunicating Systems, 1531 Devon Ave., Chicago 26, Ill.
  Network Mfg. Corp., Bayone, N. J.
  Newcomb Audio Products Co., 6824 Lexing-ton Ave., Hollywood 38, Calif.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.

- Nilson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y. Northeastern Engineering, Inc., Manchester, N. H. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.
- Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.
- Paravox Inc., 2058 E. 4th St., Cleveland, Ohio PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG, 130.
- Precision Electronics, 641 Milwaukee Ave., Chi-cago 22, Ill.
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Concer Ste Caurden N. J. SEE

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio-Music Corp., East Port Chester, N. Y.
  Radio Development & Research Co., 26 Cornellson Ave., Jersey City, N. J.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
- Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, Ill.
- Rabander Dei Scorp., 4240 R. Riber Aves, Chi-cago 41, Ill.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  Regal Electronics Corp., 603 W. 130th St., New York 27, N. Y.
  Rek-O-Kut Co., Inc., 3801 Queens Blvd., Long Island City, N. Y.
  Remler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calit.
  Riggs & Jeffreys, Inc., 140 Glenridge Ave., Montclair, N. J.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Rowe Industries, 1702 Wayne St., Toledo 9, Ohio Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
  Sargent-Rayment Co., The, 212 9th St., Oakland 7, Cal.

- Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C. Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
- Cambridge 35, Mass. Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. Setchell Carlson, 2233 University Ave., St. Paul,
- Minn.
- Sierra Electronic Corp., Belmont & San Carlos, Calif.

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- Simpson Mfg. Co., Inc., Mark, 32-28 49 St., Long Island City 3, N. Y.
  Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  Sematane Corp. P. O. Bay 200 Saw Mill Biver
- Sonotone Corp., P. O. Box 200, Saw Mill River

- Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
   Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
   Special Products Co., Silver Spring, Md.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
   STANDARD TRANSFORMER CORP., Elston, Kodiw, & Addiew, Chiner, 18, III SEF ADV. STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV. PG. 207.
  Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
  Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
  Stromberg-Carlson Co., Rochester, N. Y. Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago 23, Ill.

- Tech-Master Products Co., 443-445 Broadway New York 13, N. Y.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  Telephenian Corp., 250 W. 21st St. New York 1
- Telephonics Corp., 350 W. 31st St., New York 1,
- Television Projects, Inc., 3660 Coral Way, Miami 35, Fla.
- Rd., Chicago 34, Ill. Thermionic Engineering Corp., Pompton Plains,
- N. J. Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. United Radio Electronics Corp., 901 W. Jackson Blvd., Chicago, Ill. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.

- Universal Broadcast Equipment Corp., 6035 Northwest Highway, Chicago 31, III. WATERMAN PRODUCTS CO., 2445-63 Emerald
- St., Philadelphia 25, Pa. SEE ADV. PG. 146. Waterproof Electric Co., 72 E. Verdugo Ave., Burbank, Calif. Webster Electric Co., 1900 Clark St., Racine, Wie
- Wis.

- Wis. Electronics Co., 1600 Clark St., Racine,
  West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  Western Electro-Acoustic Labs., 621 S. Spring St., Los Angeles 14, Calif.
  Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis.
  WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 6, 77.
  Weston Laboratories Weston 93 Macc.
- Weston Laboratories, Weston 93, Mass. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

### AMPLIFIERS-Audio Input Systems

- Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Allied Radio Corp., 833 W. Jackson Blvd., Chi-
- cago 7, Ill. Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.

- New York 13, N. Y. American Communications Corp., 306 Broadway, New York 7, N. Y. Amplifier Corp. of America, 396 Broadway, New York 13, N. Y. Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Barber & Howard, East Ave., Westerly, R. I. Bardwell & McAlister, Inc., P. O. Box 1310, Hollywood, Calif. BARKER & WILLIAMSON, 235 Fairchild Ave., Upper Darby, Pa. SEE ADV. PG. 39. Bogen Co., David, 663 Broadway, New York 12, N. Y. Brook Electronics, Inc., 34 DeHart Place
- Bogen Co 12, N. Brook E Electronics, Inc., 34 DeHart Place,
- Elizabeth, N. J. Caltron Co., 1406 So. Hobart Blvd., Los Angeles 6, Calif.
- Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.

Collins Audio Products Co., P. O. Box 368, Westfield, N. J.

AMPLIFIERS

- Collins Radio Co., Cedar Rapids, Iowa Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y.
- Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.
- Concord Radio Corp., 901 W. Jackson Blvd.,
- Chicago 7, Ill. Eckstein Radio & Television Co., Le Roy, Minn. Electronic Systems Co., 201 N. Wells St., Chi-cago 1, Ill.

- cago 1, Ill.
  EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
  Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gates Radio Co., Quincy, Ill.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Godfrey Mfg. Co., 171 S. 2nd St., Milwaukee 4, Wis.

4, Ind.

Canada

153-155.

Wayne 7, Ind.

City, Calif.

- Hoffman Radio Corp., 3716 S. Hill St., Los
- Angeles 7, Calif. Inductive Equipment Co., Gettysburg, Pa. INDUSTRIAL ELECTRONICS, INC., 2457 Woodward Ave., Detroit 1, Mich. SEE ADV. P.G. 226. Kalbfell Labs.
- Inc., 1076 Morena Blvd., San Diego 10, Calif.
   Langevin Manufacturing Corp., 37 W. 65th St., New York 23, N. Y.
   Lear, Inc., 110 Ionia Ave., NW, Grand Rapids 2, Mich.
- Mich.
- Loge Sound Engineers, J. M., 2171 W. Washing-ton Blvd., Los Angeles 7, Calif. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. M. P. Concert Installations, Fairfield 10, Conn. Magnavox Co., The, Components Div., Fort Wayne

Measurement Engineering Ltd., Arnprior, Ontario,

Miles Reproducer Co., Inc., 812 Broadway, New

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
National Intercommunicating Systems, 1531 Devon Ave., Chicago 26, Ill.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
Northeastern Engineering, Inc., Manchester, N. H.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, SEE ADV. PGS. 153-155.

221d St., New YORK 11, SEE ADV. POS. 153-155.
Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Radio Development and Research Co., 26 Cornell-son Ave., Jersey City, N. J.
Radio-Music Corp., Port Chester, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
Remler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calif.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Sandwick-Bowen Corp., 4712 Bethesda Ave.,

York 19, N. Y. Sandwick-Bowen Corp., 4712 Bethesda Ave., Bethesda, Md. Schuttig & Co., Inc., 9th & Kearney St., N. E., Washington 17, D. C. Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass. Simpson Mfg., Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. Smith-Meeker Engineering Co., 125 Barclay St.

Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Southwestern Industrial Electronic Co., 2831

Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind

Stephens Mfg. Corp., 8538 Warner Drive, Culver

D-3

Stromberg-Carlson Co., Rochester, N. Y.

### AMPLIFIERS

- Talk-A-Phone Co., 1512 Pulaski Rd., Chicago
- Television Projects, Inc., 3660 Coral Way, Miami 35, Fla.
- Thermionic Engineering Corp., Pompton Plains, N.J.
- N. J. Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Universal Broadcast Equipment Corp., 6035 Northwest Highway, Chicago 31, Ill. Webster Electric Co., 1900 Clark St., Racine,
- Wis.
- Wis. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis.

#### AMPLIFIERS-Decade

BALLANTINE LABS, INC., Boonton, N. J. SEE

- BALLANTINE LABS, INC., Boonton, N. J. SEE ADV. PG. 134.
  Bardwell & McAlister, Inc., P. O. Box 1310, Hollywood, Calif.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
  Kalbfell Labs. Inc., 1076 Moreua Blvd., San Diego 10, Calif.
- Diego 10, Calif. Diego 10, Calif.
  Keithley Instruments, 1507 Warrensville Center Rd., Cleveland 21, Ohio
  Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
  M. P. Concert Installations, Fairfield 10, Conn.
  Radio-Music Corp., Port Chester, N. Y.

### AMPLIFIERS-f-m & a-m Antenna

- Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J. Crystal Devices Co., Inc., 50 Mill Rd., Freeport, N. Y.

- N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Intra-Video Corp. of America, S51 Madison Ave., New York 21, N. Y.
  Jerrold Electronics, 121 N. Broad St., Phila., Pa.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio-Music Corp., Port Chester, N. Y.

#### AMPLIFIERS-Facsimile

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton
- Mass
- 64, Mass.
  McElroy, Mfg. Corp., Littleton, Mass.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radio Inventions, Inc., 155 Perry St., New York JAN N.

- York 14, N. Y. Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey P'kway, Chicago 14, Ill.

#### AMPLIFIERS-Keying

D-4

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Bendix Radio Div., Bendix Aviation Corp., Balti-
- more 4, Md. Bochme Inc., H. O., 915 Broadway, New York,
- N. Y.
- Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.

- Erco Radio Labs., Inc., E. Stewart Ave., Galden City, N. Y.
  Gates Radio Co., Quincy, Ill.
  Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
  McElroy Mfg. Corp., Littleton, Mass.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

- Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn.
- Conn. Schuttig & Co., Inc., 9th & Kearney Sts., NE, Washington 17, D. C. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
- Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.

#### AMPLIFIERS-Medical Instrument

- American Radio Co., 611 E. Garfield Ave., Glen. dale Calif.
- Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
- York 13, N. Y. AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
- Angenes, Can. Electro-Medical Lab., Inc., Holliston, Mass. Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y. Electrofax Corp., 30 Burtis Ave., New Canaan, Conro
- Conn. Electronic Engineers, 1039 B Pacific St., Santa

- Electronic Engineers, 1039 B Pacific St., Santa Monica, Calif.
  Electronic Tube Corp., 1200 E. Mermaid Ave., Phila. 18, Pa.
  Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
  Fidelity Amplifier Co., 1632 No. Halsted St., Chicago 14, Ill.
  Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
  Inductograph Laboratory, Box 76, Brookfield, Conn.
- Conn. LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182. Lektra Labs., 30 E. 10th St., New York, N. Y. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. Manning, Maxwell & Moore, Inc., 11 Elias St., Bridgeport 2. Conn.

- York 54, N. Y.
  Manning, Maxwell & Moore, Inc., 11 Elias St., Bridgeport 2, Conn.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  O'Connor & Co., John T., West Orange, N. J.
  PERMOFLUX CORP., 4900 W. Grand Ave., Chicago, Ill. SEE ADV. PG. 230.
  Photocon Research Products, 1062 N. Allen Ave., Passadena 7, Calif.
  Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
  Radiation Counter Laboratories, Inc., 1844 W 21st St., Chicago 8, Ill.
  RAHM INSTRUMENTS, INC., 12 West Broad-way, New York 7, N. Y. SEE ADV. PG. 222.
  RESEARCH ELECTRONICS LAB., 2459 Sus-quehanna Rd., Roslyn, Pa. SEE ADV. PG. 233.
  SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.
  Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
  Webster Engineering Co., 105 Tenth St., N. E., Cedar Rapids, Iowa

### AMPLIFIERS-Microwave Radar

- DeMornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y. FEDERAL TELEPHONE AND RADIO CORP.
- 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- PGS. 129, 131, 133, 135. Leru Laboratories, Inc., 360 Bleecker St., New York 14, N. Y. Melpar, Inc., 452 Swann Ave., Alexandria, Va. POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228. POLYTECHNIC RESEARCH & DEVELOPMENT CO. 100. 66 Court St. Bracking 2 N. V.

- POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Reeves Instrument Corp., 215 E. 91st St., New York, N. Y. York, N. Y.

Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y. Submarine Signal Div., Raytheon Mfg. Co.,

1949-1950 DIRECTORY of

- Waltham, Mass. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.

### AMPLIFIERS-Musical Instrument

Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa.

- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y. Arlington Electric Products, Inc., 500 W. 52nd

- Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  Audar Inc., Argos, Indiana
  AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  Bardwell & McAlister, Inc., P. O. Box 1310, Hollywood, Calif.
  Bell Sound Systems, Inc., 555 Marion Rd., Col-umbus 7, Ohio
  Conn Ltd., C. G., Electronics Div., Elkhart, Ind.
  Electronic Engineers, 1039 B Pacific St., Santa Monica, Calif.
  Electronic Systems Co., 201 N. Wells St., Chi-cago 1, 111.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

- Espey Mig. Co., Inc., 528 E. 12nd St., New York, N. Y.
  Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa.
  Heath Co., Benton Harbor, Mich.
  Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
  Meck Industries, John, Liberty at Pennsylvania, Diversity Ind.

Plymouth, Ind. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.

Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.

Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.<sup>e</sup> Rowe Industries, 1702 Wayne St., Toledo 9,

Sandwick-Bowen Corp., 4712 Bethesda Ave.,

Sandwick-Bowen Corp., 4712 Bethesda Ave., Bethesda, Md. Scott, Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass. Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City, N. Y. Special Products Co., Silver Spring, Md. Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind

Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
Stromberg-Carlson Co., Rochester, N. Y.
Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
Universal Broadcast Equipment Corp., 6035 Northwest Highway, Chicago 31, Ill.
Valco Mfg. Co., 4700 W. Walton St., Chicago 51, Ill.

Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
Bardwell & McAlister, Inc., P. O. Box 1310, Hollywood, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.

Collins Radio Co., Cedar Rapids, Iowa Electronic Engineers, 1039 B Pacific St., Santa

EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. Erco Radio Labs., Inc., E. Stewart Ave., Garden

City, N. Y. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.

AMPLIFIERS—Peak Limiting

Burbank, Calif.

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Ill.

# **ELECTRONIC** and **ALLIED PRODUCTS**.

- Gates Radio Co., Quincy, III. Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
- Audio Products Co., 6824 Lexington Newcomb
- Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Development & Research Co., 26 Cor-nellson Ave., Jersey City, N. J.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass: SEE ADV. PG. 55.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Thermionic Engineering Corp., Pompton Plains.

- Thermionic Engineering Corp., Pompton Plains,
- N. J.
- Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Maguera Maguera, 1990 Chestnut St., Kansas City, Mo.

### AMPLIFIERS-Photocell

- Acme Telectronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- Airlectron, P.O. Box 151, Caldwell, N. J. Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- 64, Mass.
  Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  Autotron Co., The, Danville, Ill.
  Bardwell & McAlister, Inc., P. O. Box 1310, Hollywood, Calif.
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  Federal Instrument Corp., 1402 Broadway, L. I. City 2, N. Y.

- City 2, N. Y. Fidelity Amplifier Co., 1632 No. Halsted St.,
- Chicago 14, III. FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City 1, N. Y. SEE ADV. PG. 90. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
- Hoffman Engineering Corp., Anoka, Minn. Inductive Equipment Co., Gettysburg, Pa. Machine-O-Matic, Inc., P. O. Box 238, Ashley,
- Ohio Manning, Maxwell & Moore, Inc., 11 Elias St.,

- Bridgeport 2, Conn. McElroy Mig. Corp., Littleton, Mass. Mellaphone Corp., Rochester 2, N. Y. Miles Reproducer Co., Inc., 812 Broadway, New York 2, N. Y.

- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  Moulic Specialties Co., 1005-1007 W. Wash-ington St., Bhomington, Ill.
  Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
  O'Connor & Co., John T., West Orange, N. J.
  Pho Tron Intrument Co., 5713 Euclid Ave., Cleveland, Ohio
- Cleveland, Ohio Potter Instrument Co., Inc., 136:56 Roosevelt Ave., Flushing, N. Y. Precision Electronics, 641 Milwaukee Ave., Chi-cago 22, Ill. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. L., N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Event L. Correr Ste. Canudon, N. J. SEE

- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Sonic Corp., 186 Union Ave., New Rochelle,
- Y.
- Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
- Conn. Simpson Mfg. Co., Inc., Mark, 32-28 49 St., Long Island City 3, N. Y. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
- Stark Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind
- Dayner, Jud.
   Tech Laboratories, Inc., Bergen & Edsall Blvd., Palisades Park, N. J.
   Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
   Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.
- N. J.

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#### AMPLIFIERS-Power

- Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- Alden Products Co., 117 N. Main St., Brockton, Mass.
- Mass. Arlington Electric Products, Inc., 500 W. 52nd St., New York, 19, N. Y. Bardwell & McAlister, Inc., P. O. Box 1310, Hollywood, Calif. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank. Calif.
- Collins Audio Products Co., P.O. Box 368, West-field, N. J.
   Collins Radio Co., Cedar Rapids, Iowa
- Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass.
- Electronic Systems Co., 201 N. Wells St., Chi-cago 1, Ill.
- Cago 1, 111.
   EL-TRONICS, INC., 2647 No. Howard St., Phila.
   33, Pa. SEE ADV. PG. 189.
   Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- Executione, Inc., 415 Lexington Ave., New York 17, N. Y. 17, N. Y. Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y. Feiler Engineering Co., 945 W. George St., Chi-
- cago 14, Ill. Fidelity Amplifier Co., 1632 No. Halstead St.,
- Chicago 14, III. FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. C. 1, N. Y. SEE ADV. PG. 90. Gates Radio Co., Quincy, III. Heath Co., Benton Harbor, Mich. Hoffman Engineering Corp., Anoka, Minn. Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7 Calif. Chicago 14, Ill.

- Angeles 7, Calif. La Magna Mfg. Co., Inc., E. Rutherford, N. J. Loral Electronics Corp., 794 E. 140 St., New York 54, N. Y. Miles Reproducer Co., Inc., 812 Broadway, New

- Jork D4, N. T.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. of America, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Music Corp., Port Chester. N. Y.
  RADIO RECEPTOR CO., 251 W. 19th St., New York, N. Y. SEE ADV. PGS. 162, 163.
  Riggs & Jeffreys, Inc., 140 Glenridge Ave., Montclair, N. J.
  Ripley Co., Inc., P. O. Box 31. Middletown, Conn.
  Servomechanisms Inc., 142 Mineola Blvd., Mineola, N. Y.
  Sierra Electronic Corp., Belmont & San Carlos,

- Sierra Electronic Corp., Belmont & San Carlos, Calif.
- Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
- SPENCER-KENNEDY LABS. INC., 186 Massa-chusetts Ave., Cambridge 39, Mass. SEE ADV. PG. 208
- Stephens Mig. Corp., 8538 Warner Drive, Culver City, Calif.
- Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. Transmitter Equipment Co., Inc., 345 Hudson St.,
- Maisinter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
   Western Sound & Electric Labs., Inc., 805 S.
   Sih St., Milwaukee 4, Wisc.
   West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.

#### AMPLIFIERS-r-f

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Clarke Instrument Corp., 910 King St., Silver

Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y. Conn Ltd., C. G., Electronics Div., Elkhart, Ind. Dallons Labs., 5066 Santa Monica Blvd., Los An-geles, Calif.

Electronic Systems Co., 201 N. Wells St., Chicago 1. III.

EL-TRONICS, INC., 2647 No. Howard St., Phil-delphia 33, Pa. SEE ADV. PG. 189. Erco Radio Labs., Inc., E. Stewart Ave., Garden

AMPLIFIERS

- City, N. Y FEDERAL TELEPHONE AND RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Feiler Engineering Co., 945 W. George St., Chi-
- cago 14, Ill. Ferris Instrument Co., 110 Cornelia St., Boonton,

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29, Mass.

- Ferris Instrument Co., 110 Contents
  N. J.
  Gates Radio Co., Quincy, fll.
  Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
  Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y.
  Islip Radio Mfg. Corp., Beech St., Islip, N. Y.
  Jerrold Electronics, 121 N. Broad St., Phila., Pa.
  Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

- Mass.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Craftsmen, Inc., 1341 S. Michigan Ave., Chicago 5, III.

Radio Cratismen, Inc., 1341 S. Michigan Ave., Chicago 5, Ill.
 RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
 Sierra Electronic Corp., Belmont & San Carlos, Calif.

Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.

Shuckler & Co., Inc., A. F., 202 Indry Se, Brooklyn 1, N. Y.
 SPENCER-KENNEDY LABS., INC., 186 Massa-achusetts Ave., Cambridge 39, Mass. SEE ADV. PG. 208.
 STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219

Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

Thermionic Engineering Corp., Pompton Plains,

Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
U. S. Electronics Corp., 275 Warren St., Lynd-hurst, N. J.

West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif. Western Sound & Electric Labs., Inc., 805 S. 5th

St., Milwaukee 4, Wis. WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67,

BALLANTINE LABS., INC., Boonton. N. J. SEE

ADV. PG. 134.
 Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
 BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.

Commercial Research Labs., Inc., 20 Bartlett Ave.,

Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich.
Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif.
ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y.
Electronic Tube Corp., 1200 E. Mermaid Ave., Phila. 18, Pa.
Engineering Lab., Inc., 602 E. 4th St. Tulsa 3.

Engineering Lab., Inc., 602 E. 4th St., Tulsa 3.

GENERAL ELECTRIC CO., Schenectady 5, N. Y.
SEE ADV. PGS. 5-18.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
INDUSTRIAL ELECTRONICS, INC., 2457 Woodward Ava, Detroit 1 Mich. SEE ADV. DC.

ward Ave., Detroit 1, Mich. SEE ADV. PG.

MacLeod & Hanopol, 10 Joiner St., Charlestown

Manning, Maxwell & Moore, Inc., 11 Elias St.,

D-5

Bridgeport 2, Conn. Melpar, Inc., 452 Swann Ave., Alexandria, Va.

AMPLIFIERS-Strain Gage

### AMPLIFIERS

Miller Corp., Wm., 362 W. Colorado St., Pasadena, Calif.

- Calif. Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill. O'Connor, & Co., John T., West Orange, N. J. RAHM INSTRUMENTS, INC., 12 West Broad-way, New York 7, N. Y. SEE ADV. PG. 222. Ruge-DE Forest, Inc., 76 Massachusetts Ave., Cambridge 39, Mass. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas

- Southwestern Industrial Electronic Co., 2001 Post Oak Rd., Houston 19, Texas Televiso Products Inc., 7644 West Irving Park Rd., Chicago, Ill. WATERMAN PRODUCTS CO., 2445-63 Emerald St., Philadelphia 25, Pa. SEE ADV. PG. 146. Wilson & Co., G. C., 2 N. Passaic Ave., Chatham,
- N. J.

### AMPLIFIERS-Television

- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Decimeter Inc., 1430 Market St., Denver 2,
- Douglas Radio Labs., 40 Wayland St., Boston 25,
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill.
- Five Star Radio Co., 416 Broadway, Cambridge,

- Mass. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif. Intra Video Corp. of America, 851 Madison Ave., New York 21, N. Y. Jerrold Electronics, 121 N. Broad St., Phila., Pa. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. Lynan Electronic Corp., 12 Care St. Springfold
- Lyman Electronic Corp., 12 Cass St., Springfield,
- Mass. Magnavox Co., The, Components Div., Fort Wayne

- Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
  Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
- N. Y. Electronics Co., 1201 Flushing Ave.,
- N. Y. 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. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Snaider Television Corp., 540 Bushwick Ave., Brooklyn 6, N. Y.

- Brooklyn 6, N. Y. SPENCER-KENNEDY LABS., INC., 186 Massa-chusetts Ave., Cambridge 39, Mass. SEE ADV. PG, 208. Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y.
- Telequip Radio Co., 1901 S. Washtenaw, Chicago,
- m
- Television Equipment Corp., 238 William St., New York 7, N. Y. Television Projects, Inc., 3660 Coral Way, Miami

- 30, Fla.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  TRANSVISION INC., 460 North Ave., New Rochelle, N. Y. SEE ADV. PG. 172.
  U. S. Electronics Corp., 275 Warren St., Lyndhurst, N. J.

#### AMPLIFIERS-Ultrasonic

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- Arlington Electric Products, Inc., 500 W. 52nd
- Arington Electric Products, Inc., 200 W. 52nd St., New York 19, N. Y. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Communication Accessories Co., Box 345 110th St. & Hillcrest Rd., Hickman Hills, Missouri Crystal Research Labs., Inc., 29 Allyn St., Hart-ford Conn.
- ford, Conn.

- Edo Corp., College Point, Long Island, N. Y. Kalbfell Labs., Inc., 1076 Morena Blvd., San Di-ego 10, Calif. Keithley Instruments, 1507 Warrensville Center Rd., Cleveland 21, Ohio Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.

- St. Paul 1, Minn.
  Northern Communications Mfg. Corp., 210 E.
  40th St., New York 16, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Development & Research Co., 26 Cornell-son Ave., Jersey City, N. J.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
- N. Y. Triplett & Barton, Inc., 831 N. Lake St., Bur-bank, Calif. Western Sound & Electric Labs., Inc., 805 S. 5th
- St., Milwaukee 4, Wis. Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

#### AMPLIFIERS-Vibration Pickup

- Autotron Co., The, Danville, Ill. Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif. Calidyne Co., The, 751 Main St., Winchester,
- CENTURY GEOPHYSICAL CORP., Tulsa 3, Oklahoma. SEE ADV. PG. 164. Commercial Research Labs., Inc., 20 Bartlett

- Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich. Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif. Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
- BL-TRONICS INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. Feiler Engineering Co., 945 W. George St., Chi-
- cago 14, 111. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
- Maguire Industries Inc., Electronics Dept., Bridge-
- port, Conn. Miles Reproducer Co., Inc., 812 Broadway, New
- York 3, N. Y. Miller Corp., William, 362 W. Colorado St., Pasadena, Calif.
- dena, Calif. Newcomb Autoin Products Co., 6824 Lexington Ave., Hollywood 38, Calif. Offner Electronics Inc., 5320 N. Kedzie Ave., Chicago 25, 111. PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130. Radio-Music Corp., Port Chester, N. Y. Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.

- N. Y. RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222. Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
- Campridge 33, Mass. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- 51, 52.
  Televiso Products Inc., 7466 West Irving Park Rd., Chicago 34, Ill.
  Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
  WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

### AMPLIFIERS-Wideband

- American Radio Co., 611 E. Garfield Ave., Glen-

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
  Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
  Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  BALLANTINE LABS., INC., Boonton, N. J. SEE ADV. PG. 134.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.

Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y. EL-TRONICS INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. FEDERAL TELEPHONE AND RADIO CORP., 100 Wind Pd. Cliffors N. J. SEE ADV. PGS

1949-1950 DIRECTORY of

- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Feiler Engineering Co., 945 W. George St., Chi-
- cago 14, Ill.
- Five Star Radio Co., 416 Broadway, Cambridge, Mass.
- Mass. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. INDUSTRIAL ELECTRONICS, INC., 2457 Wood-ward Ave., Detroit 1, Mich. SEE ADV. PG. 226. Kalbfell Labs., Inc., 1076 Morena Blvd., San Di-era 10 Calif.

- Kalbfell Labs., Inc., 1076 Morena Brvd., San Dreego 10, Calif.
  Network Mfg. Corp., Bayonne, N. J.
  POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radar Engineers, 110 University St., Seattle 1, Wash
- RADIO CORP. OF AMERICA, RCA Victor Div.,
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back and Back Covers. Radio-Music Corp., Port Chester, N. Y. Radio Sonic Corp., 186 Union Ave., New Rochelle,
- NY
- Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
- SPENCER-KENNEDY LABS., INC., 186 Massa-chusetts Ave., Cambridge 39, Mass. SEE ADV. PG. 208.
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Stromberg-Carlson Co., Rochester, N. Y. Television Equipment Corp., 238 William St., New York 7, N. Y.

Weston Laboratories, Weston 93, Mass.

ANALYZERS—Audio Amplifier

Canada

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Canada

Ind

- Thermionic Engineering Corp., Pompton Plains, N. J.
- Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

BARKER & WILLIAMSON, 235 Fairfield Ave.,

Upper Darby, Pa. SEE ADV. PG. 39. Coastwise Electronics Corp., Inc., 130 Beaudry Ave., Los Angeles, Calif.

Ave., Los Angeles, Call.
 Feiler Engineering Co., 945 W. George St., Chi cago 14, Ill.
 KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
 McMurdo Silver Co., Inc., 1240 Main St., Hartford

3, Conn.
 M. P. Concert Installations, Fairfield 10, Conn.
 Measurement Engineering Ltd., Arnprior, Ontaric,

Meters, Inc., 915 Westfield Blvd., Indianapolis 20,

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213.

Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

Aerovox Corp., 740 Belleville Ave., New Bedford,

Mass. CORNELL-DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., South Plainfield, N. J. ADV.

Electric Heat Control Co., The, 9123 Inman Ave.,

Electric Heat Control Co., 1ne, 9123 Inman Ave., Cleveland 5, Ohio
 GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
 GENERAL ELECTRIC CO., Electroncis Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
 Heath Co., Benton Harbor, Mich.
 Jackson Electrical Instrument Co., 16 S. Patter-con Blud Davidon 1, Ohio

son Bloch, Dayton 1, Ohio Kalbfell Labs., Inc., 1076 Morena Blvd., San Di-ego 10, Calif. McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn.

Measurement Engineering Ltd., Arnprior, Ontario,

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ANALYZERS—Capacitor

# **ELECTRONIC and ALLIED PRODUCTS**

- Network Mfg. Corp., Bayonne, N. J. Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J. Solar
- Thermionic Engineering Corp., Pompton Plains, N. J.

#### ANALYZERS-Circuit

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- Amerline, 1753 N. Honore St., Chicago 22, Ill. Bradshaw Instruments Co., 348 Livingston St., Brooklyn 17, N. Y.
- Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. ELECTRO-TECH EQUIPMENT CO., 117 Lafay-ette St., New York 13, N. Y. SEE ADV. PG. 181.
- Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska Electric Heat Control Co., The, 9123 Imman Ave., Cleveland 5, Ohio
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N
- Feiler Engineering Co., 945 W. George St., Chi-
- cago 14, Ill. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio
   KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
   Maguire Industries Inc., Electronics Dept., Bridge-metric Communications.
- port, Conn. Measurement Engineering Ltd., Arnprior, Ontario,
- Canada Meissner Mfg. Div., Maguire Industries, Inc., Mt.
- Carmel, Ill. Meters, Inc., 915 Westfield Blvd., Indianapolis
- 20, Ind.
- 20, Ind.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
- Pa. Simpson Electric Co., 5218 W. Kinzie St., Chi-

- Simpson Electric Co., 5218 W. Kinzie St., Chi-cago 44, Ill.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

### ANALYZERS-Frequency

Biddle Co., James G., 1316 Arch St., Phila. 7, Pa.

#### ANALYZERS-Gas

- Applied Physics Corp., 40 South Oak Knoll Ave., Pasadena 1, Calif.
- Consolidated Engineering Corp., 620 N. Lake Ave ... Pasadena 4, Calif.
- Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5. Ohio
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Gow-Mac Instrument Co., 22 Lawrence St., New-
- ark 5, N.
- ark b, N. J.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  Leeds & Northrup Co., 4970 Stenton Ave., Phila.
  44, Pa.
  National Technical Lab., 820 Mission St., S.
- National Technical Lab., 820 Mission St., S. Pasadena, Calif. Perkin-Elmer Corp., Glenbrook, Conn. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Sun Electric Corp., 6323 Avondale Ave., Chicago 31 Ill

- 31, III. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.

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### ANALYZERS-Harmonic

- BARKER & WILLIAMSON, 235 Fairfield Ave.,
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Canada MICO INSTRUMENT CO., 80 Trowbridge St., Cambridge 38, Mass. SEE ADV. PG. 170. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213. Scott Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### ANALYZERS—Intermodulation

- Altec Lansing Corp., 161 Avenue of the Americas,
- Artee Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
   BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
   Furst Electronics, 10A S. Jefferson St., Chicago 6.
- 6. III. Measurement Engineering Ltd., Arnprior, Ontario,
- Canada
- PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213.
- PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130. Scott Inc., Hermon Hosmer, 385 Putnam Ave.,
- Cambridge 39, Mass. Sierra Electronic Corp., Belmont & San Carlos,
- Calif. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

### ANALYZERS-Microwave Radar

- ELECTRONIC MEASUREMENTS CO., Red Bank,
- ELECTRONIC MEASUREMENTS CO., Reu Dains, N. J. SEE ADV. PG. 172.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  Microwave Equipment Co., North Caldwell, N. J.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO. INC. 66 Court St. Brooklyn. 2. N. Y. SEE
- CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
- ADV. 1'G. 63. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51.
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. 5th Ave., Nev PGS. 240-244.

#### ANALYZERS-Noise

- BARKER & WILLIAMSON, 235 Fairfield Ave.,
- DARNER & WILLIAMSUN, 23D Fairheid Ave., Upper Darby, Pa. SEE ADV. PG. 39.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. 115
- 115.
  HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213
- PG. 213.
- Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass. Sierra Electronic Corp., Belmont & San Carlos,
- Calif.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

### ANALYZERS-Spectrum

- Applied Physics Corp., 40 South Oak Knoll Ave., Pasadena 1, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.

ANALYZERS

- Mats.
   National Technical Lab., 820 Mission St., S.
   Pasadena, Calif.
   PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213. Radio Sonic Corp., 186 Union Ave., New Rochelle,
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### 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. SEE ADV. PGS. 168, 169.

O'Connor & Co., John T., West Orange, N. J. Pho Tron Instrument Co., 5713 Euclid Ave., Cleveland, Ohio

#### ANALYZERS-Vibration

- Aircraft Electronics Associates, Inc., 1031 New Britain Ave., Hartford 10, Conn. Consolidated Engineering Corp., 620 N. Lake Ave.,
- Pasadena 4, Calif.
- Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
- Hathaway Instrument Co., 1315 S. Clarkson St.,

- Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  M. B. MFG. CO., 1060 State St., New Haven 11, Conn. SEE ADV. PG. 221.
  PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG 213 PG. 213. Scott, Inc., Herman Hosmer, 385 Putnam Ave.,
- Cambridge 39, Mass. Sheffield Corp., The, Dayton 1, Ohio SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

Peleviso Products Inc., 7466 West Irving Park Road, Chicago 34, Ill. Vibroscope Co., 6 East 39th St., New York 16,

Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. Measurement Engineering Ltd., Arnprior, Ontario, Conside

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213.

RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222. Televiso Products Inc., 7466 W. Irving Pk. Rd.,

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N. Y.

ANALYZERS-Wave

Chicago 34, Ill.

#### ANCHORS

#### ANCHORS-Screw or Bolt

- Alden Products Co., 117 N. Main St., Brockton
- ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG. 32.
- Arro Expansion Bolt Co., Boone Ave., Marion, Ohio
- Chicago Expansion Bolt Co., 1338 W. Concord Place, Chicago 22, Ill. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md
- Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y. Prestole Corp., 3119 Bellevue Rd., Toledo 6, Ohio
- Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.

### ANTENNA DRAG UNITS

Aeronautical Radio Mfg. Co., 155 First St., Mineola, N. Y.

### ANTENNA FAIRLEADS

Aeronautical Radio Mfg. Co., 155 First St., Mineola, N. Y. Telephonics Corp., 350 W. 31st St., New York,

## ANTENNA FEED SYSTEMS

- Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.
  Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

- FEDERAL TELEPHONE AND RADIO CORP
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. General Ceramics & Steatite Corp., Keasbey, N. J. Intra Video Corp. of America, 851 Madison Ave., New York 21, N. Y. Johnson Co., E. F., Waseca, Minn. Knights Co., James, 131 S. Wells St., Sandwich, III.
- III.
  Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
  Radio Developinent & Research Co., 26 Cornell-son Ave., Jersey City, N. J.
  Ricc's Sons Inc., Bernard, 325 Fifth Avenue, New York 16, N. Y.
  Wheeler Laboratories, Incorporated, 259-09 North-ern Blvd., Great Neck, N. Y.
  Workshop Associates, Inc., 66 Needham Street, Newton Highlands 61, Mass. III.

#### ANTENNA KITS

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Aeronautical Radio Mfg. Co., 155 First St., Mine-
- ola, N. Y. Wire Corp., 50 Howard St., New York,
- Alpha W
- American Communications Corp., 306 Broadway,
- American Communications Corp., 306 Broadway, New York 7, N. Y.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  BARKER & WILLIAMSON, 235 Fairfield Ave. Upper Darby, Pa. SEE ADV. PG. 39.
  Belden Mig. Co., 4647 W. Van Buren St., Chi-cago 44, Ill.
  Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md.
  Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
  Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J.
  Channel Master Co., Ellenville, N. Y.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

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- Electronic Indicator Corp., 53 Wyckoff St., Brooklyn, N. Y. Federal Engineering Co., 37 Murray St., New York
- 7, N. Y. General Cement Mfg. Co., 919 Taylor Ave.,
- GENERAL ELECTRIC CO., Electronics Dept., GENERAL ELECTRIC CO., Electronics Dept., Surgetise, N. Y. SEE ADV. PGS, 5-18, Surgetise, N. Y. SEE ADV. PGS, 5-18,
- Syracuse, N. Y. SEE ADV. PGS. 5-18. HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209.
- Heath Co., Benton Harbor, Mich. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80
- Interstate Mfg. Corp., 138 Sussex Ave., Newark A. N. J. 4. N. J. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Johnson Co., E. F., Waseca, Minn. La Magna Mfg. Co., Inc., East Rutherford, N. J. Magnavox Co. The, Components Div., Fort Wayne A. Ind. J.
- 4. Ind.
- Multi-Products Tool Co., 123 Sussex Ave., Newark

- Multi-Products Tool Co., 120 Susses Area, memory 4, N. J.
  4, N. J.
  National Electronic Mfg. Corp., 35-05 36th St., Long Island City 5, N. Y.
  Network Mfg. Corp., Bayonne, N. J.
  Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
  Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J.
  PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44.
  Radiart Corp., The, 3571 W. 62nd St., Cleveland, Ohio
- RADIO CORP. OF AMERICA, RCA Victor Div
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Shur-Antenna Mount Inc., Sea Cliff, N. Y. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.

- 20, N. Y.
  Technical Appliance Corp., Sherburne, N. Y.
  TRANSVISION INC., 460 North Ave., New Rochelle, N. Y. SEE ADV. PG. 172.
  Trieraft Products Co., 1535 N. Ashland Ave., Chicago 22, III.
  Ward Products Corp., Div. of the Gabriel Co., 1523 E, 45th St., Cleveland 3, Ohio
  Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.
  Workshop Associates, Inc., 66 Needham St., Newton Highlands 61, Mass.

### ANTENNA MECHANICAL DRIVES

- Eclipse-Pioneer Div., Bendix Aviation Corp., Teter-
- boro, N. J. Foote Bros. Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill. Gadgets Inc., 3629 N. Dixie Drive, Dayton 5,
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Johnson Co., E. F., Waseca, Minn. Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
- Reeves Instrument Corp., 215 E. 91st St., New
- Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
  ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204.
  Servo Corp. of America, 20-20 Jericho Turnpike. New Hyde Park, N. Y.
  Vendo Co., 7400 E. 12th St., Kansas City, Mo.
  Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio
  Workshop Associates, Inc., 66 Needhanı Street, Newton Highlands 61, Mass.

#### ANTENNA PEDESTALS - Gear Driven Radar

- Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Dalmo Victor Co., San Carlos, Calif. DeMornay-Budd, Inc., 475 Grand Concourse, New York 51, N. Y.
- Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill. Microwave Equipment Co., North Caldwell, N. J. Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
- ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204.

1949-1950 DIRECTORY of

- Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
   SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Submarine Signal Div., Raytheon Mfg. Co., Wal-
- tham, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

### ANTENNA REELS

- Aeronautical Radio Mfg. Co., 155 First St., Mineola, N. Y. Brach Mig. Corp., L. S., 200 Central Ave., New-ark, N. J.
- Multi-Products Tool Co., 123 Sussex Ave., Newark
- N.J. REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.

#### ANTENNA REFLECTORS ---- Radar Parabolic

- Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Breeze Corpns., Inc., 41 S. Sixth St., Newark 7,
- N. J.
- N. J. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Dalmo Victor Co., San Carlos, Calif. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Gorhan Co., Bronze Div., Providence 7, R. I. La Magna Mfg. Co., Inc., East Rutherford, N. J. Microwave Equipment Co., North Caldwell, N. J. Philco Corp., Tioga & C Sts., Phila. 34, Pa. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Racon Electric Co., 52 E. 19th St., New York 3, N. Y.

- N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Rice's Sons, Inc., Bernard 325 Fifth Ave., New York 16, N. Y. Selectar Industries, Inc., 401 E. 138th St., New

York 54, N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. Submarine Signal Div., Raytheon Mfg. Co., Waltham, Mass. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV.

5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Teiner Engineering Corp., 115 Madison St., Malden 48, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

Workshop Associates, Inc., 66 Needham Street, Newton Highlands 61, Mass.

Alliance Manufacturing Co., The, Alliance, Ohio PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. P.G. 44.

Radiart Corp., The, 3571 W. 62nd St., Cleveland,

Workshop Associates Inc., The, 66 Needham St., Newton Highlands 61, Mass.

American Bridge Co., U. S. Steel Corp. Sub., Frick Bldg., Pittsburgh, Pa.
 Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
 Blaw-Knox Co., Farmers Bank Bldg., Pittsburgh,

Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J. Newark, N. J. Easy-Up Tower Co., 3800 Kinzie Ave., Racine,

General Cement Mfg. Co., 919 Taylor Ave.,

Rockford, Ill. International Derrick & Equipment Co., 875 Michigan Ave., Columbus 8, Ohio J.F.D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.

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ANTENNA TOWERS & SUPPORTS

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Ohio

Pa.

Wis

ANTENNA-Rotators

La Magna Mfg. Co., Inc., East Rutherford, N. J. La Pointe-Plascomold Corp., Unionville, Conn. Lehigh Structural Steel Co., 17 Battery Pl., New York 4, N. Y. Lingo & Son, Inc., John E., 28th St. & Buren Avenue, Camden, N. J. Locke Incorporated, P. O. Box 57, Baltimore 3, Md

Md.

- Md. Lyte Parts Co., 312 Park Ave., Plainfield, N. J. Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio Ohio
- Rostan Corp., 202 E. 44th St., New York 17, N. Υ.
- Sewell, Inc., Norman M., Susquehanna at Der-stine, Lansdale, Pa. Truscon Steel Co., Youngstown, Ohio
- Wincharger Corp., E. 7th & Division Sts., Sioux
- City, Iowa. Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R.R., West Chester, Pa.

# ANTENNA TUNING UNITS

Aeronautical Communications Equipment, Inc.,

- 3090 Douglas Rd., Miami 33, Fla. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Collins Radio Co., Cedar Rapids, Iowa Continential Electropic Mice. Co., 1728, Word St.
- Continental Electronic Mig. Co., 1728 Wood St., Dallas, Texas
- Crystal Devices Co., Inc., 50 Mill Rd., Freeport,
- Erco Radio Labs., Inc., E. Stewart Ave., Garden
- Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  General Ceramics & Steatite Corp., Keasbey, N. J. Johnson Co., E. F., Waseca, Minn.
  La Pointe-Plascomold Corp., Unionville, Conn.
  NORTHERN RADIO CO., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts, Camden, N. J. SEE ADV.

- Front & Cooper Sts, Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. RADIO RECEPTOR CO., 151 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163. Sierra Electronic Corp., Belmont & San Carlos, Calif. Calif.

- Calit. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. 67
- Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R.R., West Chester, Pa.

# ANTENNAS-Airborne Radar Spinner

- ARMA CORP., 254 36th St., Brooklyn 32. N. Y. SEE ADV. PG. 220. Brach Mfg. Corp., L.S., 200 Central Ave., Newark,
- N.J.
- Dalmo Victor Co., San Carlos, Calif. DeMornay-Budd, Inc., 475 Grand Concourse, New York 51, N. Y.

- York 51, N. Y. Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Microwave Equipment Co., North Caldwell, N. J. Phileo Corp., Tioga & C Sts., Phila. 34, Pa. Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y. Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

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# ANTENNAS-Aircraft Type

- Aeronautical Radio Mfg. Co., 155 First St., Mineola, N. Y.
- Airborne Instruments Lab., Inc., 160 Old Country
- Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
  Aircraft Radio Corp., Boonton, N. J.
  BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217.
  Brach Mig. Corp., L. S., 200 Central Ave., Newark, N. J.
  Collins Radio Co., Cedar Rapids, Iowa.
  Communication Equipment & Engrg. Co., 5646 W. Race St., Chicago 44, 111.
  Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

- Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Industrial Products Co., Danbury, Coin.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
- PGS. 197, Inside Back and Back Covers. Rowe Industries, 1702 Wayne St., Toledo 9, Ohio SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 59 52
- Tricraft Products Co., 1535 N. Ashland Ave.,
- Iricati Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio
  Workshop Associates, Inc., 66 Needham St., Newton Highlands 61, Mass.

# ANTENNAS-All Wave Receiving

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. Alpha Wire Corp., 50 Howard St., New York, N. Y.
- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Amy, Aceves & King Inc., 11 W. 42nd St., New York 18 N.

- Amy, Aceves & King Inc., 11 W. 42nd St., New York 18, N. Y.
  Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J.
  Camburn, Inc., 32:40 57th St., Woodside, N. Y.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  INSULINE CORP. OF AMERICA, 36:02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.
  Interstate Mig. Corp., 138 Sussex Ave., Newark 4, N. J.
- Magnavox Co., The, Components Div., Fort Wavne 4, Ind.
- Maguire Industries Inc., Electronics Dept., Bridge-

- Maguire Industries Inc., Electronics Dept., Bridgeport, Com.
  Technical Appliance Corp., Sherburne, N. Y.
  TRANSVISION INC., 460 North Ave., New Rochelle, N. Y. SEE ADV. PG. 172.
  Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.
  Vertrod Corp., 11 Park Place, New York 7. M. Y.
  Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio
  Wind Turbine Co., Tower & Antenna Div. E. Market St. & Penna, R. R., West Chester, Pa.

#### ANTENNAS-Auto

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Brach Mfg. Corp., L. S., 200 Central Ave., New-ark, N. J.
- Camburn, Inc., 32-40 57th St., Woodside, N. Y. Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. Consolidated Wire & Associated Companies, 1635

- Consolidated Wire & Associated Companies, 163b
  S. Clinton St., Chicago 16, III.
  Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
  FEDERAL TELEPHONE & RADIO CORP., 100
  Kingsland Rd., Clifton, N. J. SEE ADV. PGS.
  129, 131, 133, 135.
  General Cement Mfg. Co., 919 Taylor Ave., Rockford III
- Industrial Products Co., Danbury, Conn.
   INSULINE CORP. OF AMERICA, 36-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.

Interstate Mfg., Corp., 138 Essex Ave., Newark

- A. M. J.
   J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
   Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.
- La Magna Mig. Co., Inc., East Rutherford, N. J. Maguire Industries Inc., Electronics Dept., Bridge-
- Maguire industries Inc., Electronics Dept., Bridgeport, Conn.
  National Electronic Mfg. Corp., 35-05 36th St., Long Island City 5, N. Y.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Philson Mfg. Co., Inc., 156 Chambers Street, New York, N. Y.
  Bad El Mir, Co., 6300 Evalid Ann. Climate 10
- York, N. Y. Rad-El-Mig. Co., 6300 Euclid Ave., Cleveland 3,
- Radiart Corp., The, 3571 W. 62nd St., Cleveland 2, Ohio
- 2, Ohio Special Products Co., Silver Spring, Md. 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

- American Bridge Co., U. S. Steel Corp. Sub.,
- Frick Bldg., Pittsburgh, Pa. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Blaw-Knox Co., Farmers Bank Bldg., Pittsburgh, Pa
- FEDERAL TELEPHONE AND RADIO CORP.
- 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Lehigh Structural Steel Co., 17 Battery Pl., N. Y
- 4, N. Y.
  Lingo & Son, Inc., John E., 28th St., & Buren Avenue, Camden, N. J.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RAYTHEON MFG. Co., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG, 55.
- Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio Vinconstant Co., Chicago, Ill. Truscon Steel Co., Youngstown, Ohio Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa ind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.

Aerolite Electronic Hardware Corp., 24 Cliff St.,

Advente Licertoine View Corp., 21 of 25, 24th AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Amy, Aceves & King Inc., 11 W. 42nd St., New

York 18, N. Y. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New

Birnoach (Value Co., Inc., 145 Hudson St., Iten York, N. Y.
Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J.
Camburn, Inc., 32-40 57th St., Woodside, N. Y.
Channel Master Co., Ellenville, N. Y.
Clarke Instrument Corp., 910 King St., Silver Spring Md.

Spring, Mo. Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J. Communications Co., Inc., 300 Greco Ave., Coral

Gables 34, Fiz.
Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City 1, N. Y.
General Ceranics & Steatite Corp., Keasbey, N. J.
Hi Par Freducts Co., Fitchware, Marcuscher, Keasbey, N. J.

Hi-Par Products Co., Fitchburg, Mass. INSULINE CORP. OF AMERICA, 26-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.

Interstate Mfg. Corp., 138 Sussex Ave., Newark 4, N. J.

N. J. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. La Magna Mfg. Co., Inc., East Rutherford, N. J. La Pointe-Plascomold Corp., Unionville, Conn. Lewyt Corp., 60 Broadway, Brooklyn, N. Y.

D-9

Wind

ANTENNAS-Dipole

Spring, Md.

80.

Gables 34, Fla.

# ANTENNAS

- MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110.
  Microwave Equipment Co., North Caldwell, N. J.
  Mobile Communications Co., 110 W. Ocean Blvd., Long Beach 2, Calif.
  National Electronic Mig. Co., 35.05 36th St., Long Island City 5, N. Y.
  Network Mig. Corp., Bayonne, N. J.
  Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
  Phileo Corp., Tioga & C Sts., Phila. 34, Pa.
  Philson Mfg. Co., Inc., 156 Chambers St., New York, N. Y.
  PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44.
  Radiart Corp., The, 3571 W. 62nd St. Cleveland 2, Ohio

- 2, Onio **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore. Birge's Spas. Inc. Bernard, 325 Fifth Ave. New

- Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
  Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  Serdex, Inc., 91 Cambridge St., Boston, Mass.
  Shur-Antenna Mount, Inc., Sea Cliff, N. Y.
  Special Products Co., Silver Spring, Md.
  Stromberg-Carlson Co., Rochester, N. Y.
  Technical Appliance Corp., Sherburne, N. Y.
  Transvision INC., 460 North Ave., New Ro-chelle, N. Y. SEE ADV. PG. 172.
  Vertrod Corp., 11 Park Place, New York 7, N. Y.
  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.
  Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
  Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.
  Workshop Associates, Inc., 66 Needham St., Newton Highlands 61, Mass.

# ANTENNAS-Directional Antenna Coupling & Phasing Units

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217. Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J. Burnett Service Co., 178 E. 168th St., New York 52, N. Y.

- 52, N. Y. Communications Co., Inc., 300 Greco Ave., Coral
- Gables 34, Fla. Continental Electronics Mfg. Co., 1728 Wood St.,
- Gables 34, Fla.
  Continental Electronics Mfg. Co., 1728 Wood St., Dallas I, Texas
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gates Radio Co., Quincy, Ill.
  Industrial Products Co., Danbury, Conn.
  Islip Radio Mfg. Corp., Beech St., Islip, N. Y. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Johnson Co., E. F., Waseca, Minn.
  General Ceramics & Steatite Corp., Keasbey, N. J. La Magna Mfg. Co., Inc., East Rutherford, N. J.
  Microwave Equipment Co., North Caldwell, N. J.
  National-Simplex-Bludworth, Inc., Bludworth Marine Div., 92 Gold St., New York 7, N. Y.
  Network Mfg. Corp., Bayonne, N. J.
  Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
  Press Wireless Mfg. Co., 100 W. 42nd St., New York, N. Y.
  Public Operating Co., 100 W. 42nd St., New York, N. Y.

- N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. RAVTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y. Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C. Shur-Antenna Mount, Inc., Sea Cliff, N. Y.

D-10

- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- 52. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wheeler Laboratories Inc., 259-09 Northern Blvd., Great Neck, N. Y. Workshop Associates, Inc., 66 Needham Street.
- Workshop Associates, Inc., 66 Needham Street, Newton Highlands 61, Mass.

# ANTENNAS-Dummy Loads

- Aeronautical Communications Equipment, Inc.,
- Aeronauticai Communications Equipment, Mer. 3090 Douglas Rd., Miami 33, Fla. BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217. Brach Mfg. Corp., L. S., 200 Central Ave., New-
- ark, N. J. Carborundum Co., The, Globar Div., Niagara Falls, N. Y. Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y.
- Communications Co., Inc., 300 Greco Ave., Coral
- Gables 34, Fla. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Continental Electronics Mfg. Co., 1728 Wood St.,
- Continental Electronics Mig. Co., 1128 Wood St., Dallas 1, Texas
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gates Radio Co., Quincy, Ill.
  Gorham Co., Bronze Div., Providence 7, R. I.
  Lapp Insulator Co., Inc., 31 Gilbert St., Le Roy, N. V.

- Microwave Equipment Co., North Caldwell, N. J.
- Microwave Equipment Co., North Caldwell, N. J.
  Network Mfg. Corp., Bayonne, N. J.
  OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. SEE ADV. PG. 201.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  Precision Resistor Co., 334 Badger Ave., Newark 8 N. J.
- 8, N. J.
  8, N. J.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
  Sierra Electronic Corp., Belmont & San Carlos, Calif.

- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- States Co., 19 New Park Ave., Hartford 6, Conn. Thermionic Engineering Corp., Pompton Plains, N. J.

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- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  Amy, Aceves & King, Inc., 11 W. 42nd St., New York 18, N. Y.
  Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
  Belden Mfg. Co., 4647 W. Van Buren St., Chi-cago 44, Ill.
  Birnbach Radia Co., Inc., 145, Hudson St. New
- cago 44, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y. Blaw-Knox Co., Farmers Bank Building, Pitts-burgh, Pa. Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J. Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio

- 1, Ohio

- Ohio
   Burnett Service Co., 178 E. 168th St., New York 52, N. Y.
   Camburn, Inc., 32-40 57th St., Woodside, N. Y.
   Channel Master Co., Ellenville, N. Y.
   Collins Radio Co., Cedar Rapids, Iowa
   Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
   Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
   Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
   Electronic Indicator Corp., 53 Wyckoff St., Brook-lyn, N. Y.

- lyn, N. Y. Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.

FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Finch Telecommunications Inc., Passaic, N. J. Gordon Specialties Co., 542 S. Dearborn St., Chi-cago 5, Ill.

1949-1950 DIRECTORY of

- cago 5, Ill.
  Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
  Hi-Par Products Co., Fitchburg, Mass.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.
  Interstate Mfg. Corp., 138 Sussex Ave., Newark
- Interstate Mfg. Corp., 138 Sussex Ave., Newark 4, N. J.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn 5, N. Y.
  Brooklyn 5, N. Y.
  La Magna Mfg. Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  LaPointe-Plascomold Corp., Unionville, Conn.
  Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y.
  Lingo & Son, John E., Inc., 28th St. & Buren Ave., Camden, N. J.
  Lyte Parts Co., 312 Park Ave., Plainfield, N. J.
  Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

- 4, Ind. Marino Radio Co., 203 Greenwich St., New York Y
- 7, N. Motorola Inc., 4545 W. Augusta Blvd. Chicago 5,
- National Electronic Mfg. Co., 35-05 36th St., Long Island City 5, N. Y. Network Mfg. Corp., Bayonne, N. J.

Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y. Philco Corp., Tioga & C Sts., Phila. 34, Pa. Philson Mfg. Co., Inc., 156 Chambers St., New York, N. Y.

PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44. Public Operating Co., 100 W. 42nd St., New York, N. Y. York, N. Y. Rad-El Mfg. Co., 6300 Euclid Ave., Cleveland 3.

Radiart Corp., The, 3571 W. 62nd St., Cleveland 2, Ohio RADIO CORP. OF AMERICA, RCA Victor Div.

Front & Cooper Sts., Camden, N. J. SEE PGS. 197, Inside Back and Back Covers. Radio Engineering Labs., Inc., 35-54 36th St., Long Island City, N. Y. Radio Sonic Corp., 186 Union Ave., New Rochelle,

Rauland Corp., 4245 N. Knox Ave., Chicago 41,

S-W Inductor Co., 1056 N. Wood St., Chicago,

Ill.
Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
Shur-Antenna-Mount Inc., Sea Cliff, N. Y.
Stromberg-Carlson Co., Rochester, N. Y.
Technical Appliance Corp., Sherburne, N. Y.
Telrex, Inc., Box 879, Rutherford & Neptune Highway, Asbury Park, N. J.
TRANSVISION INC., 460 North Ave., New Ro-chelle, N. Y., SEE ADV. PG. 172.
Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.

Chicago 22, Ill. S. Rubber Co., Mechanical Rubber Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.

20, N. Y. Vertrod Corp., 11 Park Place, New York 7, N. Y. 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. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa

City, Iowa Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna R. R., West Chester, Pa. Workshop Associates, Inc., 66 Needham St., Newton Highlands 61, Mass.

ANTENNAS-Fixed Station Antenna Sys-

Air Associates, Inc., Teterboro, N. J. AMERICAN PHENOLIC CORP., 1830 S. 5-Ave., Chicago 50, Ill. SEE ADV. PG. 167.

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- Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
- Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
- Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J. Erco Radio Labs., Inc., E. Stewart Ave., Garden

- Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y. Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md. Mobile Communications Co., 110 W. Ocean Blvd., Long Beach 2, Calif. Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, III

- III. Technical Appliance Corp., Sherburne, N. Y. 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, Inc., 66 Needham Street, Newton Highlands 61, Mass.
- ANTENNAS-Ground Plane
- American Electroneering Co., 2112 S. La Brea
- Andreiter Los Angeles, Calif.
   AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
   Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Bendix Radio Div., Bendix Aviation Corp., Balti-more 4 Md more 4, Md.
- Communications Co., Inc., 300 Greco Ave., Coral
- Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
  Hi-Par Products Co., Fitchburg, Mass.
  Lingo & Son, Inc., John E., 28th St. & Buren Ave., Camden, N. J.
  Melpar, Inc., 452 Swann Ave., Alexandria, Va.
  Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
- 51, Ill. Radio Sonic Corp., 186 Union Ave., New Rochelle,
- N. Y. Serdex, Inc., 91 Cambridge St., Boston, Mass. 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
- Wildox Lieutic Co., 1400 Chestnut St., Kansas City, Mo.
  Wind Turbine Co., Tower & Antenna Div., E. Market St., & Penna. R. R., West Chester, Pa.
  Workshop Associates, Inc., 66 Needham St., New-ton Highlands 61, Mass.

#### ANTENNAS-Loop

- Aircraft Radio Corp., Boonton, N. J. Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md.
- Burnett Service Co., 178 E. 168th St., New York 52, N. Y. C. B. Mfg. Co., 480 Broome St., New York 13,
- N. Y. Clarke Instrument Corp., 910 King St., Silver
- Spring, Md. Communications Co., Inc., 300 Greco Ave., Coral
- Gables 34, Fla.
- Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y. Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
- Franklin Mfg. Corp., A. W., 43.20 34th St., Long Island City, N. Y. General Ceramics & Steatite Corp., Keasbey, N. J. Guthman Inc., Edwin I., 15 S. Throop St., Chicago, Ill.
- Cago, III.
   Houlihan Company, T. J., 2508-14 W. Lawrence Ave., Chicago 25, III.
   INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 20
- Ave., Long January 80, 80. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, III. Motorola Inc., 4545 W. Augusta Blvd., Chicago
- Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill. Multi-Products Tool Co., 123 Sussex Ave., Newark
- 4, N. J.
- National Electronic Mfg. Corp., 30-05 36th St., Long Island City 5, N. Y.

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National-Simplex-Bludworth, Inc., Bludworth Marine Div., 92 Gold St., New York 7, N. Y. Polytron Corp., 133 Martine Ave., White Plains,

- N.Y
- Precise Mfg. Co., 24-34 New Chamber St., New York 7, N. Y. York 7, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div.
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Sonic Corp., 186 Union Ave., New Rochelle,
- Y N.
- S-W Inductor Co., 1056 N. Wood St., Chicago,
- TANDARD COIL PRODUCTS CO., 2329 Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219. SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PC. 32
- PG. 33. Stanwyck Winding Co., 102-104 S. Lander St., Newburgh, N. Y.
- York 5, N. Y. Workshop Associates Inc., 66 Needham St., New-

ton Highlands 61, Mass.

#### ANTENNAS-Marine

- Bassett, Inc., Rex, 307-11 N. W. 1st Ave., Fort Lauderdale, Fla.
- Cauderdate, rta. Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y. General Ceramics & Steatite Corp., Keasbey, N I
- N. J. Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Jefferson Inc., Ray, 40 E. Merrick Rd., Freeport,
- N. Y. Jefferson-Travis Inc., 76 Ninth Ave., New York

- Jefferson-Travis Inc., 76 Ninth Ave., New 1018 11, N. Y. Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. National-Simplex-Bludworth, Inc., Bludworth Ma-rine Div., 92 Gold St., New York 7, N. Y. PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio Workshop Associates, Inc., 66 Needham St., New-
- ton Highlands 61, Mass.

#### ANTENNAS-Microwave

- Airborne Instruments Lab. Inc., 160 Old Coun-
- Airborne Instruments Lab. Inc., 160 Old Coun-try Rd., Mineola, N. Y. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Dalmo Victor Co., San Carlos, Calif. De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.

- New York 51, N. Y.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gorham Co., Bronze Div., Providence 7, R. I. La Magna Mfg. Co., Inc., East Rutherford, N. J. Microwave Equipment Co., North Caldwell, N. J. Network Mfg. Corp., Bayonne, N. J.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
  Prennier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
  Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  Servo Corp. of America. 20-20 Jericho Turnpike. FEDERAL TELEPHONE AND RADIO CORP

- Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
   Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
   SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 59 52.

Televiso Products, Inc., 7466 West Irving Park Rd., Chicago 34, III.
United Industries, Inc., Everett, Mass.
Weynouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
Workshop Associates, Inc., 66 Needham St., New-ton Highlands 61, Mass.

#### ANTENNAS—Radar Receiving & Transmitting

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y

- Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md.

more 4, Md. Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Dalmo Victor Co., San Carlos, Calif. De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y. La Magna Mfg. Co., Inc., East Rutherford, N. J. Microwave Equipment Co., North Caldwell, N. J.

- La Magna Mfg. Co., Inc., East Rutherford, N. J. Microwave Equipment Co., North Caldwell, N. J. Network Mfg. Corp., Bayonne, N. J. Philco Corp., Tioga & C Sts., Phila. 34, Pa. Philson Mfg. Co., Inc., 156 Chambers St., New York, N. Y. Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.

- York, N. Y. Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y. Selectar Industries, Inc., 401 E. 138th St., New
- Selectar Industries, Inc., 401 E. 1850, St., New York 54, N. Y.
   Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
   SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y.
   SEE ADV. PGS, 51, 59

SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

Televiso Products Inc., 7466 W. Irving Park Rd., Chicago 34, Ill. United Industries, Inc., Everett, Mass. Workshop Associates, Inc., 66 Needham St., New-ton Highlands 61, Mass.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Bendix Radio Div., Bendix Aviation Corp., Balti-

More 4, Md. Communication Equipment & Engrg. Co., 5646 W. Race St., Chicago 44, 111. Communications Co., Inc., 300 Greco Ave., Coral

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Industrial Products Co., Danbury, Conn.
Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
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.
Western Electric Co., Inc., 195 Broadway, New

Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
 Workshop Associates, Inc., 66 Needham Street, Newton Highlands 61, Mass.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Espey Mfg. Co. Inc., 528 E. 72nd St., New York 19, N. Y.

Gordon Specialties Co., 542 S. Dearborn St., Chi-

Gordon Specialties Co., 542 S. Dearborn St., Ch. cago 5, Ill.
Hi-Par Products Co., Fitchburg, Mass.
Johnson Co., E. F., Waseca, Minn.
Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
LaPointe-Plascomold Corp., Unionville, Conn.

D-11

ANTENNAS-Rotary Beam

ANTENNAS-Railroad

# ANTENNAS

# PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44. Telrex, Inc., Box 879, Rutherford & Neptune Highway, Asbury Park, N. J. Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R.R., West Chester, Pa. Workshop Associates, Inc., 66 Needham Street, Newton Highlands 61, Mass.

#### ANTENNAS-Telescopic

- Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J.
  Camburn, Inc., 32-40 57th St., Woodside, N. Y.
  Communications Co., Inc., 300 Greco Ave., Coral

- Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  Federal Engineering Co., 37 Murray St., New York 7, N. Y.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City 1, N. Y.
  General Ceramics & Steatite Corp., Keasbey. N. J.
  GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
  Gordon Specialties Co., 542 S. Dearborn St., Chicago 5, Ill.
  HyLite Antennae. 528 Tiffany St., Bronx, N. Y.

Chicago 5, III. HyLite Antennae, 528 Tiffany St., Bronx, N. Y. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Interstate Mfg. Corp., 138 Sussex Ave., Newark

- 4, N. J. F. D.
- J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Jefferson-Travis Inc., 76 Ninth Ave., New York
- Jefferson-Iravis Inc., 76 Mitti Ave., New Yold 11, N. Y.
  Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
  La Magna Mig. Co., Inc., East Rutherford, N. J.
  Lingo & Son, Inc., John E., 28th St. & Buren Ave., Camden, N. J.
  Maguire Industries Inc., Electronics Dept., Bridge-Dept., Bridge-

- port, Conn. MEASUREMENTS CORP., Boonton, N. J. SEE

ADV. PG. 110. National Electronic Mfg. Corp., 35-05 36th St., Long Island City, N. Y.

- National Electronic Use, Corp., do to the Long Island City, N. Y.
   Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
   Philson Mfg. Co. Inc., 156 Chambers St., New York, N. Y.
- Precision Plastic Products Inc., 628-30 W. Lake
- St., Chicago 6, Ill. PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44. Public Operating Co., 100 W. 42nd St., New York, N. Y.
- York, N. Y. Radiart Corp., The, 3571 W. 62nd St., Cleveland
- Ward Products Corp., Div. of The Gahriel Co., 1523 E. 45th St., Cleveland 3, Ohio
   Workshop Associates, Inc., 66 Needham Street, Newton Highlands 61, Mass. 2, Ohio

#### ANTENNAS-Television

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Amy, Aceves & King Inc., 11 W. 42nd St., New York 18, N. Y.
- Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Antenna Research Lab., Inc., 797 Thomas Lane, Columbus 9. Ohio

D-12

- Audar Inc., Argus, Indiana Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
- Bowers Battery & Spark Plug Co., Reading, Pa. Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J.
- Burnett Service Co., 178 E. 168th St., New York 52, N. Y. Camburn, Inc., 32-40 57th St., Woodside, N. Y. Channel Master Co., Ellenville, N. Y. Cole-Worner Corp., 345 Albert Ave., Mansfield, Obio
- Ohio
- Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y. Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
- Dalmo Victor Co., San Carlos, Calif.

- Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J. Electronic Indicator Corp., 53 Wyckoff St.,

- Electronic Indicator Corp., 53 Wyckoft St., Brooklyn, N. Y.
  Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
  Federal Engineering Co., 37 Murray St., New York 7, N. Y.
  Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Five Star Radio Co., 416 Broadway, Cambridge, Mass.
- Mass.
- Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City 1, N. Y. General Electronics Inc., 101 Hazel St., Pater-
- N. J General PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Gordon Specialties Co., 542 S. Dearborn St., son
- Chicago 5, Ill. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209. Hi-Par Products Co., Fitchburg, Mass. Hofinan Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif. House of Television, 601 W. 26th St., New York,
- N. Y.
- HyLite Antennae, 528 Tiffany St., Bronx, N. Y. Industrial Television, Inc., 359 Lexington Ave.,

- HyLite Antennae, 528 Tittany St., Bronx, N. Y.
  Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.
  Intra Video Corp. of America, 851 Madison Ave., New York 21, N. Y.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
  Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  LaPointe-Plascomold Corp., Unionville, Conn.
  Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y.
  Lingo & Son, Inc., John E., 28th St. & Buren Ave., Canden, N. J.
  Lyte Parts Co., 312 Park Ave., Plainfield, N. J.
  Marino Radio Co., 203 Greenwich St., New York 7, N. Y.

- N. Y.
   NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
   National Electronic Mfg. Corp., 35-05 36th St., Long Island City 5, N. Y.
   Network Mfg. Corp., Bayonne. N. J.
   Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
   Philson Mfg. Co., Inc., 156 Chambers St., New York, N. Y.
   Polytron Corp., 133 Martine Ave., White Plains, N. Y.
- Precision Plastic Products Inc., 628-30 W. Lake
- Frecision Plastic Products Inc., 628-30 W. Lake St., Chicago 6, Ill.
  PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44.
  Public Operating Co., 100 W. 42nd St., New York, N. Y.
  Bad-El Mar. Co. 6200 E. Ukit and St.
- York, N. Y. Rad-El Mfg. Co., 6300 Euclid Ave., Cleveland 3,
- Ohio Radiart Corp., The, 3571 W. 62nd St., Cleveland Ohio
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Merchandise Sales, 550 Westchester Ave., New York 55, N. Y.
- Radio Sonic Corp., 186 Union Ave., New Rochelle, Y N.
- Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
- S-W Inductor Co., 1056 N. Wood St., Chicago, III.
- Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

- Deverty Hills, Calif. Shur-Antenna Mount, Inc., Sea Cliff, N. Y. Special Products Co., Silver Spring, Md. Technical Appliance Corp., Sherburne, N. Y. Telicor Corp., 851 Madison Ave., New York 21, N. Y.

Telrex, Inc., Box 879, Rutherford & Neptune Highway, Asbury Park, N. J. TRANSVISION INC., 460 North Ave., New Ro-chelle, N. Y. SEE ADV. PG. 172. Tricraft Products Co., 1535 N. Ashland Ave., Chicage 22 III

1949-1950 DIRECTORY of

- Chicago 22, 111. S. Rubber Co., Mechanical Rubber Goods Div., 1230 Avenue of the Americas, New York 20, U.
- N
- N. Y. Ventod Co., 7400 E. 12th St., Kansas City, Mo. Vertrod Corp., 11 Park Place, New York 7, N. Y. Ward Products Corp., Div. of The Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R.R., West Chester, Pa. Workshop Associates, Inc., 66 Needham Street, Newton Highlands 61, Mass.

#### ANTENNAS-uhf & vhf

- Air Associates, Inc., Teterboro, N. J. **AMERICAN PHENOLIC CORP.**, 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Any, Aceves & King Inc., 11 W. 42nd St., New York 18 N. V.
- York IS, N. Y. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Bendix Radio Div., Bendix Aviation Corp., Balti-
- BirD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217.
   Birnbach Radio Co., Inc., 145 Hudson St., New
- York, N. Y. Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J.
- Newark, N. J. Buggie & Co., H. H., 2141 Madison Ave., Toledo . Ohio
- Ohio
   Burnett Service Co., 178 E. 168th St., New York 52, N. Y.
   Camburn, Inc., 32:40 57th St., Woodside, N. Y.
   Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.
   Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
   De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.
   Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chicago 36, Ill.
   Electronic Indicator Corp., 53 Wyckoff St., Brooklyn, N. Y.

Electronic indicator Corp., 55 wyckon St., Brooklyn, N. Y. Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y. Farnsworth Television & Radio Corp., Ft. Wayne,

FEDERAL TELEPHONE AND RADIO CORP., 100

FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland R.d., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
Gordon Specialties Co., 542 S. Dearborn St., Chi-cago 5, Ill.
Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.

Interstate Mfg. Corp., 138 Sussex Ave., Newark

Interstate Mig. Corp., 138 Sussex Ave., Newark 4, N. J. Johnson Co., E. F., Waseca, Minn. La Magna Mig. Co., Inc., East Rutherford, N. J. LaPointe-Plascomold Corp., Unionville, Conn. Lingo & Son, Inc., John E., 28th St. & Buren Ave., Camden, N. J. Link Radio Corp., 125 W. 17th St., New York, N Y

N. Y. Lyte Parts Co., 312 Park Ave., Plainfield, N. J. Microwave Equipment Co., North Caldwell, N. J. Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.

Alberton Hen, 4949 W. Augusta Bivel, Chicago 51, 111.
PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197. Inside Back and Back Covers.
Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C.
Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.

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N. Y.

- Serdex Inc., 91 Cambridge St., Boston, Mass. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51,
- SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33.
- Technical Appliance Corp., Sherburne, N. Y. Televiso Products Inc., 7466 W. Irving Rd.,
- Televiso Products Inc., 7466 W. Irving Rd., Chicago 34, Ill.
  Telrex, Inc., Box 879, Rutherford & Neptune Highway, Asubury Park, N. J.
  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.

- West Coast Electronics Co., 1601 S. Burlington St., Los Angeles 6, Calif.
  Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
  Wind Turbine Co., Tower & Antenna Div., F., Market St. & Penna. R.R., West Chester, Pa.
  Workshop Associates, Inc., 66 Needham Street, Newton Highlands 61, Mass.

# ARRESTORS-Lightning

- Alpha Wire Corp., 50 Howard St., New York 13, N. Y.
- Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New
- Birnbach Rado Co., Inc., 140 House File York, N. Y. Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J. Camburn, Inc., 32-40 57th St., Woodside, N. Y. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Cook Electric Co., 2700 Southport Ave., Chicago, 10

- III. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- 80.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  LaPointe-Plascomold Corp., Unionville, Conn.
  NATIONAL CARBON CO., INC., Unit of Carbide & Union Carbon Corp., 30 E. 42nd St., New York 17, N. Y. SEE ADV. PG. 57.
  National Electronic Mfg. Corp., 35-05 36th St., Long Island City 5, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
   PGS. 197, Inside Back and Back Covers.
   Shur-Antenna Mount, Inc., Sea Cliff, N. Y.
   STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa.
   SEE ADV. PG. 78.
   Technical Appliance Corp., Sherburne, N. Y.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. 67.
- Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R.R., West Chester, Pa.

#### ATTENUATORS

- American British Technology Inc., 57 Park Ave., New York 16, N. Y.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upped Darby, Pa. SEE ADV. PG. 39.
  CENTRALAB, DIV. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
  Clarke Instrument Corp., 910 Jackson St., Silver Spring, Md.
- Clarke Instrument Corp., 910 Jackson 51., Sliver Spring, Md.
   Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y.
   Collins Radio Co., Cedar Rapids, Iowa
   Corning Glass Works, Corning, N. Y.
   Daven Co., 191 Central Ave., Newark 4, N. J.
   De Mornay-Budd Inc., 475 Grand Concourse, New York 51. N. Y.

- Vork 51, N. Y. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,
- HEWLET-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Kalbfell Labs., Inc., 1076 Morena Blvd., San Direct 10, Colvit
- Diego 10, Calif. AY ELECTRIC CO., 14 Maple Ave., Pine Brook, KAY
- N. J. SEE ADV. PG. 215.
   Keithley Instruments, 1507 Warrensville Center Rd., Cleveland 21, Ohio
   Leeds & Northrup Co., 4970 Stenton Ave., Phila 44 Pc
- Phila. 44, Pa.

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- MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- Maritime Quality Hardware Co., Inc., Belfast, Maine
- MEASUREMENTS CORP., Boonton, N. J. SEE
- MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110. Microwave Equipment Co., North Caldwell, N. J. OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
- ADV. PG. 63. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif.
- Calif.
- Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Shalleross Mfg. Co., 10 Jackson Ave., Collings-
- dale, Pa.
  SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Tech Laboratories, Inc., Bergen & Edsall Blvd., Palisades Park, N. J.
  Tel-Craft Co., 108 Havemeyer St., Brooklyn 11, N. Y.
  Weinschel Engineering Co., 123 William St., New York 7, N. Y.

#### AUDIOMETERS

- AUDIO DEVELOPMENT CO., 2833 13th Ave. S. Minneapolis 7, Minn. SEE ADV, PG. 94. Aurex Corp., 1117 N. Franklin St., Chicago, Ill. Begen Co., David, 663 Broadway, New York 12,
- Ň. Y.
- Maico Co., Inc., 25 North 3rd St., Minneapolis, Minn.
- Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y. Vacolite Co., 3001-3003 N. Henderson, Dallas,
- Texas
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

### BAFFLES-Microphone

- ELECTRO-VOICE INC., Buchanan, Mich. SEE ADV. PG. 195. General Ceramics & Steatite Corp., Keasbey,

- N. J.
   Racon Electric Co., 52 E. 19th St., New York
   3, N. Y.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
   PGS. 197, Inside Back and Back Covers.
   Rauland-Borg Corp., 4245 N. Knox Avenue, Chi-cago 41, 111
- cago 41, Ill.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### **BAFFLES**—Speaker

- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y American Communications Corp., 306 Broadway,
- New York 7, N. Y. Atlas Sound Corp., 1443 39th St., Brooklyn 18,
- N Y Board Products Co., 4206 W. Lake St., Chicago
- 24, Ill Bogen Co., David 663 Broadway, New York 12, Υ.
- Castlewood Mfg. Co., 12th & Burnett Sts., Louisville, Ky.
  Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y.
  Flock Process Co., Velvetone Div., 3 Quincy St., Nawyolk, Course
- Norwalk, Conn. General Cement Mfg. Co., 919 Taylor Ave.,

- Rockford, III. Heath Co., Benton Harbor, Mich. Illinois Wood Products Corp., 1656 N. Besly Court, Chicago 22, III. Jensen Míg. Co., 6601 S. Laramie Ave., Chi-cago 38, III.
- cago 38, Ill. Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.

- Lansky Die Cutting Co., 192½ Greene St., New York 12, N. Y. Mellaphone Corp., Rochester 2, N. Y. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. NATIONAL CO., INC., 61 Sherman St., Malden, 48, Mass. SEE ADV. PGS. 105-108. Olek & Son, Inc., A., 4757-59 Melrose St., Philadelphia 37, Pa. Oneradio Mfr. Co., 135th & Indiana Sts., St.

- Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.
- Charles, III. PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, III. SEE ADV. PG. 230. Racon Electric Co., 52 E. 19th St., New York
- N.
- 3. N. Y. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Mdse. Sales, 550 Westchester Ave., New York 55, N. Y. Radio-Music Corp., Port Chester, N. Y. Radio-Music Corp., 4245 N. Knox Ave., Chi-cago 41, Ill. Simuson Mir. Co. Luc. Mark. 32-98 49th St.

- cago 41, III. Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City, N. Y. Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
- City, Calif. Terminal Radio Corp., 85 Cortland St., New York
- Terninal Radio Corp., 60 Cortains and 7, N. Y.
  Topping Mfg. Co., 3597 Mission St., San Fran-cisco 10, Calif.
  University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y.
  Wotterson Radio Mfg. Corp., P. O. Box 840, Watterson Radio Mfg. Corp., P. O. Box 840, Dallas, Texas Willard's, Hampden, Mass.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51,

Alden Products Co., 117 No. Main St., Brockton

Alden Products Co., 117 No. Main St., Brockton 64, Mass.
CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark, N. J. SEE ADV. PG. 223.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton, N. J.

Acine Battery Co., 59 Pearl St., Brooklyn 1, N. Y. Admiral Corp., 3800 Cortland St., Chicago 47, Ill. Bond Electric Corp., Div. of Olin Industries, Inc., New Haven 4, Conn.

Bright Star Battery Co., 200 Crooks Ave., Clifton,

BURGESS BATTERY CO., Battery Div., Freeport,

Bertalli, SEE ADV. PG. 88.
 General Dry Batteries, Inc., 13000 Athens Ave., Cleveland, Ohio
 MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.

71-74. Manufacturers Battery Co., Sub. of Ray-O-Vac Co., Madison, Wisc. Marathon Battery Co., Wausau, Wisc. NATIONAL CARBON CO., INC., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. SEE ADV. PG. 57. National Union Radio Corp., 350 Scotland Rd., Orange, N. J.

Olin Industries, Inc., Electrical Div., New Haven

4, Conn. **A, Conn. RADIO CORP. OF AMERICA.** RCA Victor Div. Front & Cooper Sts., Camden, N. J. SEE ADV PGS. 197, Inside Back and Back Covers. Ray-O-Vac Co., Madison, Wise. Second Rev. Batterne Co. Madison 4 Wise

Ray-O-Vac Co., Madison, Wisc.
Specialty Battery Co., Madison 4, Wisc.
Vitamite Co., The, 227 W. 64th St., New York 23, N. Y.
Western Cable Battery Co., Inc., 395 Sibley St., St. Paul, Minn.
Winchester Repeating Arms Co., Div. of Olin Industries, Inc., New Haven, Conn.
Willard Storage Battery Co., 246 E. 131st St., Cleveland 1, Ohio

SEE ADV.

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BARRETTERS

BASES-Relay

BATTERIES-Dry

Orange, N. J

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# BATTERIES

#### **BATTERIES**—Standard Cell

- Acme Battery Co., 59 Pearl St., Brooklyn 1, N.Y. Bond Electric Corp., Div. of Olin Industries, Inc., New Haven, Conn.
- New Haven, Conn. Bowers Battery & Spark Plug Co., Reading, Pa. Electric Storage Battery Co., Allegheny Ave., & 19th St., Phila. 32, Pa. Eppley Lab. Inc., Newport, R. I. Willard Storage Battery Co., 246 E. 131st St., Cleveland 1, Ohio Winchester Reneating Arms Co. Div. of Olin In-
- Winchester Repeating Arms Co., Div. of Olin In-dustries, Inc., New Haven, Conn.

#### BATTERIES-Storage

Baker & Co., 113 Astor St., Newark 5, N. J. Bowers Battery & Spark Plug Co., Reading, Pa. Edison Storage Battery Div., Thomas A. Edison Inc., Main St. at Lakeside Ave., W. Orange,

- N.
- Electric Auto-Lite Co., The, Toleda 1, Ohio Electric Storage Battery Co., Allegheny Ave. & 19th St., Phila. 32, Pa.
- General Lead Batteries Co., 196 W. Railway Ave.,
- Paterson, N. J. Gould Storage Battery Corp., 35 Neoga St., DePew, N. Y. Nickel Cadmium Corp., Easthampton, Mass. Solar Corp., 1000 W. Bruce St., Milwaukee 4, Wise Wisc.

- Wisc. Vitamite Co., The, 227 W. 64th St., New York 23, N. Y. Western Cable Battery Co., Inc., 395 Sibley St., St. Paul, Minn. Willard Storage Battery Co., 246 E. 131st St., Cleveland 1, Ohio

#### BATTERIES—Storage Nonspill

- Bowers Battery & Spark Plug Co., Reading, Pa. CENTRALAB, DIV. of Globe-Union Inc., 900 E. Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.
- Electroic Storage Battery Co., 19th St. & Al-legheny Ave., Phila. 32, Pa. Electronic Batteries Inc., Bush Terminal Bldg., No. 4, 28-34 Thirty Fifth St., Brooklyn 32, N. Y.
- N. Y. Nickel Cadmium Corp., Easthampton, Mass. Vitamite Co., The, 227 W. 64th St., New York 23, N. Y. Willard Storage Battery Co., 246 E. 131st St., Cleveland 1, Ohio

#### BATTERY CHARGERS

- ACME ELECTRIC CORP., Cuba, N. Y. SEE ADV.
- PG. 231. Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md.

- Baltimore 2, Md. American Communications Corp., 306 Broadway, New York 7, N. Y. AMERICAN TELEVISION & RADIO CO., 300 E. 4th St., St. Paul 1, Minn. SEE ADV. PG. 192. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Baldor Electric Co., 4353 Duncan Avenue, St. Louis. Mo.
- Louis, Mo. Bowers Battery & Spark Plug Co., Reading, Pa. Columbus Electronics Corp., 229 S. Waverly St., Yonkers, N. Y. Control Corp., 718 Central Ave., Minneapolis 14,
- Minn. Electric Products Co., 1725 Clarkstone Rd.,

- Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio
  Electric Storage Battery Co., Allegheny Ave. & 19th St., Philadelphia 32, Pa.
  Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
  Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
  Electro Products Labs., 549 W. Randolph St., Chicago 6, Ill.
  Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif.
  Electronic Products Corp., 423 Greenwich St., New York, N. Y.

- York, N. Y. Electronics Contracting Co., 122 Chambers St., New York 7, N. Y. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., No. Chicago, Ill. SEE ADV. PG. 29.

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- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
  Franklin Transformer Mfg. Co., 65 22nd Ave., NE, Minneapolis 13, Minn.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Heath Co., Benton Harbor, Mich.
  Hertner Electric Co., 12690 Elnwood Ave., Cleveland 11, Ohio
  Inductive Equipment Co., Gettysburg, Pa.
  Inductival Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif.
  Lorain Products Corp., 112 F St., Lorain, Ohio McColpin-Christie Corp., 4922 S. Figueroa St., Los Angeles 37, Calif. FEDERAL TELEPHONE AND RADIO CORP., 100

- McColpin-Christie Corp., 4922 S. Figueroa St., Los Angeles 37, Calif.
  MALLORY & CO., INC., P. R., 3029 E. Wash-ington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
  Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn.
  Mellaphone Corp., Rochester 2, N. Y.
  Network Mfg. Corp., Bayonne, N. J.
  Power Equipment Co., 55 Antoinette St., Detroit 2, Mich.
  RADIO RECEPTOR CO., 251 W. 19th St. New

- rower Equipment Co., 35 Antoinette St., Detroit 2, Mich.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  Rectifier Engineering Co., 1803 E. Seventh St., Los Angeles 21, Calif.
  Richardson Allen Corp., 15 W. 20th Street, New York 11, N. Y.
  Schauer Machine Co., Cincinnati 2, Ohio Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England TELEX, INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170.
  Ther Electric & Machine Works, 17 S. Jefferson St., Chicago, III.
- VICKERS ELECTRIC DIV., Vickers, Inc., 1815
   Locust St., St. Louis 3, Mo. SEE ADV. PG.
- 194 Vitamite Co., The, 227 W. 64th St., New York
- WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 277
- Weston Laboratories, Weston 93, Mass. Willard Storage Battery Co., 246 E. 131st St., Cleveland 1, Ohio

#### BATTERY CHARGERS-Gas Engine Driven

- Cyclohm Motor Corp., Racine, Wisc. Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio Geopyhsical Instrument Co., 1820 N. Nash St.,

- Geopynsical Instrument Co., 1820 N. Nash St., Arlington, Va. Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif. Onan & Sons Inc., D. W., 3264 Royalston Ave., Minneapolis 5, Minn.

#### **BEARINGS**—Miniature

- Amplex Div., Chrysler Corp., Detroit 31, Mich. Bird Co., Richard H., 1 Spruce St., Waltham, Mass.
- Fafnir Bearing Co., Booth Street, New Britain,

- Conn. Gatti Inc., Aurele M., 524 E. Washington St., Trenton, N. J. Keystone Carbon Co., Inc., Saint Marys, Pa. Landis & Gyr, Inc., 104 Fifth Ave., New York 11, N. Y. **MINIATURE PRECISION BEARINGS, INC.**, Keene, N. H. SEE ADV. PG. 203. New Hampshire Ball Bearings, 5 Main St., Peters-borough, N. H.

#### BELLOWS

- Chicago Metal Hose Corp., 1309 S. Third Ave., Maywood, Ill. Cook Electric Co., 2700 Southport Ave., Chicago,
- Ill.

Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y. Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn. Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.

1949-1950 DIRECTORY of

#### **BELTS**—Dial Drive

- General Cement Mfg. Co., 919 Taylor Ave.,
- General Cement Mrg. Co., 919 Taylor Ave., Rockford, Ill.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Ton-Tex Corp., 247 Pearl St., N. W., Grand Rapids 2, Mich.
  WEBSTER SPRING CORP., 97 S. 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.

# BENCH TEST SET-UPS

- Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles 15, Calif. DeMornay-Budd Inc., 475 Grand Concourse, New York, N. Y. Gadgets Inc., 3629 N. Dixie Drive, Dayton 5,
- Ohio
- Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

# BLOCKS-Fuse Blocks & Holders

N

80

Creek, Mich.

14, Minn.

Mass

Pasadena, Calif.

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**BLOWERS**—Small

- Alden Products Co., 117 N. Main St., Brockton 64, Mass. BUSSMANN MFG. CO., St. Louis 7, Mo. SEE ADV. PG. 210.

- ADV. PG. 210. Dante Electric Mfg. Co., Bantam, Conn. Eby Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa. Franklin Mfg. Corp., A. W., 43.20 34th St., Long Island City, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Insulation Mfg. Co. 11 New York Ave. Breakling

Insulation Mfg. Co., 11 New York Ave., Brooklyn,

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.

No. 1997 State Structure Participation of the structu

Erie, Pa. Sherman Mfg. Co., H. B., 22 Barney St., Battle

Clarage Fan Co., Kalamazoo, Mich. Despatch Oven Co., 619 S. E. 8th St., Minneapolis

14, Minn. Dynamic Air Engineering, Inc., 1619 So. Alameda St., Los Angeles 11, Calif. Eastern Air Devices, Inc., 585 Dean St., Brook-lyn 17, N. Y. Fasco Industries, Inc., Rochester 2, N. Y. GENERAL ELECTRIC CO., Scheneetady 5, N. Y. SEE ADV. PGS. 5-18. HAYDU BROS., Plainfield, N. J. SEE ADV. PG 209.

PG. 209. Heinze Electric Co., 685 Lawrence St., Lowell,

Ideal Industries, Inc., Park & Borden Aves.,

Ideal Industries, Inc., Park & Borden Aves., Sycamore, Ill.
Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.
Johnson Fan & Blower Corp., 1319 W. Lake St., Chicago 7, Ill.
Johnson Gas Appliance Co., 520 Ave. E, N. W., Cedar Rapids, Iowa.
Leiman Bros., 114 Christie St., Newark 5, N. J.
Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio.
Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadeaa, Calif.

Redmond Co., Inc., Owosso, Mich. Ripley Co. Inc., P. O. Box 31, Middletown, Conn. Rotron Division, 7-9 Schoonmaker Lane, Woodstock, N. Y

# **BOARDS**—Capacitor or Resistor

- Aircraft Radio Corp., Boonton, N. J. Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- Buggie & Co., H. H., 2141 Madison Ave., Toledo
- CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG.
- CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
- Edin Electronics Co., 207 Main Street, Worcester, Mass
- Mass. Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV.
- Ave., L PG. 80.
- Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
- Press Wireless Mig. Hicksville, L. I., N. Y. Skaneateles Mfg. Co., Inc., 122 Dickerson St., Swacuse 2, N. Y. WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.

#### BOBBINS-Coil Winding

- Alden Products Co., 177 N. Main St., Brockton
- AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
- AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  Boonton Molding Co., Boonton, N. J.
  CENTRALAB, DIV. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
  Chicago Die Meld Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill.
  Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
- Burbank, Calif.
- Coil Winders Inc., 61 Bergen St., Brooklyn 2, N.Y
- N. Y. Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200
- General Ceramics & Steatite Corp., Keasbey,
- Insulation Mfg. Co., 11 New York Ave., Brooklyn, INSULINE COFP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
  Kellogg Switchboard & Supply Co., 6650 S.
- Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Kirchberger & Co., Inc., M., 1425 Thirty-Seventh Street, Brooklyn 18, N. Y.
  Kuhn & Jacob Molding & Tool Co., 1200 South-land St., Trenton, N. J.
  Kurnan Electric Co., Inc., 35-18 37th St., Long Island City 1. N. Y.
  Mayfair Molded Products Corp., 4440 N. Elston Åve., Chicago 30, Ill.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
  Multi-Products Tool Co., 123 Sussex Ave., Newark 4, N. J.

- 4. N. J.
  PRECISION PAPER TUBE CO., 2033 W. Charleston St. Chicago 47, Ill. SEE ADV. PG. 112.
  Presto Electric Co., Inc., 4511 New York Ave., Union City, N. J.
  Rogers Corp., Manchester, Conn.
  S-W Inductor Co., 1056 N. Wood St., Chicago, III
- In.
   Sheffco Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J.
   TELEX, INC., Telex Park, Minneapolis, Minn. SEE ADV. PG. 170.

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# BOLOMETERS

- Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass. BALLANTINE LABS., INC., Boonton, M. J. SEE
- ADV. PG. 134. ADV. PG. 134. Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10; Ill.
- Chicago 10, 111.
   Microwave Equipment Co., North Caldwell, N. J.
   POLYTECHNIC RESEARCH & DEVELOPMENT
   CO., INC., 66 Court St., Brooklyn 2, N. Y.
   SEE ADV. PG. 63.
   SPERRY GYROSCOPE CO., Div. of The Sperry
   Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52
- 52 Thwing-Albert Instrument Co., 5351 Pulaksi Ave.,
- Phila. 44, Pa.

#### BOLTS

- ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG. 32.
- American Screw Co., Providence, R. I. Chandler Products Co., 1491 Chardon Rd., Cleve-
- land, Ohio Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn.
- Continental Screw Co., New Bedford, Mass. Corbin Screw Div., American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn. Federal Screw Products, Inc., 224 W. Huron St., Chicago 10, Ill.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
- Greene Mfg. Corp., G. G., Warren, Pa. Harper Co., H. M., 2620 Fletcher St., Chicago 18,
- III. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
- Locke Incorporated, P. O. Box 57, Baltimore 3, Md.
- National Screw & Mfg. Co., The, Cleveland 4, Ohio
- New England Screw Co., Keene, N. H. Parker-Kalon Corp., 200 Varick St., New York 14. N. Y
- Pawtucket Mfg. Co., 327 Pine St., Pawtucket, R T
- Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50,
- $\mathbf{I}\mathbf{h}$ Republic Steel Corp., Republic Bldg., Cleveland 1,

- Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio
  Russell, Burdsall & Ward Bolt and Nut Co.,
  Midland Ave., Port Chester, N. Y.
  St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Sterling Bolt Co. 200 W. Lockers Blvd. China
- Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill.
- U, all Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, Ill. Thomas Products, Inc., 9 Bentley St., Salem,
- Mass. United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.

# BOLTS-Expansion

- Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago, Ill.
- Arro Expansion Bolt Co., Boone Ave., Marion, Ohio. Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn. Conn. Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill. General Cement Mig. Co., 919 Taylor Ave., Rockford, Ill. Greene Mfg. Corp., G. G., Warren, Pa. Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md National Lead Co., 111 Broadway, New York 6,
- National Screw & Mfg. Co., The, Cleveland 4, Ohio

BOXES

- New England Screw Co., Keene, N. H. Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y. STAR EXPANSION PRODUCTS CO., 147-149 Cedar St., New York 6, N. Y. SEE ADV. PG. 96
- Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6. III.
- Thomas Products, Inc., 9 Bentley St., Salem, Mass. United Screw & Bolt Corp., 2513 W. Cullerton
- St., Chicago 8, Ill.

#### BOLTS-Eye

Mass.

BOLTS—Toggle

Chicago, Ill.

Ohio

96.

Mass.

BOOMS-Microphone

BOXES-Metal

York, N.

- Ackerman-Johnson Co., 625 W. Jackson Blvd.,
- Chicago, Ill. ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG. 32.
- Central Screw Co., 3501 Shields Ave., Chicago 9, III
- Cuyahoga Spring Co., 10272 Berea Rd., Cleve-land, Ohio General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill.
- Rockford, III. Greene Mfg. Corp., G. G., Warren, Pa. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. La Magna Mfg. Co., Inc., East Rutherford, N. J. Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
- Locke Incorporated, P. O. Box 57, Baltimore 3, Md
- National Screw & Mfg. Co., The, Cleveland 4, Ohio
- Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y. Pawtucket Mfg. Co., 327 Pine St., Pawtucket,
- R. I. t. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo. St. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.

Stronghold Screw Products Inc., 216-222 West Hubbard St., Chicago 10, Ill. Thomas Products, Inc., 9 Bentley St., Salem,

United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.

Ackerman-Johnson Co., 625 W. Jackson Blvd.,

Arro Expansion Bolt Co., Boone Ave., Marion,

Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill. General Cement Mfg. Co., 919 Taylor Ave.,

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. Greepe Mfg. Corp., G. G., Warren, Pa. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. STAR EXPANSION PRODUCTS CO., 147-149 Cedar, St., New York 6, N. Y. SEE ADV. PG. 96

Thomas Products, Inc., 9 Bentley St., Salem,

AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
Berndt-Bach, Inc., 7377 Beverly Blvd., Los An-geles 36, Calif.
Olesen Co., Otto K., 1560 Vine St., Hollywood 28, Calif.

Calif. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Special Products Co., Silver Spring, Md.

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.

PG. 174. BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. Colgate Mfg. Corp., Lindenhurst, L. I., N. Y.

Colgate Mfg. Corp., Lindenhurst, L. I., N. Y. Columbia Metal Box Co., 260 E. 143rd St., New

Dahlstrom Metallic Door Co., Jamestown, N. Y.

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BOXES

- Eclipse Mfg. Co., Inc., 294 E. 137th St., New York 54, N. Y. Federal Electric Products Co., 50 Paris St.,
- Newark, N. J.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-General Cement Mig. Co., 919 Taylor Ave., Rockford, Ill.
  Greene Mig. Corp., G. G., Warren, Pa.
  Hall Co., Gordan L., Old Lyme, Conn.
  Hoffman Engineering Corp., Anoka, Minn.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50.
  Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25. Ohio

- KIK & Blum MIg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio
  Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. Y.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  Lindsay Corp., The, 1740 25th Ave., Melrose Park, Ill.
  Lord Electronic Corp., 704 E. 1404-000 Million

- Loral Electronics Corp., 794 E. 140th St., New

- Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
  Minute Man Products, Inc., 309 E. 22nd St., New York 10, N. Y.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
  OLYMPIC TOOL & MFG. CO., INC., 39 Chambers St., New York 7, N. Y. SEE ADV. PG. 174.
  Par-Metal Products Corp., 32-62 49th St., Long Island City 3, N. Y.
  Pierce Template Corp., 2646 N. Coral St., Philadelphia 25, Pa.
  Press Wireless Mfg. Co., Inc., Cantiague Rd.,
- Press
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radiad Service, 720 W. Schubert Ave., Chicago
- Radiad Service, 720 W. Schubert Ave., Chicago 14, Ill.
  REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Robinson Aviation, Inc., Teterboro, N. J.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Sperman Metal Specialties, 27 Columbia Ave., Brooklyn 2, N. Y.
  Standard Pressed Steel Co., Jenkintown, Pa.
  Teiner Engineering Corp., 115 Madison St., Malden 48, Mass.
  Thomas Products, Inc., 9 Bentley St., Salein, Mass.

- Malden 45, Mass.
   Thomas Products, Inc., 9 Bentley St., Salem, Mass.
   WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
   WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.

- **BOXES**—Waterproof
- ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.

- PG. 174. Colgate Mfg. Corp., Lindenhurst, L. I., N. Y. Dahlstrom Metallic Door Co., Jamestown, N. Y. Hoffman Engineering Corp., Anoka, Minn. **KARP METAL PRODUCTS CO.**, INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50. Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio La Magna Mfg. Co., Inc., East Rutherford, N. J. Maritime Quality Hardware Co., Inc., Belfast, Maine Maine

- Maine Market Forge Co., Everett 49, Mass. O. Z. Electrical Mfg. Co., Inc., 262 Bond St., Brooklyn 2, N. Y. REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Skydyne Inc., River Rd., Port Jervis, N. Y. Teiner Engineering Corp., 115 Madison St., Malden 48, Mass.

#### BRACKETS

- Aerolite Electronics Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG. 178
- CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill, SEE ADV. PG. 190. Colgate Mfg. Corp., Lindenhurst, L. I., N. Y. Edin Electronics Co., 207 Main Street, Worcester,
- Mass
- Electronic Supply Co., 207 Main St., Worcester, Mass
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- Falstrom Co., 44 Falstrom Court, Passaic, N. J.

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- Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  Fryling Mfg. Co., 639 W. 12th St., Erie, Pa.
  General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
  Greene Mfg. Corp., G. G., Warren, Pa.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  KARP METAL PRODUCTS CO., 1NC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50.
  Kirk & Blum Mfg. Co., 2893 Spring Grove Ave, Cincinnati 25, Ohio
  Kling Metal Spinning Co., 174 Centre St., New

- Cincinnati 25, Ohio Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y. La Magna Mfg. Co., Inc., East Rutherford, N. J. Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.

- Calif. Minute Man Products, Inc., 309 E. 22nd St., New York 10, N. Y. National Electrical Machine Shops, Inr., 919 Jesup-Blair Dr., Silver Spring, Md. Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y. OLYMPIC TOOL & MFG. CO., INC., 39 Chambers St., New York 7, N. Y. SEE ADV. PG. 174. Pierce Template Corp., 2646 N. Coral St., Phila-delphia 25. Pa.

- Pierce Template Corp., 2646 N. Coral St., Phila-delphia 25, Pa.
  PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Robinson Aviation, Inc., Teterboro, N. J.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.
  Technical Appliance Corp., Sherburne, N. Y.
  Teiner Engineering Corp., 115 Madison St., Malden 48, Mass.
  Thomas Products, Inc., 9 Bentley St., Salen,

- Thomas Products, Inc., 9 Bentley St., Salein, Mass
- Wood Electric Co., Inc., C. D., 70-17 83rd St., Glendale, L. I., N. Y.

# BRACKETS-f-m & Television Antenna

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. AMERICAN PHENOLIC CORP.,
- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J. Espey Mfg. Co. Land The Tool Tool
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York,
- Federal Engineering Co., 37 Murray St., New York 7, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-

- General Cement Mig. Co., 919 Taylor Ave., Rock-ford, Ill. Hi-Par Products Co., Fitchburg, Mass. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80
- Interstate Mfg. Gorp., 138 Sussex Ave., Newark

- b. J.
  b. J.
  b. J. F. D. MFG. Co., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  National Electronic Mfg. Corp., 35-05 36th St., Long Island City, N. Y.
  Network Mfg. Corp., Bayonne, N. J.
  Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
  PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
  PGS. 197, Inside Back and Back Covers.
  Technical Appliance Corp., Sherburne, N. Y.
- Technical Appliance Corp., Sherburne, N. Y. Teiner Engineering Corp., 115 Madison St., Malden
- 48, Mass. Telrex, Inc., Box 879, Rutherford & Neptune Highway, Asbury Park, N. J. Thomas Products, Inc., 9 Bentley St., Salen,
- Mass.
- Wass. Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R.R., West Chester, Pa.

#### BREAKERS-Circuit

1949-1950 DIRECTORY of

- Electric Auto-Lite Co., The, Toledo 1, Ohio Fasco Industries, Inc., Rochester 2, N. Y. GENERAL ELECTRIC CO., Construction Mate-rials Dept., Bridgeport, Conn. SEE ADV. PGS.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. HEINEMANN ELECTRIC CO., 97 Plum St., Tren-
- HEINEMANN ELECTRIC CO., 97 Plum St., Irenton 2, N. J. SEE ADV. PG. 37.
  I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Phila. 30, Pa. SEE ADV. PGS. 48, 49.
  Kurman Electric Co., Inc., 35-18 37th St., L. I.
- City 1, N. Y. Littelfuse, Inc., 4757 Ravenswood Ave., Chicago 40, Ill.
- Spencer Thermostat Co., 34 Forest St., Attleboro, Mass
- Trumbull Electric Mfg. Co., Plainville, Conn. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### BRIDGES—Capacitance

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BRIDGES-Electrical

N. J.

Mass.

III.

- Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon Clippard Instrument Laboratory, Inc., 1125 Bank St., Cincinnati 14, Ohio Clough Brengle Co., 6014 N. Broadway, Chicago,

FREED TRANSFORMER CO., 1736 Weirfield St.,

Brooklyn 27, N. Y. SEE ADV. PG. 53. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Heath Co., Benton Harbor, Mich. Leeds & Northrup Co., 4970 Stenton Ave., Phila.

MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110. SYLVANIA ELECTRIC PRODUCTS INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

Thermionic Engineering Corp., Pompton Plains,

Aerovox Corp., 740 Belleville Ave., New Bedford,

Airborne Instruments Lab. Inc., 160 Old Country Rd., Mineola, N. Y. BARKER & WILLIAMSON, 235 Fairfield Ave.,

BARKER & WILLIAWSON, 235 Failheit Ave., Upper Darby, Pa. SEE ADV. PG. 39.
 Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
 Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
 Conta Content Content Chicago

Clough Brengle Co., 6014 N. Broadway, Chicago,

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Conant Labs., 6500 O St., Lincoln 5, Neb

Cossor (Canada) Ltd., 301-303 Windsor St., Hali-fax, N. S., Canada Daven Co., 191 Central Ave.. Newark 4, N. J. ELECTRO-TECH EQUIPMENT CO., 117 Lafay-ette St., New York 13, N. Y. SEE ADV. PG.

181. Eppley Lab. Inc., Newport, R. I. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Heath Co., Benton Harbor, Mich. Industrial Instruments, Inc., 17 Pollack Ave., Lorgov. City. 5. N. J.

Jersey City 5, N. J. Leeds & Northrup Co., 4970 Stenton Ave., Phila.

Leeds & Northrup Co., 4510 Stenton Arc, Luna 44, Pa.
 M. P. Concert Installations. Fairfield, Conn.
 McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn.
 Magnetic Products Corp., The, Norwalk. Conn.
 MEASUREMENTS CORP., Boonton, N. J. SEE ADV PC, 110

MEASUREMENTS CONF., Boohton, N. S. SEE ADV, PG, 110. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7. N. Y. Network Mfg. Corp., Bayonne, N. J. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.

Radio City Prods. Co., Inc., 152 W. 25th St., New

York 1, N. Y.

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Reiner Electronics Co., 152 W. 25th Street, New

York, N.Y. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,

Pa. Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52

Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.

Pewark D, N. J. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Technology Instrument Corp., 1058 Main St., Waltham, Mass.

Thermionic Engineering Corp., Pompton Plains,

N J Thwing-Albert Instrument Co., 5351 Pulaski Ave.,

- Inwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
  UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  Wheeler, Laboratorian, Inc., 250,00, Neutron

Wheeler Laboratories, Inc., 259-09 Northern Blvd., Great Neck, N. Y. Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

#### BRIDGES-Temperature

Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
Cole Instrument Co., 1320 S. Grand Ave., Los Auroles, 15 Colis

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
   Eppley Lab., Inc., Newport, R. I.
   GENERAL ELECTRIC Co., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
- Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.

Precision Resistor Co., 334 Badger Ave., Newark

8, N. J. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Shalleross Mfg. Co., 10 Jackson Ave., Collingdale. Pa.

Thwing-Albert Instrument Co., 5351 Pulaski Ave.,

Philadelphia 44, Pa. TRANS-SONICS, INC., Bedford Airport, Bedford,

Mass. SEE ADV. PG. 132. UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225. Winslow Co., Inc., The, 9 Liberty St., Newark 5,

# BRIDGES—Thermistor

Edo Corp., College Point, Long Island, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York, N. Y. SEE ADV. PGS. 240-244.

#### BROADCAST INPUT CONTROL EQUIPMENT

Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.

American Communications Corp., 306 Broadway, New York 7, N. Y.

American Communications Corp., 306 Broadway, New York 7, N. Y.
American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif.
Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
Collins Radio Co., Cedar Rapids, Iowa
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Langevin Mauufacturing Corp., 37 W. 65th St., New York 23, N. Y.
Loral Electronics Corp., 794 E. 140tb St., New York 54, N. Y.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back and Back Covers.
Radio Engineering Labs., Inc., 35-54 36th St., Long Island City, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
SUPERIOR ELECTRIC CO., THE, 83 Laurel St., Bristol, Conn. SEE ADV. PGS. 142, 143.

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Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### BRUSHES-Carbon & Graphite

Eagle Electric Mfg. Co., Inc., 2310 Bridge Plaza S., Long Island City, N. Y.
Electro-Nite Carbon Co., 1133 E. Columbia Ave., Phila, 25, Pa.
General Cennent Mfg. Co., 919 Taylor Ave., Rock-Cont. Wig. Co., 919 Taylor Ave., Rock-

111 GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV PGS 5-18

GRAPHITE METALLIZING CORP., 1041 Nepper-han Ave., Yonkers 3, N. Y. SEE ADV. PG.

Helwig Co., 2544 N. 30th St., Milwaukee 10, Wisc. Keystone Carbon Co., Inc., Saint Marys, Pa. Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio

Pure Carbon Co., St. Marys, Pa. St. Marys Carbon Co., State Road, St. Marys, Pa. Seager Carbon Co., 289 Church St., New York 13,

N. Y. Sittler Corporation, 18 N. Ada St., Chicago 7, Ill. Speer Carbon Co., Lincoln Ave., St. Marys, Pa. Stackpole Carbon Co., St. Marys, Pa. Superior Carbon Products Co., 9115 George Ave.,

Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio
 U.S. Graphite Co., Div. of the Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

#### **BRUSHES**—Metal-Graphite

GRAPHITE METALLIZING CORP., 1041 Nep-perhan Ave., Yonkers 3, N. Y. SEE ADV. PG. 177.

Helwig Co., 2544 N. 30th St., Milwankee, Wis. Keystone Carbon Co., Inc., Saint Marys, Pa. Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio

St. Marys Carbon Co., St. Marys, Pa. St. Marys Carbon Co., State Road, St. Marys, Pa. Seager Carbon Co., 289 Church St., New York 13,

Sittler Corporation, 18 N. Ada St., Chicago 7. Ill. Speer Carbon Co., Lincoln Ave., St. Marys, Pa. Stackpole Carbon Co., St. Marys, Pa. Superior Carbon Products Co., 9115 George Ave., Chick Laboratory 2010

Cleveland 5, Ohio

#### BUS BAR SYSTEMS

Federal Electric Products Co., 50 Paris St., New-

Federal Electric Froducts Co., 50 Fails St., New-ark, N. J.
 Kolton Electric Mfg. Co., 123 New Jersey Rail-road Ave., Newark 5, N. J.
 Trumbull Electric Mfg. Co., Plainville, Conn.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

#### BUS BARS—Solderless

- Aircraft-Marine Prods., Inc., 1523 No. 4th St., Harrisburg, Pa.
- Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- Frankel Connector Co., 177 Hudson St., New York, N. Y. Kolton Electric Mfg. Co., 123 N. J. Railroad Ave.,

 Newark 5, N. Y.
 Revere Copper and Brass, Inc., 230 Park Ave., New York 17, N. Y.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67 67

#### **BUSHINGS**—Hermetically Sealed

CENTRALAB, Div. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.
Corning Glass Works, Corning, N. Y.
ELECTRICAL INDUSTRIES, INC., 42 Summer Ave., Newark 4, N. J. SEE ADV. PG. 132.
General Ceramics & Steatite Corp., Keasbey, N. J.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.

SEE ADV. PGS. 5-18.

Hermaseal Co., Inc., Riverside Drive, Elkhart,

Ind. HERMETIC SEAL PRODUCTS CO., 29-37 So. 6th St., Newark, N. J. SEE ADV. PG. 223. HEYMAN MFG. CO., 300 Michigan Ave., Kenil-worth, N. J. SEE ADV. PG. 222. Locke Incorporated, P. O. Box 57, Baltimore 3, Md.

Md. Lundey Associates, Mfg. Div., 694 Main St., Wal-

Lundey Associates, Mig. Div., 094 Main St., War-tham 54, Mass.
 STUPAKOFF CERAMIC & MFG. Co., Latrobe, Pa. SEE ADV. PG. 78.
 Triad Transformer Mig. Co., 423 N. Western Ave.,

Los Angeles 4, Calif. United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England Wheaton Co., T. C., Industrial Div., 220 G St., Millville, N. J.

#### BUSHINGS-Nonmetallic

Aerolite Electronics Hardware Corp., 24 Cliff St.,

Aerolite Electronics Hardware Corp., 24 Cliff St., Jersey City, N. J.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
Auburn Mfg. Co., Middletown, Conn.
Beach Precision Parts Co., Boonton, N. J.
BIWAX CORP., 3445 Howard St., Skokie, Ill. SEE ADV. PG. 206.
Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington, Del.
CENTRALAB, Div. of Cloba Union. Inc. 200.

CENTRALAB, Div. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS.

CONTINENTAL DIAMOND FIBRE CO., 16 Contract Diamond Fibre Co., 10 Chapel St., Newark 16, Delaware. SEE ADV. PGS. 119-122. Corning Glass Works, Corning, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-

ford, Ill.

ford, Ill. General Ceramics & Steatite Corp., Keasbey, N. J. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Heli-Coil Corp., 47-23 35th St., Long Island City 1 N.Y.

I. N. Y.
 HEYMAN MFG. CO., 300 Michigan Ave., Kenilworth, N. J. SEE ADV. PG. 222.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.
 Keystone Electronics Co., 50-52 Franklin St., New York 12, N. Y.

York 13, N. Y. Kilburn Glass Co., Inc., J. R., 22 S. Worcester St.,

Chartley, Mass. Kirchberger & Co., Inc., M., 1425 37th St., Brook-

Locke Incorporated, P. O. Box 57, Baltimore 3,

Mayfair Molded Products Corp., 4440 N. Elston

Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.
MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124, 125.
NATIONAL CARBON CO., INC., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. SEE ADV. PG. 57.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
NATIONAL VIII CANIZED EIRBE CO. Wilming.

48. Mass. SEE ADV. PGS. 105-108.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. SEE ADV. PG. 31.
O.Z. Electrical Mfg. Co., Inc., 262 Bond St., Brooklyn 2, N. Y.
Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
Precision Fabricators, Inc., Roosevelt Rd., E. Rochester, N. Y.

Rochester, N. Y. Printloid Inc., 95 Mercer St., New York, N. Y. Pure Carbon Co., St. Marys, Pa. Shefico Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tona-

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.
United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
Waterbury Companies, Inc., Waterbury 90, Conn.
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

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Md.

CABINETS

See Also Housings

#### CABINETS-Metal

Alden Products Co., 117 N. Main St., Brockton,

- ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- PG. 174.
  Bardwell & McAlister, Inc., P. O. Box 1310, Hollywood, Calif.
  BUCK ENGINEERING CO., 37.41 Marcy St., Freehold, N. J. SEE ADV. PG. 224.
  BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
  Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
- Burbank, Calif.
- Colgate Mfg. Corp., Lindenhurst, L. I., N. Y. . Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y
- Continental Electronics Mfg. Co., 1728 Wood St.,
- Dallas 1, Texas Dahlstrom Metallic Door Co., Jamestown, N. Y. Eclipse Mfg. Co., Inc., 294 E. 137th St., New York 54, N. Y.
- Edin Electronics Co., 207 Main St., Worcester,
- Mass. Electronic Supply Co., 207 Main St., Worcester,
- Mass.
- Mass. Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

- N. Y. Falstrom Co., 44 Falstrom Court, Passaic, N. J. Foxboro Co., The, Foxboro, Mass. Gadgets, Inc., 3629 N. Dixie Dr., Dayton 5, Ohio Grammes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa. Gray Mfg. Co., 16 Arbor St., Hartford, Conn. Greene Mfg. Corp., G. G., Warren, Pa. Hall Co., Benton Harbor, Mich. Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif. INSUL UNF CORP. OF AMERICA. 36-02 35th

- Angeles 7, Calif. INSULINE CORP. OF AMERICA, 36-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Johnson Co., E. F., Waseca, Minn. KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto. Calif.
- Alto, Čalif. Kirk & Blum Mfg. Co., 2893 Spring Grove Ave.,
- Kirk & Blum Mig. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio
  Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
  Lawyt Corp., 60 Procedures, Parallele M. M.
- Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Lindsay Corp., The, 1740 25th Ave., Melrose Park,
- III. Loral Electronics Corp., 794 E. 140th St., New
- York 54, N. Y. Lorentzen Inc., H. K., 391 W. Broadway, New York 12, N. Y.
- Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
- McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn. Market Forge Co., Everett 49, Mass. Measurement Engineering Ltd., Arnprior, Ontario,
- Canada
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Minute Man Products, Inc., 309 E. 22nd St., New York 10, N. Y. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
- 48, Mass. SEE ADV. FGS. 103-103.
  Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
  OLYMPIC TOOL & MFG. CO., INC., 39 Cham-bers St., New York 7, N. Y. SEE ADV. PG.
- 174.
- Par-Metal Products Corp., 32-62 49th St., L. I. City 3, N. Y. Paul & Beekman Inc., 1801 Cortland St., Phila-
- delphia 40, Pa.

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- Pierce Template Corp., 2646 N. Coral St., Phila-
- delphia 25, Pa. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radiad Service, 720 W. Schubert Ave., Chicago
- Ill
- ARDIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. REF Mig. Corp., Jericho Turnpike, Mineola, N. Y. Republic Steel Corp., Republic Bldg., Cleveland 1,
- Ohio
- Ohio Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C. Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y. Special Products Co., Silver Spring, Md. Sperman Metal Specialties, 27 Columbia Place, Brooklyn 2, N. Y. Standard Pressed Steel Co., Jenkintown, Pa. Teiner Engineering Corp. 115 Madison St., Malden

- Teiner Engineering Corp., 115 Madison St., Malden 48. Mass.
- 45, Mass.
  Vendo Co., 7400 E. 12th St., Kansas City 8, Mo.
  WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
  WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.

#### CABINETS—Plastic

- American Hard Rubber Co., 11 Mercer St., New
- York 13, N. Y. Arc Radio Corp., 634 Myrtle Ave., Brooklyn, N. Y. Boonton Molding Co., Boonton, N. J.
- Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
- Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill.
- Consolidated Molded Products Corp., Scranton 2, Pa. Emerson Radio & Phonograph Corp., 111 8th
- Ave., New York, N. Y. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave.,
- Felsenthal & Sons, Inc., G., 4100 II. Grand II.C., Chicago 51, Ill. GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18. Hawley Products Co., St. Charles, Ill. Hoffman Radio Corp., 3716 S. Hill St., Los Acadio 7, Collif.

- Angeles 7, Calif.
- Inland Plastic of America, Inc., 20 W. 30th St., New York, N. Y. Kuhn & Jacob Molding & Tool Co., 1200 South-ard St., Trenton, N. J. Kurz-Kasch, Inc., 1415 S. Broadway, Dayton 1, Obia
- Ohio Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Molded Insulation Co., Aircraft Control Div., 335 Molded Institution Co., Alternat Control Div., 535
   E. Price St., Philadelphia, Pa.
   National Molding Co., 2141 W. Washington Blvd., Los Angeles 7, Calif.
   Norton Labs., Inc., Lockport, N. Y.
   Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Colif.

- 10, Calif. Richardson Co., The, Melrose Park, Ill. Shaw Insulator Co., 160 Coit St., Irvington 11,
- N. J. Stokes Molded Products, Inc., Taylor St., at Web-
- ster, Trenton, N. J. Syracuse Ornamental Co., Inc., 581 S. Clinton St.,
- Syracuse Ornamental Co., Inc., 381 S. Clinton St., Syracuse, N. Y. Taylor Mfg. Co., 3056 W. Meinecke Ave., Milwau-kee 10, Wisc. Topping Mfg. Co., 3597 Mission St., San Fran-cisco 10, Calif.
- S. Plastics Corp., 2835-53 Irving Park Rd., U. Chicago, Ill. Waterbury Companies, Inc., Waterbury 90, Conn.

#### CABINETS-Wood

- A & M Woodcraft, Inc., 419 W. 49th St., New York 19, N. Y.
- Air-King Products Co., Inc., 170 53rd St., Brook-lyn, N. Y.
- American Communications Corp., 306 Broadway, New York 7, N. Y. Arc Radio Corp., 634 Myrtle Ave., Brooklyn, N. Y.

Brunswick Radio & Television Div., Radio & Television, Inc., 244 Madison Ave., New York, N. Y. Castlewood Mfg. Co., 12th & Burnett Sts., Louisville, Ky.

1949-1950 DIRECTORY of

- Five Star Radio Co., 416 Broadway, Cambridge, Mass.
- Garrard Sales Corp., 315 Broadway, New York 7, N
- **GENERAL ELECTRIC CO.,** Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hoffman Radio Corp., 3716 S. Hill St., Los
- Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
  Hollywood Radio Cabinet Co., 924 N. Formosa Ave., Hollywood, Calif.
  Illinois Wood Products Corp., 1656 No. Besly Court, Chicago 22, Ill.
  Ingrahm Co., E., Bristol, Conn.
  Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.

14, Ill.

Mich.

N. J.

Ind.

N.Y

CABLE ASSEMBLIES

- Kent Woodcraft Corp., 2-20 Hooper St., Brook-
- lyn 11, N. Y. Klipsch & Associates, Hope, Arkansas
- La Magna Mfg. Co., Inc., East Rutherford, N. J. Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
- Midwest Radio Corp., 909 Broadway, Cincinnati 2, Ohio Radiad Service, 720 W. Schubert Ave., Chicago

14, Ill.
Radio Merchandise Sales, 550 Westchester Ave., New York 55, N. Y.
Rek-O-Kut Co., Inc., 3801 Queens Blvd., Long Island City, N. Y.
Skydyne Inc., River Road, Port Jervis, N. Y.
Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
Steger Furniture Mfg. Co., Steger, Ill.
Tel-Craft Co., 108 Havemeyer St., Brooklyn 11, N. Y.

TRANSVISION INC., 460 North Ave., New Ro-chelle, N. Y. SEE ADV. PG. 172. United Wood Specialty Mfg. Co., Inc., 951 Broad-

way, Fall River, Mass. Wallace Mfg. Co., Inc., Wm. T., Chile & Madison Ave., Peru, Ind.

Woodcraft Corp., 501 Salzburg Ave., Bay City,

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn. Aerolite Electronic Hardware Co., 24 Cliff St., Jersey City, N. J. Alden Products Co., 117 N. Main St., Brockton

Alpha Wire Corp., 50 Howard St., New York, N. Y.

N. Y. American Communications Corp., 306 Broadway, New York 7, N. Y. American Electric Cable Co., Holyoke, Mass. **AMERICAN PHENOLIC CORP.**, 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. **AVIOMETER DIV.** of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass. Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio

Buggie & Co., M. M.,
Buggie & Co., 190 Middle St., Pawtucket, R. I.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
Columbia Wire & Supply Co., 5734 N. Elson Ave.,
Chicago 30, Ill.
Columbus Electronics Corp., 229 S. Waverly St.,
Yonkers, N. Y.
Yonkers, N. Y.

Yonkers, N. Y. Cords Ltd., 780 Frelinghuysen Ave., Newark 5,

N. J. Electric Auto-Lite Co., The, Toledo 1, Ohio Englewood Electrical Supply Co., 5801 S. Halsted St., Chicago, Ill. Espey Mfg. Co., Inc., 523 E. 72nd St., New York, N. Y.

Essex Wire Corp., 1601 Wall St., Ft. Wayne 6,

Ind. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City 1, N. Y. Haft & Sons, Inc., 79 Third St., Brooklyn 31, N. Y.

Industrial Products Co., Danbury, Conn.

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INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Interstate Mfg. Corp., 138 Sussex Ave., Newark

4, N. J. Kraft & Kraft, Hicksville, N. Y. MacLeod & Hanopol, 10 Joiner St., Charlestown 29, Mass.

Marco Industries, 210 S. Clementine, Anaheim, Calif.

- Chicarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill. Chicago 40, 111. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa. Network Mfg. Co., Bayonne, N. J. Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y. Pacific Electricord Company, 9304 Santa Monica Blvd., Beverly Hills. Calif. Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass

- Phalo Plastics Corp., 25 Foster St., Worcester S, Mass.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Rostan Corp., 202 E. 44th St., New York 17, N. Y.

- N. L.
   Searle Acro Industries, Inc., Orange, Calif.
   Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
   Surprenant Mfg. Co., 199 Washington St., Boston 10. Merce
- 10. Mass.
- Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y. Thermionic Engineering Corp., Pompton Plains,
- N. J. Transmitter Equipment Co., 345 Hudson St., New
- Transmitter Equipment Co., 545 Hudson St., Rew York 14, N. Y.
  Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  Whitaker Cable Corp., Kansas City 16, Mo.

#### CABLE HOOKS

Minerallac Electric Co., 25 N. Peoria St., Chicago, 111.

#### CABLE-Coaxial Flexible

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. **AIRTRON INC.**, 101 E. Elizabeth Ave., Linden, N. J. SEE ADV. PG. 146. Alpha Wire Corp., 50 Howard St., New York,

- N. Y. **AMERICAN PHENOLIC CORP.**, 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. American Steel & Wire Co., U. S. Steel Corp., Subs., Rockefeller Bldg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
- ANCHOR 4, N. 1. ANCHOR PLASTICS CO., INC., 533-541 Canal St., New York 13, N. Y. SEE ADV. PG. 200. Andrew Corp., 363 East 75th St., Chicago 19, Ill. Ansonia Electrical Co., 63 Main St., Ansonia,
- Conn.
- Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
- Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y. Boston Insulated Wire & Cable Co., 63 Bay St.,
- Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass.
  BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. J.

- Cords Ltd., 100 Freinghuysch Aver, iterativer, N. J.
   Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
   Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
   FEDERAL TELEPHONE AND RADIO CORP., 100 Kingeland Bd. Clifton N. J. SEE ADV.
- FEDERAL FELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Federal Wire & Cable Corp., Haverstraw, N. Y.
  General Cable Corp., 420 Lexington Ave., New York, N. Y.

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- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
   GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115
- J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Johnson Co., E. F., Waseca, Minn.
  Okonite Co., Canal St., Passaic, N. J.
  Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass

- Mass. Mass. Phelps Dodge Copper Products Corp., 40 Wall Street, New York 5, N. Y. Plastic Wire & Cable Corp., Jewett City, Conn. Plastoid Corp., 10 Mill Rd., Hamburg, N. J. Simplex Wire & Cable Co., 79 Sidney St., Cam-bridge 30 Mass

- bridge 39, Mass.
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Surprenant Mfg. Co., 199 Washington St., Boston
- 10, Mass. Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y.
- Weymouth Instrument Co., 1440 Commercial St.,
- East Weymouth 19, Mass. Whitney Blake Co., New Haven, Conn. Workshop Associates, Inc., The, 66 Needham St., Newton Highlands 61, Mass.

#### CABLE-Coaxial Rigid

- Alpha Wire Corp., 50 Howard St., New York, N. Y
- N. Y. Anaconda Wire & Cable Co., 25 B'way, New York 4, N. Y. ANCHOR PLASTICS CO., INC., 533-541 Canal St., New York 13, N. Y. SEE ADV. PG. 200. Andrew Corp., 363 E. 75th St., Chicago 19, III. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Communication Resolution Co. Land Benedium for
- N. Y. SEE ADV. PGS. 92, 93.
   Communication Products Co., Inc., Broadway & Clark Street, Keyport, N. J.
   General Ceramics & Steatite Corp., Keasbey, N. J.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   Johnson Co., E. F., Waseca, Minn.
   Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
   Precision Tube Co., Inc., 3828 Terrace St., Phila. 28. Pa.

- Precision Jube Co., Inc., 3828 Jerrace St., Phila. 28, Pa.
  Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 11, N. Y.
  Rockbestos Products Corp., 308 Nicoll St., New Haven 4, Conn.
  Selectar Industries, Inc., 401 E. 138th St., New York 54 N. Y.
- York 54, N. Y.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
   Workshop Associates, Inc., The, 66 Needham St., Newton Highlands 61, Mass.

#### CABLE—Insulated

- Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- N. Y. American Electric Cable Co., Holyoke, Mass. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. Ansonia Electrical Co., 63 Main St., Ansonia, Conn.

- Conn. Boston Insulated Wire & Cable Co., 63 Bay St.,
- Boston Insulated wire & Caule Co., or Day Co., Boston 25, Mass. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Carol Cable Co., 190 Middle St., Pawtucket, R. I. Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91 Comp
- Waterbury 91, Conn. Collyer Insulated Wire Co., 249 Roosevelt Ave.,
- Pawtucket, R. I. Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
- Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N.J. Cossor (Canada) Ltd., 301-303 Windsor St., Hali-

CABLE

- Cossor (Canada) Etd., 501-505 whildsor St., Half-fax, N. S., Canada
  Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
  Electric Auto-Lite Co., Toledo 1, Ohio
  Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind
- FEDERAL TELEPHONE AND RADIO CORP., FEDERAL IELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
   Federal Wire & Cable Corp., Haverstraw, N. Y. General Cable Corp., 420 Lexington Ave., New York, N. Y.
   GENERAL ELECTRIC CO., Schenectady 5, N. Y.
   CEE ADV PCS 5 18
- SEE ADV. PGS. 5-18. General Insulated Wire Works, Inc., 69 Gordon

- General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
  Goldmark Wire Co., James, The, 75 Murray St., New York 7, N. Y.
  Hazard Insulated Wire Works, Div., The, Okonite Co., Wilkes-Barre, Pa.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  Interstate Mfg. Corp., 138 Sussex Ave., Newark 4, N. J.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck, Conn.

Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y.
U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif.
Whitney Blake Co., New Haven, Conn.
Willard Storage Battery Co., 246 E. 131st St., Cleveland 1, Ohio

Accurate Insulated Wire Corp., 25 Fox St., New

Haven, Conn.
Alden Products Co., 117 N. Main St., Brockton 64, Mass.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
American Electric Cable Co., Holyoke, Mass.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
American Steel & Wire Co., U. S. Steel Corp., Subs., Rockefeller Bldg., Cleveland 13, Ohio Ansonia Electrical Co., 63 Main St., Ansonia, Conn.

AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Belden Mig. Co., 4647 W. Van Buren St., Chi-cago 44, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New

York, N. Y. Boston Insulated Wire & Cable Co., 63 Bay St.,

Doston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass.
BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.

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CABLE—Microphone

Haven, Conn.

Conn

- tuck, Conn. Lowell Insulated Wire Co., Lowell, Mass. Okonite Co., Canal St., Passaic, N. J. Phalo Plastics Corp., 25 Foster St., Worcester 8,
- Brain Plastics Corp., 25 Foster St., Worcester 8, Mass.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Plastic Wire & Cable Corp., Jewett City, Conn.
  Plastoid Corp., 10 Mill Rd., Hanburg, N. J.
  Rockbestos Products Corp., 308 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. SEE ADV. PG. 38.
  Searle Aero Industries, Inc., Orange, Calif.
  Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y.

#### CABLE

# Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, 111. Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. J.

- CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24. Cossor (Canada) Ltd., 301-303 Windsor St., Hali-
- Fax, N. S., Canada
   Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
   Federal Wire & Cable Corp., Haverstraw, N. Y.
   General Cable Corp., 420 Lexington Ave., New York N. Y.
- York, N. Y. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

- Ave., Providence 5, R. I. Goldmark Wire Co., James, The, 75 Murray St., New York 7, N. Y. Hazard Insulated Wire Works, Div., The, Okonite Co., Wilkes-Barre, Pa. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80 80.
- J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brook-lyn, N. Y. SEE ADV. PG. 112. Phalo Plastics Corp., 25 Foster St., Worcester 8,
- Mass

- Mass. Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Plastic Wire & Cable Corp., Jewett City, Conn. Plastoid Corp., 10 Mill Rd., Hamburg, N. J. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J. **ROME CABLE CORP.**, 330 Ridge St., Rome, N. Y. SEE ADV. PG. 38. Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
- Cambridge 39, Mass. Simplex Wire & Cable Co., 79 Sidney St., Cam-
- Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  Western Insulated Wire Co., 1001 E, 62nd St.,

- Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif. Whitney Blake Co., New Haven, Conn.

#### CABLE—Shielded

- Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn. Alden Products Co., 117 No. Main St., Brockton
- 64, Mass.
- Alpha Wire Corp., 50 Howard St., New York,
- Alpha Wire Corp., 50 Howard St., New York, N. Y.
  American Electric Cable Co., Holyoke, Mass.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
  Ansonia Electrical Co., 63 Main St., Ansonia, Con.

- Conn
- Conn. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Belden Mfg. Co., 4647 W. Van Buren St., Chi-cago 44, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
- York, N. Y. Boston Insulated Wire & Cable Co., 63 Bay St.,
- Boston Insulated wire & Calle Co., 65 Day St., Boston 25, Mass. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Carol Cable Co., 190 Middle St., Pawtucket, R. I. Collyer Insulated Wire Co., 249 Roosevelt Ave.,
- Collyer Insulated Wire Co., 249 nooseven Ave., Pawtucket, R. I.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies 1635 S. Clinton St., Chicago 16, Ill.
  CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24.
  Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. J.

- Cortos Etd., 180 Freinightysen Ave., Renard O, N. J. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Dielectric Materials Co., 5315-17 N. Ravenswood Ave. Chinese 40, 10
- Ave., Chicago 40, Ill.

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- Electric Auto-Lite Co., Toledo 1, Ohio Federal Wire & Cable Corp., Haverstraw, N. Y. General Cable Corp., 420 Lexington Ave., New
- York, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- GENERAL ELECTRIC CO., Schenectady D. N. 1. SEE ADV. PGS. 5-18. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. Goldmark Wire Co., James, The, 75 Murray St., New York 7, N. Y. Hazard Insulated Wire Works, Div., The, Okonite Co. Wilkers Pa
- Co., Wilkes-Barre, Pa. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City. N. Y. SEE ADV. PG.
- Ave., Long Island City. A. T. Shib her, 80.
  St. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck, Conn.
  Okonite Co., Canal St., Passaic, N. J.
  Phalo Plastics Corp., 25 Foster St., Worcester S, Marce
- Mass.
- Mass. Phelphs Dodge Cooper Products Corp., 40 Wall Street, New York 5, N. Y. Plastic Wire & Cable Corp., Jewett City, Conn. Plastoid Corp., 10 Mill Rd., Hamburg, N. J. Precision Tube Co., Inc., 3828 Terrace St., Phila-delphia 28, Pa. Rockbestos Products Corp., 308 Nicoll St., New Hause 4, Corp.

- Rockbestos Products Corp., 308 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. SEE ADV. PG. 38.
  Searle Aero Industries, Inc., Orange, Calif.
  Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y.
  U. S. Rubber Co., Mechanical Goods Div., 1230
- 17, N. Y.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  Uniform Tubes, Shurs Lane & Laruiston Sts., Roxborough, Phila., Pa.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  Western Insulated Wire Co., 1001 E. 62nd St., Log America 1. Calif.

- Los Angeles 1, Calif. Whitney Blake Co., New Haven, Conn.

#### CABLE—Transmission Line

- Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn. Aerolite Electronic Hardware Corp., 24 Cliff

- America Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alpha Wire Corp., 50 Howard St., New York, N. Y. American Electric Cable Co., Holyoke, Mass. **AMERICAN PHENOLIC CORP.**, 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Ansonia Electrical Co., 63 Main St., Ansonia, Con.
- Conn.
- Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
- Birubach Radio Co. Inc., 145 Hudson St., New York, N. Y. Boston Insulated Wire & Cable Co., 63 Bay St.,
- Boston Insulated wire & Cable Co., 63 Bay St., Boston 25, Mass. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Carol Cable Co., 190 Middle St., Pawtucket, R. I.
- Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn. Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  Diamond Wire & Cable Co., Sycamore, Ill.
  Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 19, Ill.
  Essex Wire Corp., 1601 Wall St., Ft. Wayne 6. Ind.

- Ind. 6, 100. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.

Federal Wire & Cable Corp., Haverstraw, N. Y. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. Interstate Mfg. Corp., 138 Sussex Ave., Newark 4 N.J.

1949-1950 DIRECTORY of

- Interstate Mig. Corp., 138 Sussex Ave., Newark 4, N. J.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Johnson Co., E. F., Waseca, Minn.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ili.
  Phalo Plastics Corp., 25 Foster St., Worcester 8, Marce
- Mass Phelps Dodge Copper Products Corp., 40 Wall St.,

CABLE-uhf

8, Mass.
Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
Plastic Wire & Cable Corp., Jewett City, Conn.
Plastoid Corp., 10 Mill Rd., Hanburg, N. J.
Precision Tube Co., Inc., 3828 Terrace St., Philadelphia 28, Pa.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back and Back Covers.
Rome Cable Corp., 330 Ridge St., Rome, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Surprenant Mfg. Co., 199 Washington St., Boston 10, Mass.
Technical Appliance Corp., Sherburne, N. Y.
U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
Ward Products Corp., Div. of The Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio Whitney Blake Co., New Haven, Conn.

CABLE—uhf
American Electric Cable Co., Holyoke, Mass.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass.
Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
General Cable Corp., 420 Lexington Ave., New York, N. Y.

York, N. Y. General Insulated Wire Works, Inc., 69 Gordon

Ave., Providence 5, R. I. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Okonite Co., Canal St., Passaic, N. J. Phalo Plastics Corp., 25 Foster St., Worcester 8,

Mass. Plastic Wire & Cable Corp., Jewett City, Conn. Precision Tube Co., Inc., 3828 Terrace St., Philadelphia 28, Pa. Simplex Wire & Cable Co., 79 Sidney St., Cam-

Simpler Wire & Cables Con. 19 Simpler Wire & Cables bridge 39, Mass.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W. C. 2. England Ward Products Corp., Div. of The Gabriel Co., 1523 E. 45th St., Cleveland 3. Ohio

BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179. Clarkstan Corp., 11927 W. Pico Blvd., Los

Woodward Ave., Detroit 1, Mich. SEE ADV.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada Network Mfg. Corp., Bayonne, N. J. Owen Laboratories, 9130 Orion St., San Fer-

nando, Calif. Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Inc.,

INC.

130 N.

CALIBRATORS-Sweep

PG. 226.

Clarkstan Corp., 11927 W. Pico Angeles 34, Calif. Coastwise Electronics Corp., Inc. Beaudry Ave., Los Angeles, Calif. Heath Co., Benton Harbor, Mich. INDUSTRIAL ELECTRONICS, IN

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RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

**ELECTRONIC** and **ALLIED PRODUCTS**.

Thermionic Engineering Corp., Pompton Plains, N. J.

#### CALIBRATORS-uhf

- Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. LAVOIE LABORATORIES, Morganville, N. J.
- SEE ADV. PG. 182. Measurement Engineering, Ltd., Arnprior, On-tario, Canada
- Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Thermionic Engineering Corp., Pompton Plains, N J

#### CAMERAS—Cathode Ray Oscillograph

- CAMERAS—Cathode Ray Oscillograph
  American British Technology, Inc., 57 Park Ave., New York 16, N. Y.
  BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179.
  Commercial Research Labs, Inc., 20 Bartlett Ave., Detroit 3, Mich.
  Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifas, N. S., Canada
  Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
  ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
  Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
- Heiland Research Corp., 130 E. 5th Ave., Denver 9. Colo
- Jerome Camera & Instrument Corp., Massa-

- Jerome Camera & Instrument Corp., pequa, N. Y. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEF ADV. PG. 222. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Warrick, Frederick P., 8666 Grandville, Detroit 10. Mich. 10, Mich.

#### CAMERAS—Radar Recording

Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y.

#### CAMERAS—Television

- Berndt-Bach, Inc., 7377 Beverly Rd., Los Angeles 36, Calif. Douglas Radio Labs., 40 Wayland St., Boston
- Mass. 25
- Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J. Jerome Camera & Instrument Corp., Mas-
- Jerome Camera & Instrument Corp., Mas-sapequa, N. Y. POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Str., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Remington Rand, Inc., Systems Div., Vericon Dept., S. Norwalk, Com. Television Equipment Corp., 238 William St., New York 7, N. Y.

- Television Projects, Inc., 3660 Coral Way, Miami
- 35. Fla.

#### CAMERAS-X-Ray

- Central Research Laboratories, Inc., Red Wing, Minn
- Junn, Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y.
   Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y.

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- North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. Picker X-Ray Corp., 300 Fourth Ave., New York 10, N. Y. Triplett & Barton, Inc., 831 N. Lake St., Bur-
- Calif bank WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,
- 67

#### CANS

- Colgate Mfg. Corp., Lindenhurst, L. I., N. Y. Craft Mfg. Co., 3949 W. Schubert St., Chicago, T11
- Falstrom Co., 44 Falstrom Court, Passaic, N. J. Greene Mfg. Corp., G. G., Warren, Pa. Guthman Inc., Edwin I., 155 Throop St., Chi-
- Guthman Inc., Edwin I., 155 Inroop St., Chi-cago, Ill. Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio Loral Electronics Corp., 794 E. 140th St., New
- Loral Electronics Corp., T. York 54, N. Y. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Miller Co., J. W., 5917 S. Main St., Los
- Angeles, Calif. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. OLYMPIC TOOL & MFG. CO., INC., 39 Cham-bers St., New York 7, N. Y. SEE ADV. PG. 174.
- Paul & Beekman Inc., 1801 Cortland St., Philadelphia 40, Pa. Radiad Service, 720 W. Schubert Avc., Chi-
- cago 14, Ill.
- REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Teiner Engineering Corp., 115 Madison St.,
- Malden 48, Mass. Thomas Products, Inc., 9 Bentley St., Salem,
- Mass.
- Mass.
   Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif.
   Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass.
   Worcester Pressed Steel Co., 100 Barber Ave.,
- Worcester, Mass.

#### CANS—Hermetically Sealed

- Cook Electric Co., 2700 Southport Ave., Chi-III cago.
- cago, III. ELECTRICAL INDUSTRIES, INC., 42 Summer Ave., Newark, N. J. SEE ADV. PG, 132. ELECTRO-SEAL CORP., 946 Lee St., Des Plaines, III. SEE ADV. PG, 90. Fusite Corp., Carthage at Hannaford, Cincinnati 12 Okia
- Fusite Corp., Carthage at Hannatord, Cincinnati 12, Ohio
  Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
  Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
  Radiad Service, 720 W. Schubert Ave., Chi-cago 14, Ill.
  Transformer, Mfg. Co., 422, N. Western, M.

- riad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif. Triad

#### NOTE:

- Throughout all capacitor listings:
- (h) indicates hermetically sealed types
- (p) indicates pressure types
- (v) indicates vacuum types

#### CAPACITORS—Ceramic Fixed

- Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
- CENTRALAB DIV. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
- 26, 27. ELECTRICAL REACTANCE CORP., Elm St., Franklinville, N. Y. SEE ADV. PGS. №2, 83. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV., PGS. 5-18. Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
- Development Co., 12 E. Howard St., Maida Phoebus, Va.
- Herlec Corp., The, 422 N. Fifth St., Milwaukee 3, Wis. (h) (p) (v)

CAPACITORS

. Brooklyn 6, N. Y. Muter Co., 1255 S. Michigan Ave., Chicago, Ill. Sprague Electric Co., North Adams, Mass. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England

#### CAPACITORS—Ceramic Transmitting

- CENTRALAB DIV. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
  ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) General Ceramics & Steatite Corp., Keasbey, No. 100. (h)
- N. J. Maida Development Co., 12 E. Howard St.,
- Maida Development Co., 12 E. Howard Co., Phoebus, Va. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England United Insulator Co., Ltd., Tolworth-Surbiton-Constructional Co., Ltd., Tolworth-Surbiton-
- Surrey, England

#### CAPACITORS-Ceramic Trimmer

- CENTRALAB DIV. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. SEE ADV. PG. 219
- 219

#### CAPACITORS—Electrolytic

N J

PG. 87

67.

- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
- Mass. (h) American Condenser Co., 4410 Ravenswood Ave, Chicago 40, Ill. (h) Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Plut, Scuth Disinfold M. J. SEE
- Hamilton Blvd., South Plainfield, N. J. SEE ADV. PG. 87.
- Cosmic Radio Corp., 699 E. 135th St., New York, N. Y.
- Vork, N. Y.
  Deutschmann Corp., Tobe, Norwood, Mass. (h)
  Dumont Electric Co., 308 Dyckman St., New York, N. Y.
  LLINOIS CONDENSOR CO., 1616 N. Throop St., Chicago, Ill. SEE ADV. PG. 226. (h) (p) (v)
  ILLINOIS CONDENSOR Co., 1616 N. Throop St., Chicago, Ill. SEE ADV. PG. 226. (h) (p) (v)
  Industrial Condenser Corp., 3243 No. Calif. Ave., Chicago 18, Ill.
  (h)
  Magnavox Co., The, Components Div., Fort Wayne 4, Indiana
  MALLORY & CO., INC., P. R., 3029 E. Washington Street, Indianapolis 6, Iud. SEE ADV. PGS. 71-74. (h) (p) (v)
  Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y.
  (p)
  Pyramid Electric Co., 155 Oxford St., Paterson, N. J.

N. J. Sangamo Electric Co., Springfield, Illinois (h) Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J.

Aerovox Corp., 740 Belleville Ave., New Bedford,

Mass. (h) CORNELL DUBILIER ELECTRIC CORP., 1000

FO. 81.
Peutschmann Corp., Tobe, Norwood, Mass. (h)
GENERAL ELECTRIC CO., Schenectady 5, N. Y.
SEE ADV. PGS. 5-18. (h)
Micamold Radio Corp., 1087 Flushing Ave.,
Brooklyn 6, N. Y.

Brooklyn 6, N. Y. Sprague Electric Co., North Adams, Mass. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

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Hamilton Blvd., S. Plainfield, N. J. SEE ADV.

Sprague Electric Co., North Adams, Mass.

CAPACITORS—Energy Storage

# CAPACITORS

# CAPACITORS-Fixed

- Aerovox. Corp., 740 Belleville Ave., New Bedford, (h)Mass
- American Condenser Co., 4410 Ravenswood Ave.,

- American Condenser Co., 4410 Ravenswood Ave., Chicago 40, Ill. (h) Amperex Electronic Corp., 25 Washington St., Brooklyn 1, N. Y. (h) (p) (v) BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, Ill. SEE ADV. PG. 214. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., South Plainfield, N. J. SEE ADV. PG. 87. Corwing Glass Works, Corning, N. Y. Crown Capacitor Corp., Minot & Depot St., Wrentham, Mass.

- Wrentham, Mass. Deutschmann Corp., Tobe, Norwood, Mass. (h) Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Dumont Electric Co., 308 Dyckman St., New
- Dumont Electric Co., 308 Dyckman St., New York, N. Y. (h) (p) (v) Eitel-McCullough, Inc., San Bruno, Calif. (v) Electric Auto-Lite Co., Toledo 1, Ohio ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, Ill. (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Herlec Corp., The 422 N. Fifth St., Milwaukee 3, Wisc.

- 3, Wisc. JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158-159.

- ILLINOIS CONDENSER CO., 1616 N. Throop St., Chicago, Ill. SEE ADV. PG. 226.
  Industrial Condenser Corp., 3243 No. Calif. Ave., Chicago 18, Ill.
  Johnson Co., E. F. Waseca, Minn. (h) (p) (v) Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.
  Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
  Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
  MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.

- MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110. Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. Potter Co., 1850 Sheridan Rd., No. Chicago. III. Precision Tube Co., Inc., 3828 Terrace St., Philadelphia 28, Pa. Sangamo Electric Co., Springfield, III. (h) Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J. Sprague Electric Co., North Adams, Mass.

- Solar Mig. Corp., 1445 Hudson Blvd., North Bergen, N. J. Sprague Electric Co., North Adams, Mass. Stackpole Carbon Co., St. Marys, Pa. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225. (h) Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

#### CAPACITORS—Fluid Variable

CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, Ill. SEE ADV. PG, 214.

#### CAPACITORS—Gas-filled

Johnson Co., E. F., Waseca, Minn. (h) (p) (v) Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y. (p) (v)

#### CAPACITORS-Mica Fixed

Aerovox Corp., 740 Belleville Ave., New Bed-

- Activity Cost, 140 Denevine Inter, 160 Denevine Inter, 160 Denevine Inter, 160 Denevine Inter, 160 Denevine Internet Internet
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- ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

- Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
  MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
  Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. (p)
  Sangamo Electric Co., Springfield, Illinois (h)
  Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J.
  Sprague Electric Co., North Adams, Mass.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England

#### CAPACITORS—Mica Transmitting

- Aerovox Corp., 740 Belleville Ave., New Bedford,
- Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Continental Electronics Mfg. Co., 1728 Wood St., Dallas 1, Tex.

- St., Danas I, 1ex.
  Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
  Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
  MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS. 71 74 71-74.
- RADIO CORP. OF AMERICA, RCA Victor Div SEE

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back and Back Covers. Sangamo Electric Co., Springfield, Ill. (h) Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J. Sprague Electric Co., North Adams, Mass. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England Surrey, England

#### CAPACITORS—Mica Trimmer

- Automatic Mfg. Corp., 65 Gouverneur St.,
- Newark, N. J. CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV. PG. 87. Guthman Inc., Edwin I., 15 S. Throop St.,
- Chicago, Ill. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.

- 80.
  Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
  Micacraft Products Inc., 701 McCarter Highway, Newark 5, N. J.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Sangamo Electric Co., Springfield, Ill. (h) Sickles Co., F. W., 165 Front St., Chicopee, Mass.
- Mass. Sprague Electric Co., North Adams, Mass. STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG.

#### CAPACITORS—Neutralizing

- BARKER & WILLIAMSON, 235 Fairfield Ave.,
- Upper Darby, Pa. SEE ADV. PG. 39. BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
- CENTRALAB DIV. of Globe-Union Inc., 900 Keefe Ave., Milwaukee I, Wisc. SEE ADV. PGS. 26, 27.
- CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV.
- PG. 87. Hammarlund Mfg. Co., 460 W. 34th St., New
- York, N. Y. Industrial Condenser Corp., 3243 N. Calif. Ave., Chicago 18, Ill.

JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158, 159.

1949-1950 DIRECTORY of

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  Johnson Co., E. F., Waseca, Minn. (p) (v)
  Millen Mfg. Co., James, 150 Exchange St., Malden 48, Mass.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Sprague Electric Co., North Adams, Mass.
- Sprague Electric Co., North Adams, Mass. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y.

# CAPACITORS—Oil Impregnated

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.

- ford, Mass. (h) American Condenser Co., 4410 Ravenswood Ave., Chicago 40, III. (h) CHICAGO CONDENSER CORP., 3255 W. Armi-tage Ave., Chicago 47, III. SEE ADV. PG. 218. CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, III. SEE ADV. PG. 214. CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV. PG. 87.
- PG. 87. Crown Capacitor Corp., Minot & Depot Sts.,
- Crown Capacitor Corp., Wrentham, Mass. Deutschmann Corp., Tobe, Norwood, Mass. (h) Dumont Electric Co., 308 Dyckman St., New (h) (p) (v)
- Dunont Electric Co., 308 Dyckman St., New York, N. Y. (h) (p) (v) Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, 11l. (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Girard-Hopkins, 1000 40th Ave., Oakland 1, Colif
- Calif.
- Industrial Condenser Corp., 3243 No. Calif Ave., Chicago 18, Ill. (h) MALLORY & CO., INC., P. R. 3029 E. Wash-ington St., Indianopolis 6, Ind. SEE ADV. PGS. 71-74.
- PGS. 71-74. Micamold Radie Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. (p) Potter Co., 1850 Sheridan Rd., No. Chicago, Ill. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Sangamo Electric Co., Springfield Ill. (h) Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J. Snrague Electric Co., North Adams, Mass.

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CAPACITORS—Padder

Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J.
Sprague Electric Co., North Adams, Mass.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Automatic Mfg. Corp., 65 Gouverneur St., Newark N J Newark, N. J. BARKER & WILLIAMSON, 235 Fairfield Ave.,

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
CENTRALAB DIV. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
Electro Motive Mfg. Co., South Park & John St., Willimantic, Conn.
Industrial Condenser Corp., 3243 N. Calif. Ave., Chicago 18, Ill. (h)
INSULINE CORP. OF AMERICA, 36.02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158, 159.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
North American Philips Co., Inc., 100 E. 42nd

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Potter Co., 1850 Sheridan Rd., No. Chicago, Ill.
Sprague Electric Co., North Adams, Mass.

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Special Products Co., Silver Spring, Md. Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y.

**ELECTRONIC and ALLIED PRODUCTS\_** 

# CAPACITORS—Paper

- Aerovox Corp., 740 Belleville Ave., New Bedford, (h) Mass.
- American Condenser Co., 4410 Ravenswood Ave.,
- American Condense: Co., 112 Chicago 40, Ill. (h) Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. CHICAGO CONDENSER CORP., 3255 W. Armi-tage Ave., Chicago 47, Ill. SEE ADV. PG. 218. (h) (p) (v)
- Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Plust Court Corp., 1000
- Hamilton Blvd., South Plainfield, N. J. SEE ADV. PG. 87. Cosmic Radio Corp., 699 E. 135th St., New York, N. Y. Crown Capacator Corp., Minot & Depot Sts., Wwastham, Mass
- Crown Capacator Corp., hunde & Dept. Wrentham, Mass. Deutschmann Corp., Tobe, Norwood, Mass. (h) Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Dumont Electric Co., 308 Dyckman St., New (h) (p) (v)
- Dumont Electric State (h) (p) (v) York, N. Y. Electric Auto-Lite Co., Toledo 1, Ohio Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, Ill.
- cago 41, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y. (h)
- SEE ADV. PGS. 5-18. (h) ILLINOIS CONDENSER CO., 1616 N. Throop St., Chicago, Ill. SEE ADV. PG. 226. Industrial Condenser Corp., 3243 N. Calif. Ave., Chicago 18, Ill. (h) L SEE ADV. PG. 226.
- Legri-S Co., 846 Amsterdam Ave., New York 25,
- MALLORY & CO., Inc., P. R., 3029 E. Wash-ington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. (p) National Union Radio Corp., 350 Scotland Rd.,
- Orange, N. J. Pyramid Electric Co., 155 Oxford St., Paterson,
- N. J.
- N. J. Sangano Electric Co., Springfield, Ill. (h) Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J. Sprague Electric Co., North Adams, Mass. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225. (h) Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# CAPACITORS-Plastic Dielectric

- Aerovox Corp., 740 Belleville Ave., New Bed-Activity Corp., 140 Determine Inter, incer (h) ford, Mass. (h) CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, Ill. SEE ADV. PG. 214. (h) (p) (v) Crown Capacitor Corp., Minot & Depot Sts.,
- Crown Capacitor Corp., Mass. Wrentham, Mass. Deutschmann Corp., Tobe, Norwood, Mass. (h) Dumont Electric Co., 308 Dyckman St., New Ut. A. N. V. (h) (p) (v).
- York, N. Y. (h) (p) (v) Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, Ill. (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. (p) Potter Co., 1850 Sheridan Rd., No. Chicago, III. Sangamo Electric Co., Springfield, III. (h) Sprague Electric Co., North Adams, Mass. TELEX, INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170. UNITED CONDENSER CORP. 207. D. 1001
- UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225. Watertown Mfg. Co., The, Watertown, Conn.

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ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h)

#### **CAPACITORS**—Power Factor

- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. (h) CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, Ill. SEE ADV. PG. 214. (h)
- (h) (p) (v) CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV.
- PG. 87.
- PG. 87. Deutschmann Corp., Tobe, Norwood, Mass. (h) Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, Ill. (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y. (h)
- SEE ADV. PGS. 5-18. (h)

- SEE ADV. PGS. 5-18. (h) Industrial Condenser Corp., 3243 N. Calif. Ave., Chicago 18, Ill. (h) Potter Co., 1850 Sheridan Rd., No. Chicago, Ill. Sprague Electric Co., North Adams, Mass. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. 67.

#### CAPACITORS—Precision Air

- BARKER & WILLIAMSON, 235 Fairfield Ave.,
- Upper Darby, Pa. SEE ADV. PG. 39. Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
- Cardwein M.S. Plainville, Conn. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,
- Mailen Mfg. Co., James, 150 Exchange St., Mailden, Mass.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

# CAPACITORS—Silvered Mica

- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass (h)
- Automatic Mfg. Corp., 65 Gouverneur St., New-
- ark, N. J. CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV. PG. 87
- Electro Motive Mfg. Co., South Park & John St.,
- Electro Motive Mtg. Co., South Park & John St., Willimantic, Conn. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) Legris Co., Inc., 846 Amsterdam Ave., New York 25, N. Y. Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. (p)
- Ross Mfg. Co., 860 Washington St., Burlington, Iowa (h)
- Sangamo Electric Co., Springfield, Ill. Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J.
- Bergen, N. J. Sprague Electric Co., North Adams, Mass. STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England

#### CAPACITORS—Small High Voltage

- American Condenser Co., 4410 Ravenswood Ave. (h)
- Chicago 40, Ill. (h) Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio
- CENTRALAB DIV. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27
- 26, 27. CONDENSER PRODUCTS CO., 1375 N. B St., Chicago 22, Ill. SEE ADV. PG. (h) (p) Branch
- CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., South Plainfield, N. J. SEE ADV. PG. 87.

Deutschmann Corp., Tobe, Norwood, Mass. (h) Dumont Electric Co., 308 Dyckman St., New York, N. Y. (h) (p) (y)

CAPACITORS

- Dumont Electric Co., 308 Dyckman St., New York, N. Y. (h) (p) (v) ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, III. (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. (h) Herlec Corp., The, 422 N. Fifth St., Milwaukee
- 3, Wisc. Industrial Condenser Corp., 3243 N. Calif. Ave.,
- Chicago 18, Ill. (h) JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158,
- Jeminus inclusion in direct ADV. PGS. 158, 159.
  Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
  Magnavox Co., The, Components Div., Fort Wayne 4, Indiana
  Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. (p)
  North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
  Potter Co., 1850 Sheridan Rd., No. Chicago, Ill. Sangamo Electric Co., Springfield, Ill. (h)
  Sprague Electric Co., North Adams, Mass.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225. (h)
  United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England

- England
- Surrey, England WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

#### CAPACITORS-Trimmer

- CENTRALAB DIV. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27. CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV. PC. 97.
- PG. 87. Corning Glass Works, Corning, N. Y. ELECTRICAL REACTANCE CORP., Elm St., Franklinville, N. Y. SEE ADV. PGS. 82, 83. Electro Motive Mfg. Co., South Park & John St.,
- Electro Motive Mfg. Co., South Park & John St., Wilimantic, Conn. Engineering Research Associates. Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn. ERIE RESISTOR CORP., 644 W. 12th St., Erie Pa. SEE ADV. PG. 109. (h) Guthman Inc., Edwin I., 15 S. Throop St., Chi-cago, Ill. Herlec Corp., The, 422 N. Fifth St., Milwaukee 3, Wisc.

- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158, 159.
- 159. Joyner Corp., The, 462 N. Parkside Ave., Chicago 44, Ill. Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. Millen Mfg. Co., James, 150 Exchange St., Maklen Mass
- illen Mfg. Co Malden, Mass. Muter Co., 1255 S. Michigan Ave., Chicago, Ill. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.

AS, Mass. SEE ADV. PGS. 105-108. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. Sangamo Electric Co., Springfield. Ill. (h) Sickles Co., F. W., 165 Front St., Chicopee,

Mass. Special Products Co., Silver Spring, Md. Sprague Electric Co., North Adams, Mass. Stackpole Carbon Co., St. Mary's, Pa. **STANDARD COIL PRODUCTS CO.**, 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219. United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y.

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Mass.

# CAPACITORS

#### CAPACITORS—Trimmer Receiving

- Automatic Mfg. Corp., 65 Gouverneur St., Newark, N.
- CENTRALAB DIV. of Globe-Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
- CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV. PG. 87.

- Corning Glass Works, Corning, N. Y. Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
- Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) Herlec Corp., The, 422 N. Fifth St., Milwaukee
- 3, Wisc. INSULINE CORP. OF AMERICA, SULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- 80 MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Miller Co., J. W. 5917 S. Main St., Los Angeles, Calif.
- North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. Sangamo Electric Co., Springfield, Ill. (h) Sickles Co., F. W., 165 Front St., Chicopee,
- Mass.
- Sprague Electric Co., North Adams, Mass. STANDARD COLL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219.
- United Insulator Co., Ltd., Tolworth-Surbiton-
- Surrey, England Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y.

#### CAPACITORS-Vacuum

- Amperex Electronic Corporation, 25 Washington
- Amperex Electronic Corporation, 25 Washington St., Brooklyn 1, N. Y.
  Eitel-McCullough Inc., San Bruno, Calif.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  General Electronics, Inc., 101 Hazel St., Pater-son, N. J.
- son, N. J. Gilandun Electronics, 14 Union Ave., Campbell,
- Calif
- JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158, 159.
- 109. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, Eng-land (h) (p) (v)
- United Electronics Co., 42 Spring St., Newark 2, N. J.

#### CAPACITORS—Variable Receiver Tuning

- Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
  Clarkstan Corp., 11927 W. Pico Blvd., Los Angeles 34, Calit.
  Engineering Research Associates, Inc., 1902 W.
- Minnehaha Ave., St. Paul 14, Minn. General Instrument Corp., 829 Newark Ave.,
- Elizabeth 3, N. J. Hamnarlund Mfg. Co., 460 W. 34th St., New
- York, N. Y. (h) INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- 80. Kings Electronics Co., Inc., 372 Classon Ave.,
- Brooklyn 5, N. Y. MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110. Millen Mfg. Co., Malden, Mass. Co., James, 150 Exchange St.,
- Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Cant.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
- D-24

- Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, 111.
- Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y.
  Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y.

#### CAPACITORS—Variable Transmitter Tuning

- Andrew Corp., 363 E. 75th St., Chicago 19, Ill. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. BUD RADIO, INC., 2118 E. 55th St., Cleve-land 3, Ohio. SEE ADV. PG. 19. Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn. Eitel-McCullough, Inc., San Bruno, Calif. (p) (v) Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn. Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y. JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158, 159. Johnson Co., E. F., Waseca, Minn. (h) (p) (v)

- Johnson Co., E. F., Waseca, Minn. (h) (p) (v) Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
- Lapp Insulator Co., Inc., 31 Gilbert St., Le Roy, N. Y.
- N. Y.
  Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. T.
  Peerless X-Ray Labs. & Mfg. Corp., 467 10th Ave., New York 18, N. Y.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radio Condenser Co., Camden, N. J.

#### CAPACITORS—Wax Impregnated

- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass (h)
- American Condenser Co., 4410 Ravenswood Ave., Chicago 40, Ill. (h) CENTRALAB DIV. of Globe-Union Inc., 900 Keefe
- Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
- 26, 27. CHICAGO CONDENSER CORP., 3255 W. Armi-tage Ave., Chicago 47, III. SEE ADV. PG. 218. CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, III. 6EE ADV. PG. 214. CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., South Plainfield, N. J. SEE ADV. PG. 87. Crown Capacitor Corp., Minot & Depot Sts., Wrentham. Mass.

- Crown Capacitor Corp., Minot & Depot Sts., Wrentham, Mass. Deutschmann Corp., Tobe, Norwood, Mass. (h) Dumont Electric Co., 308 Dyckman St., New York, N. Y. Electric Auto-Lite Co., Tolede 1, Ohio ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. (h) Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, III. (h)

- Girard-Hopkins, 1000 40th Ave., Oakland Calif
- ILLINOIS CONDENSER CO., 1616 N. Throop St., Chicago 22, Ill. SEE ADV. PG. 226. Industrial Condenser Corp., 3243 No. Calif. Ave.,

- Industrial Condenser Corp., 3243 No. Calif. Ave., Chicago 18, Ill. (h)
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
  MALLORY & CO., INC., P. R., 3029 E. Wash-ington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
  Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. (p)
  National Union Radio Corp., 350 Scotland Rd., Orange, N. J.
  Potter Co., 1850 Sheridan Rd., No. Chicago, Ill. Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J.
  Sprague Electric Co., North Adams, Mass.

- Solar Mig. Corp., 1445 Induson Biva., North Bergen, N. J.
   Sprague Electric Co., North Adams, Mass.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
   UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225.

# CARDIOTACHOMETERS

- Edin Electronics Co., 207 Main St., Worcester, Mass.
- Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y. ELECTRODYNE COMPANY, 899 Boylston St.,

1949-1950 DIRECTORY of

- Boston 15, Mass. SEE ADV. PG. 188. Electronic Supply Co., 207 Main St., Worcester,
- Mass. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y. Waters Conley Co., 501 First St., N. W.,
- Rochester, Minn.

#### CASES, PORTABLE

#### (for Radios, Phonographs, Amplifiers, etc.)

- Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, Ill.

**CELLS**—Photoelectric

Conn

**CEMENTS**—Radio

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- Audar Inc., Argos, Ind. Boonton Molding Co., Boonton, N. J.
- Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill. Conn Ltd., C. G., Electronics Div., Elkhart, Ind. Eastern Case Co., 5401 5th Ave., Brooklyn, N. Y.
- Garrard Sales Corp., 315 Broadway, New York
- 7, N. Y.
   Hollywood Radio Cabinet Co., 924 N. Formosa Ave., Hollywood, Calif.
   INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 200 80
- 80. KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. P.G 50. La Magna Mfg. Co., Inc., East Rutherford, N. J. Minute Man Products, Inc., 309 E. 22nd St., New York 10, N. Y. Radiad Service, 720 W. Schubert Ave., Chicago
- Radiad Service, 720 W. Schubert Ave., Chicago 14, III.
  Radio Merchandise Sales, 550 Westchester Ave., New York 55, N. Y.
  REF Mfg. Corp., Jericho Turnpike, Mineela, N. Y.
  Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
  Skydyne Inc., River Rd., Port Jervis, N. Y.
  Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
  Stokes Molded Products, Inc., Taylor St. at Webster, Trenton, N. J.
  Triad Portable Case Corp., 2545 Boston Rd., Bronx 67, N. Y.
  Waterbury Companies, Inc., Waterbury 90, Conn.
  WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.

American Scientific Co., P. O. Box 1, Highbridge Station, New York 52, N. Y.
BRADLEY LABS., INC., 82 Meadows St., New Haven 10, Conn. SEE ADV. PG. 171.
CONTINENTAL ELECTRIC CO., Geneva, Ill. SEE ADV. PG. 176.
Eby. Inc. Hugh. H. 4700. Statistical Statistics

Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.

GENERAL ELECTRIC CO., Schenectady 5, N. Y.

GENERAL ELECTRIC CO., Scheneetady 5, N. Y. SEE ADV. PGS. 5-18.
 International Rectifier Corp., 6809 S. Victoria Ave., Los Angeles 43, Calif.
 RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
 Ripley Co., Inc., P.O. Box 31, Middletown, Covers.

Standard Arcturus Corp., 54 Clark St., Newark

VICKERS ELECTRIC DIV., Vickers, Inc., 1815 Locust St., St. Louis 3, Mo. SEE ADV. PG. 194.

Ambroid Co., 305 Franklin St., Boston 10, Mass. **AMERICAN PHENOLIC CORP.**, 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. American Products Mfg. Corp., Oleander & Dublin Sts., New Orleans 18, La. American Resinous Chemical Co., 103 Foster

St., Peabody, Mass. Arco Co., 7301 Bessemer Ave., Cleveland 4,

Armstrong Cork Co., Lancaster, Pa. Bakelite Corp., 30 E. 42nd St., New York 17,

- Bakente Corp., 30 E. Taha Gu, Taha Gu, Taha Su, Y.Y.
  Borden Co., The, Chemical Div., Durite Plastics, 5000 Summerdale Ave., Phila. 24, Pa.
  Carron Mig. Co., 415 S. Aberdeen St., Chicago, Ill.
  General Cement Mfg. Co., 919 Taylor Ave., Philas J. P.
- Rockford, Ill.

- Rockford, Ill. Haynes Labs., Inc., C. W., 61 Chandler St., Springfield, Mass. INSL-X CO, INC., THE, Water Street, Ossining, N. Y. SEE ADV. PG. 160. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Maas & Waldstein & Co., 438 Riverside Ave., Newsrift 4. N. I.
- Maas & Waldstein & Co., 438 Riverside Ave., Newark 4, N. J.
  Moyen, C. P., 908 Chicago Ave., Chicago, Ill.
  Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
  Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.
  Plax Corp., P.O. Box 1019, Hartford, Conn. Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.
- 34, Mass.
- Sauereisen Cements Co., Sauereisen Building,
- Sabereisen Centents Co., Catercart Participal Pittsburgh 15, Pa. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

#### CERAMICS

#### See Insulation Materials

#### CHAMBERS\_Test

- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
  BOWSER, INC., Refrigeration Div., 420 Lexing-ton Ave., New York, N. Y. SEE ADV. PGS. 105, 166.
  Tenny Engineering Inc., 26 Ave. B., Newark 5, N. J. American Instrument Co., 8030 Georgia Ave.,

### CHANGERS-Automatic Record

- Admiral Corp., 3800 Cortland St., Chicago 47, TIF
- Bogen Co., David, 663 Broadway, New York 12, Crescent Industries, Inc., 4140 Belmont Ave.,
- Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill. Garrard Sales Corp., 315 Broadway, New York 7, N. Y. General Instrument Corp., 829 Newark Ave.,
- Elizabeth 3, N. J Maguire Industries Inc., Electronics Dept. Bridge-
- maguite infinities inc., Electronics rept. Bruger port, Conn.
   Milwaukee Stamping Co., 800 S. 72nd St., Mil-waukee, Wisc.
   Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, TH

M. Corp., Benton Harbor, Mich.
 Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 39, Ill.

#### CHARGERS-Battery

See Battery Chargers

#### CHASSIS—Metal

- Alden Products Co., 117 No. Main St., Brockton
- 64, Mass. ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV.
- PG, 174. Bardwell & McAlister, Inc., P. O. Box 1310, Hollywood, Calif.
- Hollywood, Calif.
  Barreca Products Co., Inc., 84 Bowery, New York 13, N. Y.
  BUCK ENGINEERING CO., INC., 37-41 Marcy St., Freehold, N. J., SEE ADV. PG. 224.
  Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill.
  Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.
- York, N. Y. Conn Ltd., C. G., Electronics Div., Elkhart, Ind. Columnation, C. G., Electronics Div., Elkhart, Ind. Colgate Mfg. Corp., Lindenhurst, L. L., N. Y. Dahlstrom Metallic Door Co., Jamestown, N. Y. Eclipse Mfg. Co., Inc., 294 E. 137th St., New York 54, N. Y.
- Edin Electronics Co., 207 Main St., Worcester, Mass.

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- Electronic Supply Co., 207 Main St., Worcester, Mass.
- Mass. Falstrom Co., 44 Falstrom Court, Passaic, N. J. Garrett Co., Inc., G. K., 1421 Chestnut St., Philadelphia 2, Pa. Gorkam Co., Bronze Div., Providence 7, R. I. Greene Mfg. Corp., G. G., Warren, Pa. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 50

- 80. Kaar Engineering Co., 2815 Middlefield Rd.,
- Kaar Engineering Co., 2815 Inducement Fu., Palo Alto, Calif.
  KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50.
  La Magna Mfg. Co., Inc., East Rutherford, N. J. Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
  Lower Corp., 60 Broadway Brooklyn N. Y.
- Lovik 23, N. Y.
  Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
  Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
  Lorentzen Inc., H. K., 391 W. Broadway, New York 12, N. Y.
  Measurement Engineering Ltd., Arnprior, On-taria Canada

- How 12, N. 1.
  Measurement Engineering Ltd., Arnprior, Ontario. Canada
  Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
  Minute Man Products, Inc., 309 E. 22nd St., New York 10, N. Y.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
  OLYMPIC TOOL & MFG. Co., INC., 39 Chambers St., New York 7, N. Y. SEE ADV. PG. 174.
  Par-Metal Products Corp., 32-62 49th St., L. I. City 3, N. Y.
- City 3, N. Y. Paul & Beekman Inc., 1801 Cortland St., Phila-
- delphia 40, Pa
- Pierce Template Corp., 2646 N. Coral St., Phila-delphia 25, Pa.
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hickswille, L. I., N. Y. Radiad Service, 720 W. Schubert Ave., Chicago
- 14. III.
- RADIO CORP. OF AMERICA, RCA Victor Div.. Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. REF Mfg. Corp., Jericho Turnpike, Mineola,
- N.Y.
- Reiner Electronics Co., 152 W. 25th St., New York, N. Y. Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn.
- Robinson Aviation, Inc., Teterboro, N. J.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
  Sperman Metal Specialties, 27 Columbia Place, Brooklyn 2, N. Y.
  Stamford Metal Specialty Co., Inc., 429 W.
  Broadway, New York 12, N. Y.
  Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
  Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
  United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
  WALTER CO., S., 1400 Atlantic Ave., Brooklyn

- York, N. Y.
  WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
  WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.
  Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass.
  Worcester Pressed Steel Co., 100 Barber Ave., Worcester Mass Worcester, Mass.

#### CHASSIS-Wood

La Magna Mfg. Co., Inc., East Rutherford, N. J.

#### CHECKERS

See Also Analyzers

#### CHECKERS—Crystal Rectifier

MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79.

#### CHECKERS-QX

BOONTON MADIO CORP., Boonton, N. J. SEE ADV. PG. 61

Heath Co., Benton Harbor, Mich.

#### CHECKERS-vhf Circuit

BOONTON RADIO CORP., Boonton, N. J. SEE

ADV. PG. 61. Heath Co., Benton Harbor, Mich. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ilk

#### CHEMICALS—Luminescent

- Carbide and Carbon Chemicals Corp., Unit of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. du Pont de Nemours & Co., Inc., E. I., Patterson Screen Div., Towanda, Pa. General Cement Mfg. Co., 919 Taylor Ave., Reckford III

- Rockford, III.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.

- 4, N. Y.
  Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa.
  Merck & Co., Inc., Rahway, N. J.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind.

#### CHOKES-Audio

E. Columbus, Ind.

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Pa.

Acro Products Co., 5330 Baltimore Ave., Phila. Pa. Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign Inc., 241 Fairfield Ave., Upper Darby,

Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y. AMERICAN TELEVISION & RADIO CO., 300 E.

Fourth St., St. Paul 1, Minn. SEE ADV. PG.

AMERICAN TRANSFORMER Co., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116, Amplifier Corp. of America, 396 Broadway, New

AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94.

Minneapolis 7, Minn. SEE ADV. PG. 94. Best Mfg. Co., Inc., 1200 Grove St., Irvington 1,

N. J. BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212. BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45. Burnet Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif. Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. Columbus Process Co., Inc., State & Maple Sts., E. Columbus, Ind.

E. Columbus, Ind. DX Radio Products Co., Inc., 1200 N. Claremont Ave., Chicago 22, Ill. Dinion Coil Co., Inc., Caledonia, N. Y. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. ELECTRONIC TRANSFORMER CO., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200. Empire Coil Co., Inc., 233 Huguenot St., New Rochelle, N. Y. Engineering, Lab. Inc., 602 E. 4th St. Tube. 2

Rochelle, N. Y. Engineering Lab., Inc., 602 E. 4th St., Tulsa 3,

FEDERAL TELEPHONE AND RADIO CORP. FEBRAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 96

80. Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.

Inc., 3820 Colerain

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# CHOKES

- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. General Transformer Corp., 4321 N. Knox Ave.,

- General Transformer Corp., 4321 N. Knox Ave., Chicago 41, Ill.
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132.
  Halldorson Co., The, 4500 Ravenswood Ave., Chicago 40, Ill.
  Inductive Equipment Co., Gettysburg, Pa.
  INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113. Union, N. J.
  Jefferson Electric Co., Bellwood, Ill.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

- York 57, N. Y. KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.
- Langevin Manufacturing Corp., 37 W. 65th St.,

- Langevin Manufacturing Corp., 37 W. 65th St., New York 23, N. Y.
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
  Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
  Magnetic Devices Corp., 232 Broad Ave., Pali-sades Park. N. J.
  Magnetic Products Corp., The, Norwalk, Conn.
  Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa.
  Maguire Industries Inc., Electronics Dept., Bridge-port, Conn.
- port, Conn. elco Products Inc., 22 E. Hennepen Ave., Melco
- Minneapolis 1, Minn. Merit Coil & Transformer Corp., 4427 N. Clark

- Merit Coil & Transformer Corp., 4421 N. Claik St., Chicago 40, Ill. Miller B. F., P. O. Box 568, Trenton 4, N. J. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. Osborne Transformer Corp., 948 E. Lafayette Ave. Datrait 7. Mich.
- Osborne Transformer Corp., 948 E. Latayette Ave., Detroit 7, Mich. Peerless Electrical Products Co., 6920 McKinley
- Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles, Calif.
   PICKERING AND CO., 309 Woods Ave., Ocean-side, L. I., N. Y. SEE ADV. PG. 130.
   Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
   Precision Transformer Co., Inc., 1101 N Paulina Conference 20, 201

- Precision Transformer Co., Inc., 1101 N Paulina St., Chicago 22, Ill. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio-Music Corp., Port Chester, N. Y. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
- Waltham 54, Mass. SEE ADV. PG. 55.
  Red Arrow Electric Corp., 100 Colt St., Irvington 11, N. J.
  S. N. C. Mfg. Co., Inc., Oshkosh, Wisc.
  Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
  Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
  Southwestern Industrial Electronic Co., 2831
  Post Oak Bd. Houston 19, Texas

- Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Standard Electrical Products Co., Dayton 3,
- STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, III. SEE ADV. PG. 207.
- SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV.
- PG. 33. PG. 33.
   TELEX, INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170.
   Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.
   South Arroyo Park-

- Los Angeles 22, Calif. Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif. Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
- Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

#### CHOKES—Filter

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- ACME ELECTRIC CORP., Cuba, N. Y. SEE ADV. PG. 231
- Acro Products Co., 5330 Baltimore Ave., Phila.

- Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 247 Fairfield Ave., Upper Darby,
- Pa. Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
- New York 13, N. Y. AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116. Amplifier Corp. of America, 396 Broadway, New York 13, N. Y. NEW York 13, N. Y.
- Ampliner Corp. of America, 556 Bloadway, New York 13, N. Y. AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94. Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
- 11, N. J. BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212. Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. Columbus Process Co., Inc., State & Maple Sts., E. Columbia Ind.

- Columbus Process Co., Inc., State & Maple Sts., E. Columbia, Ind.
  Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri
  CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224.
  Control Corp., 718 Central Ave., Minneapolis 14, Minn.
  D. & M. Mfg. Co., 2 Delford Ave., Bergenfield, N. J.
  DX Radio Products Co., Lond 1000 M. Cit.

- N. J. DX Radio Products Co., Inc., 1200 N. Claremont Ave., Chicago 22, 111. Dinion Coil Co., Inc., Caledonia, N. Y. Dormitzer Electric & Mig. Corp., 782 Common-wealth Ave., Boston 15, Mass. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Electran Mig. Co., 4596 Elston Ave., Chicago 30, 111.

- 30. Ill. Electricoil Transformer Co., 421 Canal St., New

- Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
   Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
   ELECTRONIC TRANSFORMER CO., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.
   Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.
   FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Bd., Cliffon, N. J. SEE ADV.
- PEDERAL IELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG.
- 86.
- Gov.
   Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
   GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
- General Transformer Corp., 4321 N. Knox Ave.,
- General Transformer, and the Chicago 41, Ill. GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132. Halldorson Co., The, 4500 Ravenswood Ave., Halldorson Co., T Chicago 40, Ill.
- Inductive Equipment Co., Gettysburg, Pa. Inductive Equipment Co., Gettysburg, Fd. INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Jefferson Electric Co., Bellwood, Ill.

- Joyner Corp., The, 462 N. Parkside Ave., Chicago
- Joyner Corp., Ine, 462 N. Farksher Ave., Chicago 44, III. K-V Transformer Co., 4414 Park Ave., New York 57, N. Y. KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139. Manufacturing Corp. 37 W 65th St.
- 138, 139.
  Langevin Manufacturing Corp., 37 W. 65th St., New York 23, N. Y.
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
  Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
- Magnetic Devices Corp., 232 Broad Ave., Pali-sades Park, N. J. Magnetic Products Corp., The, Norwalk, Conn. Maguire Industries Inc., Electronics Dept., Bridge-
- port Conn. Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn.
- Mellaphone Corp., Rochester 2, N. Y.
- Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.

Miller, B. F., P. O. Box 568, Trenton 4, N. J. Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.

1949-1950 DIRECTORY of

- Calif.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
  Osborne Transformer Corp., 948 E. Lafayette Ave., Detroit 7, Mich.
  Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill.

- St., Chicago 22, Ill. RADIO CORP. OF AMERICA, RCA Victor Div.,
- RADIO LORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
   RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
   Red Arrow Electric Corp., 100 Colt St., Irvington
- S. N. C. Mfg. Co., Inc., Oshkosh, Wis.
   S-W Inductor Co., 1056 N. Wood St., Chicago,
- Ill. Scott Inc., Herman Hosmer, 385 Putnam Ave.,
- Cambridge 39, Mass. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- Pa.

- Pa.
  Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
  Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV. PG. 207.

PG. 207. SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV.

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PG. 33. Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif. Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

Wheeler Insulated Wire Co., Inc., Waterbury 91,

Acro Products Co., 5330 Baltimore Ave., Phila. Pa. Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby,

Altece Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y. American Transformer Co., 178 Emmet St.,

American Transformer Co., 178 Emmet St., Newark, N. J.
Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94.
BURNELL & CO., 45 Waburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45.
Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.
Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y.

CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Dinion Coil Co., Inc., Caledonia, N. Y. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.

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**CHOKES**—Hermetically Sealed

- FEDERAL TELEPHONE AND RADIO CORP. 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG.
- 86.

Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- SEE ADV. PGS. 5-18. Inductive Equipment Co., Gettysburg, Pa. INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113. Islip Radio Mig. Corp., Beech St., Islip, N. Y. K-V Transformer Co., 4414 Park Ave., New York 57 N. V.

- 57, N. Y. KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.
- Langevin Mfg. Corp., 37 W. 65th St., New York
- Langevin Mig. Colp., St W. ooth St., New York 23, N. Y.
   LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
   Magnetic Products Corp., The, Norwalk, Conn.
   Magnetic Winding Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa.

Maguire Industries Inc., Electronics Dept., Bridge-

port, Conn. Melco Products Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn. Millen Mfg. Co., James, 150 Exchange St., Mal-

- Millen Mfg. Co., James, 150 Exchange St., Mat-den, Mass.
  NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
   RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
   S. N. C. Mfg. Co., Inc., Oshkosh, Wis.
   S-W Inductor Co., 1056 N. Wood St., Chicago, III

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- Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- Fa.
   SORENSEN & CO., INC., 375 Fairfield Ave., Stamford Cohn. SEE ADV. PG. 211.
   Standard Electrical Products Co., Dayton 3, Ohio
   SUPER ELECTRIC PRODUCTS CORP., 1057
   Summit Ave., Jersey City, N. J. SEE ADV. PG. 33
- PG. 33. Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.
- Los Angeles 22, Calif. Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif. Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

#### CHOKES-Power

- Acro Products Co., 5330 Baltimore Ave., Phila. Pa. Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign Inc., 241 Fairfield Ave., Upper Darby,
- Pa.
- Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y. AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. SEE ADV. PG.
- AUDIO DEVELOPMENT CO., 2833 13th Ave.
- AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94.
  BOND ELECTRONICS CORP., 88 Franklin Pl., Summit, N. J. SEE ADV. PG. 212.
  Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.
  Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
  Cima Corp., 91 Boylston St., Jamaica Plain 32, Mass.

- Mass. Control Corp., 718 Central Ave., Minneapolis 14,
- Minn.

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- DANO ELECTRIC CO., Winsted, Conn. SEE ADV. PG. 192
- Dinion Coil Co., Inc., Caledonia, N. Y. Electran Mfg. Co., 4596 Elston Ave., Chicago 30, TH
- Electricoil Transformer Co., 421 Canal St., New

- Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
  Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
  ELECTRONIC TRANSFORMER CO., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS, 129, 131, 133, 135.
  FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
  Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
- Cincinnati 23, Ohio GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS.
- 5-18. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-13.
- General Transformer Corp., 4321 N. Knox Ave.,
- Chicago 41, Ill. GRAMER COMPANY, THE, 2734 N. Pulaski Rd.,
- GRAMER CUMPANY, THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132. Halldorson Co., The, 4500 Ravenswood Ave., Chicago 40, Ill. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. K-V Transformer Co., 4414 Park Ave., New York 57, N. Y.
- 57, N. Y. KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS.
- Langevin Manufacturing Corp., 37 W. 65th St.,
- Langevin Manufacturing Corp., 37 W. 65th St., New York, N. Y.
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
  Magnetic Devices Corp., 232 Broad Ave., Palis-ades Park, N. J.
  Magnetic Products: Corp., The, Norwalk, Conn.
  Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hohson Blvd., Easton, Pa.
  Maguire Industries Inc., Electronics Dept., Bridge-port. Conn.

- port, Conn.
- Melco Products Inc., 22 E. Hennepen Ave., Min-

- Melco Products Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn.
  Mellaphone Corp., Rochester 2, N. Y.
  Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
  Miller, B. F., P. O. Box 568, Trenton 4, N. J.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
  Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
- ton 3, N. J.
- Northern Communications Mfg. Corp., 210 E. 40 Northern Communications Mig. Corp., 210 E. 40 St., New York 16, N. Y.
  OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201.
  Osborne Transformer Corp., 948 E. Lafayette

- Ave., Los Angeles 1, Calif.
- Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill. RADIO CORP. OF AMERICA, RCA Victor Div.
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
   RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
- Red Arrow Electric Corp., 100 Colt St., Irvington

- Red Arrow Electric Corp., 100 Cort St., Itvington 11, N. J.
  S. N. C. Mfg. Co., Inc., Oshkosh, Wis.
  SORENSON & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG: 211.
  Standard Electrical Products Co., Dayton 3, Ohio
  STANDARD TRANSFORMER CORP., Elston, Undrig & Addison Chicago 18, III. SEE ADV. Kedzie & Addison, Chicago 18, Ill. SEE ADV. 207
- SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33.
- Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.
- Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif. Triad
- Transformer Mfg. Co., 423 N. Western e., Los Angeles 4, Calif.
- Ave., Los Angeles 4, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

CHOKES

Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

# CHOKES-r-f (Heavywire Low Voltage)

Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, m

- Fast & Co., John E., 3123 N. Pulaski Rd., Chicago 41, Ill. Rollan Electrical Co., 8020 S. South Park, Chi-
- cago, Ill.

#### CHOKES-r-f & i-f

BARKER & WILLIAMSON, 235 Fairfield Ave.,

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  BOND ELECTRONICS CORP., 88 Franklin Pl., Summit, N. J. SEE ADV. PG. 212.
  BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
  Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
  C. B. Mir Co. 480 Brasma St. New York 12.
- C. B. Mfg. Co., 480 Broome St., New York 13,
- N. Y. CAMBRIDGE THERMONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG, 178. Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill. Cima Corp., 91 Boylston St., Jamaica Plains 32,
- Mass.
- Mass. Clarostat Mfg. Co., Inc., 130 Clinton St., Breok-lyn 2, N. Y. Clippard Instrument Laboratory, Inc., 1125 Bank St., Cincinnati 14, Ohio Coil Winders Inc., 61 Bergen St., Brooklyn 2,
- N. Y. Columbus Process Co., Inc., State & Maple Sts.,
- E. Columbus, Ind. Communications Par Communications Parts, 1101 N. Paulina St., Chicago 22, III. Continental Electronics Mfg. Co., 1728 Wood St.,

Continental Electronics Mig. Co., 1728 Wood St., Dallas I, Texas ELECTRICAL REACTANCE CORP., Elin St., Franklinville, N. Y. SEE ADV. PGS. 82, 83. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.

Electronic Corls, Inc., 44 Taylor St., Springfield,

Mass. Essex Electronics, Berkeley Heights, N. J. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Foster Transformer Co., Inc., 3820 Colerain Ave., Circinetti 22 Ohio

Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. SEE ADV. PG. 226.
GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS, 114, 115.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG. 188.

Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. SEE ADV. PG, 112.
Horther Co. T. J. 2508 14 W. Lemman Act.

PG. 112. Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago, Ill. Inductive Equipment Co., Gettysburg, Pa. INSTRUMENT RESISTORS INC., 1036 Com-merce Ave., Union, N. J. SEE ADV. PG. 113. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.

Johnson Co., E. F., Waseca, Minn. Joyner Corp., The, 462 N. Parkside Ave., Chicago 44, Ill.

44, Ill. Leonard Electric Products Co., 1562 61st St., Brooklyn, N. Y. LEWIS SPRING & MFG. CORP., 2646 North Ave., Chicago 47, Ill. SEE ADV. PG. 44. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. Maguire Industries Inc., Electronics Dept., Bridge-

magine indicates inc, Dictiones Dept., Dittge-port, Conn.
MALLORY & CO., INC., P. R., 3029 E. Wash-ington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.

MEASUREMENTS CORP., Boonton, N. J. SEE

ADV. PG. 110. Meissner Mfg. Div., Maguire Industries Inc., Mt.

D-27

Mass.

188.

Carmel, Ill.

# CHRONAXIMETERS

1949-1950 DIRECTORY of

- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Miller Co., J. W., 5917 S. Main St., Los Angeles,
- Calif. Monroe Coil Co., 1606 N. California St., Chicago,
- III. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, III. SEE ADV. PG. 201. Precise Mig. Co., 24-34 New Chambers St., New York 7, N. Y. Precision Resistor Co., 334 Badger Ave., Newark
- 8, N. J. Precision Tube Co., Inc., 3828 Terrace St., Phila-
- Precision Tube Co., Inc., 3828 Terrate St., Finita-delphia 28, Pa. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. S-W Inductor Co., 1056 N. Wood St., Chicago,
- 111.
- Schutter, Carl W., Rockville Center, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219.
- 213.
   Stanwyck Winding Co., 102-104 S. Lander St., Newburgh, N. Y.
   SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV.
- PG. 33. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.
- Engineering Corp., 99 Wall St., New Teleradio
- York, N. Y. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

#### CHRONAXIMETERS

Electro-Medical Lab., Inc., Holliston, Mass. ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.

#### CHRONOGRAPHS—Inertialess

Airlectron, P. O. Box 151, Caldwell, N. J. Alden Products Co., 117 N. Main St., Brockton

- 64, Mass. **AMERICAN TIME PRODUCTS INC.**, 580 Fifth Ave., New York 19, N. Y. SEE ADV. PG. 216. **ATOMIC INSTRUMENT CO.**, 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Electro-Medical Lab. Inc., Holliston, Mass. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Mass

#### **CHRONOSCOPES**

- Airlectron, P. O. Box 151, Caldwell, N. J. AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. SEE ADV. PG.
- Berkeley Scientific Co., 6th & Nevin, Richmond, Calif.
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Rawson Electrical Instrument Co., 110 Potter St.,
- Cambridge 42, Mass.

#### CIRCUITS—Printed or Stamped

- Airlectron, P. O. Box 151, Caldwell, N. J. CENTRALAB, DIV. of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.
- PGS. 26, 27. Cossor (Canada) Ltd., 30-303 Windsor St., Hali-fax, N. S., Canada Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. General Ceramics & Steatite Corp., Keasbey, N. J. Herlec Corp., The, 422 Fifth St., Milwaukee 3, Wis
- Wis.
- Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.

### CITIZENS RADIO

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Citizens Radio Corp., 1869 Prospect, Cleveland, Ohio

Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio Hallicrafters Co., 4401 W. Fifth Ave., Chicago

24, Ill.

#### CLIPS-Grid

LEWIS SPRING & MFG. CORP., 2646 North Ave., Chicago 47, Ill. SEE ADV. PG. 44. WEBSTER SPRING CORP., 97 South 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.

# CLIPS & CLAMPS-Test & Tube

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
- Alden Products Co., 117 N. Main St., Brockton 64, Mass.
- Birtcher Corp., 5087 Huntington Dr., Los Angeles 32, Calif.
- be, Catt.
  Frankel Connector Co., 177 Hudson St., New York, N. Y.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  Granmes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
  Generative Mig. Co. Lan. The C.F. Exc. Mat. No.

- Gregory Mfg. Co., Inc., The, 67 Franklin St., New Haven 11, Conn. INSULINE CORP. OF AMERICA, 36.02 35th
- SULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- Johnson Co., E. F., Waseca, Minn. Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y. Littelfuse, Inc., 4757 Ravenswood Ave., Chicago
- 40, III. Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass. Mueller Electric Co., 1583 E. 31st St., Cleveland
- It, Ohio
   NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS, 105-108.
   Penn-Union Electric Corp., 315 State Street, Erie,
- Prestole Corp., 3119 Bellevue Rd., Toledo 6, Ohio Rapid Specialties Co., 325 W. Huron St., Chicago
- Rapid Specialties Co., 325 W. Huron St., Chicago 10, Ill.
  Reliable Spring & Wire Forms Co., Fulton Road and Paris Ave., Cleveland 9, Ohio
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.
  Swith Lee Herman H. 405 44th St. Brooklyn

- Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. States Co., 19 New Park Ave., Hartford 6, Conn. Thompson Corp., The, George S., South Pasadena, Calif.
- Times Facsimile Corp., 229 W. 43rd St., New
- York, N. Y. Tinnerman Products Inc., 2038 Fulton Rd., Cleveland 13, Ohio Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.
- Volkert Metal Stampings Inc., John, 141 Spencer St., Brooklyn 5, N. Y.

Volkert Metal Stampings Inc., John, 141 Spencer St., Brooklyn 5, N. Y.
WEBSTER SPRING CORP., 97 S. 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.
Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass.
Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

#### **CLOTHS**—Speaker Grille

- Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y
- Bestcraft Products, 14 Delancey St., New York, N. Y. Feit Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- General Cement Mig. Co., 919 Taylor Ave., Rockford, Ill.
  J. F. D. MFG. CO., 6101-23 Sixtenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Olek & Sons, Inc., A., 4757-59 Melrose St., Philadelphia 37, Pa.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

#### CLOTHS-Woven Wire

- Austin Co., O., 335 Throop Ave., Brooklyn 21,
- N. Y. Bestcraft Products, 14 Delancey St., New York, N. Y.

- Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th Street, Cleveland 5, Ohio
- Flock Process Co., Velvetone Div., 3 Quincy St., Norwalk, Conn. General Cement Mfg. Co., 919 Taylor Ave., Rock-

- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
  JELLIFF MFG. CORP., C. 0., 200 Pequot Ave., Southport, Conn. SEE ADV. PG. 102.
  Keashey & Mattison, Ambler, Pa.
  Schott, Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Wickwire Spencer Steel, Div., The Colorado Fuel and Iron Corp., 500 5th Ave., New York 18, N Y. N. Y.

#### **COATINGS**—Conductive

COATINGS-Protective

Mass.

N.Y

See Also, Graphite, Colloidat

- Acheson Golloids Corp., Port Huron, Mich. Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- Centro Research Laboratories, Inc., Briarcliff
- Manor, N. Y. Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y.
- Iyn 2, N. Y. Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rock-Content and Content Mfg. Co., 919 Taylor Ave., Rock-
- General Cement Mg. ford, Ill. Hague & Co., Inc., Alfred, 227 34th Street, Brooklyn, N. Y. Maas & Waldstein Co., 438 Riverside Ave.,
- Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J. U. S. Stoneware Co., The, Akron 9, Ohio Weinschel Engineering Co., 123 William St., New York 7, N. Y.

# COATINGS-CONDUCTIVE-Tube Interior Acheson Colloids Corp., Port Huron, Mich. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

Alden Products Co., 117 N. Main St., Brockton,

Peabody, Mass. Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.

N. Y. Bakelite Corp., 30 E. 42 St., New York 17, N. Y. Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J. Centro Research Laboratories, Inc., Briarcliff Manor, N. Y. Dow Chemical Co., Midland, Mich. Dow Corning Corp., Midland, Mich. du Pont de Nemours & Co., Inc., E. I., Wilming-ton 98, Del. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y. Ervotian Lacouer Mfg. Co., 1270 Sixth Ave., New

Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y. Esso Standard Oil Co., 15 W. 51st St., New York

Pranklin Paint & Varnish Co., Benjamin, 4820 Langdon St., Philadelphia 24, Pa.
 General Cement Mfg. Co., 919 Taylor Ave., Rock-ford Ull

General Culture ingle Co., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. George Co., P. D., 5200 N. 2nd St., St. Louis,

Mo.
Goodyear Tire & Rubber Co., Chemical Div., 1144
Market St., Akron 16, Ohio
Heresite and Chemical Co., Manitowoc, Wis.
Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
INSL-X CO., INC., Water Street, Ossining, N. Y.
SEE ADV. PG. 160.
INSULATION MFRS. CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
Lukens Steel Co. and divisions, By-Products Steel Co. and Lukenweld, 447 Lukens Building, Coatesville, Pa.
Maas & Waldstein Co., 438 Riverside St., New-ark 4, N. J.
Marblette Corp., 37-21 30th St., Long Island City,

Marblette Corp., 37-21 30th St., Long Island City,

Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio

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American Chemical Paint Co., Ambler, Pa. American Resinous Chemical Co., 103 Foster St.,

Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.

Nukem Products Corp., 111 Colgate Ave., Buffalo 20, N. Y.

20, N. Y.
Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 26, Calif.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind.
SCHENECTADY VARNISH CO., Schenectady, N. Y., SEE ADV. PG. 111.
Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1, Ohio

- Cleveland 1, Ohio Southwestern Industrial Electronic Co., 2831 Post

- Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y. Sun Oil Co., 1608 Walnut St., Philadelphia 3, Pa. U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y. U. S. Stoneware Co., The, Akron 9, Ohio WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wilbur & Williams Co., 43 Leon St., Boston 15, Mass.
- ZOPHAR. MILLS INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

# COATINGS-Salt Spray Resistance

Acheson Colloids Corp., Port Huron, Mich. Alden Products Co., 117 N. Main St., Brockton, Mass

- American Chemical Paint Co., Ambler, Pa. Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio Austin Co., O., 335 Throop Ave., Brooklyn 21, Y.
- Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J. Centro Research Laboratories, Inc., Briarcliff
- Manor, N. Y. Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y.
- Esso Standard Oil Co., 15 W. 51st St., New York
- 19, N. Y. George Co., P. D., 5200 N. 2nd St., St. Louis, Mo. Hamilton Kent Mfg. Co., Kent, Ohio
- Haimiton Kent Mig. Co., Kent, Ohio
  Heresite & Chemical Co., Manitowoc, Wis.
  Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
  INSL-X CO., INC., Water St., Ossining, N. Y. SEE ADV. PG. 160.
  Maas & Waldstein Co., 438 Riverside Ave., New-ark 4 N. J.
- ark 4, N. J. Marblette Corp., 37-21 30th St., Long Island City,
- N. Y. Mission Electric Mfg. Co., 132 W. Colorado Blvd.,
- Pasadena, Calif. Nukem Products Corp., 111 Colgate Ave. Buffalo
- 20. N. Y.
- 20, N. Y. Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 26, Calif. Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind. SCHENECTADY VARNISH CO., Schenectady,
- N. Y. SEE ADV. PG. 111. Sherwin-Williams Co., 101 Prospect Ave., N. W.,
- Cleveland 1, Ohio
- Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Special Chemicals Corp., 30 Irving Pl., New York, N Y
- Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y. U. S. Stoneware Co., The, Akron 9, Ohio

#### CODE & TAB MARKERS

- Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
- Side D, N. J.
  Kulka Electric Mfg. Co., Inc., 30 South St., Mt.
  Vernon, N. Y.
  Topflight Tape Co., Huber Bldg., York, Pa.
  Western Lithograph Co., E-Z Code Div., 600 E.
  Second St., Los Angeles 54, Calif.

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# COIL ASSEMBLIES

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alden Products Co., 117 No. Main St., Brockton
- 64. Mass.
- Alladin Radio Industries Inc., 501 W. 35th St., Chicago 16, Ill. American Communications Corp., 306 Broadway,
- New York 7, N. Y. Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. Automatie Mig. Corp., 65 Gouverneur St., New-
- ark, N. J. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Best Mfg. Co., Inc., 1200 Grove St., Irvington

- BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212. BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
- C. B. Mfg. Co., 480 Brome St., New York 13,
- CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178.
   Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y.
- Cook Electric Co., 2700 Southport Ave., Chicago, TH
- III. COTO-COIL CO., INC., 65 Pavilion Ave., Provi-dence 5, R. I. SEE ADV. PG. 144. Davis & Co., Dean W., Kentland, Ind. Dietz Design & Mfg. Co., 5810 Park Ave., Kansas
- City 4, Mo. City 4, Mo. Electric Auto-Lite Co., The, Toledo 1, Ohio Electric Auto-Lite Co., The, Toledo 1, Ohio Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. Electronic Coils, Inc., 44 Taylor St., Springfield,
- ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.
- 200. Electyme Motor Products Corp., 565 W. Wash-
- ington Blvd., Chicago 6, Ill. Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Five Star Radio Co., 416 Broadway, Cambridge,
- Mass. Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio FUGLE-MILLER LABORATORIES, 398 Main St.,
- Metuchen, N. J. SEE ADV. PG. 226. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132. Guthman Inc., Edwin I., 15 S. Throop St., Chi-cago.

- (ago, 11].
   HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG. 188. Ieath Co.
- Heath Co., Benton Harbor, Mich. HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau St., Brooklyn 22, N. Y. SEE ADV. PG.
- 112 Houlihan Co., T. J., 2508-14 W. Lawrence Ave.,
- Chicago, II. J., 2508-14 W. Lawrence Ave., Chicago, Ill. Inductive Equipment Co., Gettysburg, Pa. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- 80.
- K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. Kellogg Switchboard & Supply Co., 6650 S. Cicero

- Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
  Leonard Electric Products Co., 1562 61st St., Brocklum, N. V. Brooklyn, N. Y.
- Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. Lynch Co., F. W., 151 2nd St., San Francisco,
- Calif.
- Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
- Magnetic Devices Corp., 232 Broad Ave., Pali-sades Park, N. J.
- Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass

COILS

- Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif
- Monroe Coil Co., 1606 N. California St., Chicago, 111
- III. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Northern Communication Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
- Peerless Electrical Products Co., 6920 McKinley
- Ave., Los Angeles 1, Calif. PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230. Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Precise Mfg. Co., 24-34 New Chambers St., New York 7, N, Y.
- Presto Electric Co., Inc., 4511 New York Ave., Union City, N. J. Radex Corp., 2076 N. Elston Ave., Chicago 14,
- Ill. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Craftsmen, Inc., The, 1341 S. Michigan Ave., Chicago 5, Ill. Ross Mfg. Co., 860 Washington St., Burlington, Lowa
- Iowa
- S-W Inductor Co., 1056 N. Wood St., Chicago, 111
- Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale, Pa. Sickles Co. F. W., 165 Front St., Chicopee, Mass. Small Motors, Inc., 2076 Elston Ave., Chicago 14,

Post Oak Rd., Houston 19, Texas SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51,

STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219.

Standard Electrical Products Co., Dayton 3, Ohio STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison Chicago 18, Ili. SEE ADV.

PG. 207. Stanwyck Winding Co., 102-104 S. Lander St.,

Newburg, N. Y. SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV.

PG. 33. Telectron Co., The, 4019 Prospect Ave., Cleve-land 3, Ohio Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

U. S. Electronics Corp., 275 Warren St., Lynd-

U. S. Electronics Corp., 215 Warren St., Eynchurst, N. J.
 West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
 Wheeler Insulated Wire Co., Inc., Waterbury 91,

LEWIS SPRING & MFG. CORP., 2646 North Ave., Chicago 47, III. SEE ADV. PG. 44. WEBSTER SPRING CORP., 97 South 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.

Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. BARKER & WILLIAMSON, 235 Fairfield Ave.,

Duper Darby, Pa. SEE ADV. PG. 39.
 BOND ELECTRONICS CORP., 88 Franklin Pl., Summit, N. J. SEE ADV. PG. 212.
 C. B. Mig. Co., 480 Broome St., New York 13, N. Y.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178. Carron Mfg. Co., 415 S. Aberdeen St., Chicago,

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.

Dietz Design & Mfg. Co., 5810 Park Ave., Kansas

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COIL WINDING MACHINES

See Machines-Coil Winding

COIL WINDINGS

COILS-Antenna

III.

City 4, Mo.

Industrial Electronic Co., 2831

Southwestern

PG. 33.

Conn.

# 1949-1950 DIRECTORY of

- COILS
- ELECTRONIC DESIGNS, INC., Irvington, N. Y.
- SEE ADV. PG. 230. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.

- 200.
  Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
  Essex Electronics, Berkeley Heights, N. J.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Foster Transformer Co., Inc., 3820 Colerain Ave., Cincingati 23, Ohio.

- Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
  FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. SEE ADV. PG. 226.
  Gates Radio Co., Quincy, Ill.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Guthman Inc., Edwin I., 15 S. Throop St., Chi-cago, Ill.
  HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG. 188.
- Heath Co., Benton Harbor, Mich. HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. SEE ADV. PG. 112.

PG. 112. Houlihan Go., T. J., 2508-14 W. Lawrence Ave., Chicago, MI. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.

- Ave., Long Island City, ...
  80.
  30.
  31. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Johnson Co., E. F., Waseća, Minn.
  Joyner Corp., The, 452 N. Parkside Ave., Chicago 44. III.
  Leonard Electric Products Co., 1562 61st St., Brooklyn, N. Y.
  Loral Electronics Corp., 794 E. 140th St., New
- Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
- York 54, N. Y. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
- Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Monroe Coil Co., 1606 N. California St., Chicago, 111.

- <sup>111.</sup> Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Philco Corp., Tioga & C Sts., Phila. 34, Pa. Precise Mig. Co., 24.34 New Chambers St., New York 7, N. Y. Radex Corp., 2076 N. Elston Ave., Chicago 14, **T11**
- RADIO CORP. OF AMERICA, RCA Victor Div. Front & Cooper Sts., Camden, N. J. SEE ADV PGS. 197, Inside Back and Back Covers. SEE ADV.
- Ross Mfg. Co., 860 Washington St., Burlington,
- Jowa
   S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
   STANDARD COIL PRODUCTS Co., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219.
- Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.
- Stanwyck Winding Co., 102-104 S. Lander St., Newburgh, N. Y.
- SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33.
- Teleradio Engineering Corp., 99 Wall St., New York 5, N.Y.
- U. S. Electronics Corp., 275 Warren St., Lyndhurst, N. J.
- West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- Workshop Associates, Inc., The, 66 Needham St., Newton Highlands 61, Mass.

#### COILS-Choke

D-30

- Acro Products Co., 5330 Baltimore Ave., Phila. Pa. Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y.
- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
- Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y.
- American Communications Corp., 306 Broadway, New York 7, N. Y.

- AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. SEE ADV. PG. 192.
- Arco Transformer & Electrical Co., 1602 S. Hanna St., Ft. Wayne, Ind. Automatic Mfg. Corp., 65 Gouverneur St., New-
- ark, N. J. BARKER & WILLIAMSON, 235 Fairfield Ave.,
- Upper Darby, Pa. SEE ADV. PG. 39. est Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. Best
- 11, N. U. Bittermann Electric Co., Box 665, Canaan, Conn. BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212. BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45. C. B. Mfg. Co., 480 Broome St., New York 13, N. Y.
- v N
- N. Y. CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178. Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y. Clippard Instrument Lab., Inc., 1125 Bank St., Cinciparti 14 Obio
- Cincinnati 14, Ohio Coil Winders Inc., 61 Bergen St., Brooklyn 2,
- CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Continental Electronics Mfg. Co., 1721 Wood St.,
- Dallas 1, Texas Cook Electric Co., 2700 Southport Ave., Chicago,
- dence 5, R. I. SEE ADV. PG. 144. DANO ELECTRIC CO., Winsted, Conn. SEE ADV.

- PG. 192. Davis & Co., Dean W., Kentland, Ind. Davis Electric Co., Cape Girardeau, Mo. Dietz Design & Mfg. Co., 5810 Park Ave., Kansas
- Dietz Design & Mig. Co., 5810 Fair Ave., Wallads City 4, Mo. Dinion Coil Co., Inc., Caledonia, N. Y. ELECTRICAL REACTANCE CORP., Elm St., Franklinville, N. Y. SEE ADV. PGS. 82, 83. Electrical Windings, Inc., 2015 N. Kølmar Ave., Chicago 39, Ill. Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
- York 13, N. Y. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. Electronic Coils, Inc., 44 Taylor St., Springfield,
- Mass. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200
- Electyme Motor Products Corp., 565 W. Wash-ington Blvd., Chicago 6, Ill. Elliott Manufacturing Co., 218 Prospect Ave.,

- Elliott Manufacturing Co., 218 Prospect Ave., Binghamton, N. Y.
  Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.
  Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
  Essex Electronics, Berkeley Heights, N. J.
  Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, Ill.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV.
  PGS. 129, 131, 133, 135.
  Five Star Radio Co., 416 Broadway, Cambridge, Mass.
- Mass. Foster Transformer Co., Inc., 3820 Colerain Ave.,

- Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
  FUGLE-MILLER LABORATORIES, 398 Main St., Metuchen, N. J. SEE ADV. PG. 226.
  Gates Radio Co., Quincy, Ill.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  GRAMER CO, THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132
  Guthman Inc., Edwin I., 15 S. Throop St., Chi-cago. Ill.
- cago, Ill. HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG.
- 188.
- Heath Co., Benton Harbor, Mich. Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
- Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill.
- Inductive Equipment Co., Gettysburg, Pa.
- INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- 80.

Johnson Co., E. F., Waseca, Minn. Joyner Corp., The, 462 N. Parkside Ave., Chicago

- 44. III.
- Transformer Co., 4414 Park Ave., New York, K-V N. Y.
- Langevin Manufacturing Corp., 37 W. 65th St.,

- Langevia Manufacturing Corp., 37 W. 65th St., New York 23, N. Y.
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
  Leonard Electric Products Co., 1562 61st St., Brooklyn, N. Y.
  LEWIS SPRING & MFG. CORP., 2646 North Ave., Chicago 47, Ill. SEE ADV. PG. 44.
  Magnetic Devices Corp., 232 Broad Ave., Pali-sades Park, N. J.
  Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa.
  Meissner Mfg. Div., Maguire Industries Inc., Mt. Carmel, Ill.
  Melco Products, Inc., 22 E. Hennepen Ave.,
- Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn.
- Mellaphone Corp., Rochester 2, N. Y. Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Monroe Coil Co., 1606 N. California St., Chicago, 111

- Monroe Coil Co., 1606 N. Canonia St., Chicago, III.
  NATIONAL CO., INC., 61 Sherman St., Maldea 48, Mass. SEE ADV. PGS. 105-108.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  OHMITE MFG. CO., 4335 W. Flournoy St., Chicago 44, III. SEE ADV. PG. 201.
  Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles, Calif.
  PERMOFLUX CORP., 4900 W. Grand Ave., Chicago, III. SEE ADV. PG. 230.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Philoc Corp., Tioga & C Sts., Phila. 34, Pa.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, III.

Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
Ross Mfg. Co., 860 Washington St., Burlington, Jowa

S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.

Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,

Sickles Co., F. W., 165 Front St., Chicopee, Mass. Slepian Co., Arthur, Bridgeport, Conn. Southwestern Industrial Electronic Co., 2831 Post

Oak Rd., Houston 19, Texas SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51,

STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG.

andard Electrical Products Co., Dayton 3, Ohio IANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV.

Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y. Stanwyck Winding Co., 102-104 S. Lander St., Newburgh, N. Y.

Newburgh, N. Y. SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33.

Teleradio Engineering Corp., 99 Wall St., New

York 5, N. Y.
 Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill.
 Triad Transformer Mfg. Co., 423 N. Western Ave.,

Los Angeles 4, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. Vokar Corp., 7300 Huron River Drive, Dexter, Minb

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

Wheeler Insulated Wire Co., Inc., Waterbury 91,

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STANDARD

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# COILS—Electronic Heating Inductor

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Coil Winders Inc., 61 Bergen St., Brooklyn 2,

- N. Y. COTO-COIL CO., INC., 65 Pavilion Ave., Provi-dence 5, R. I. SEE ADV. PG. 144. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.
- 200
- 200.
  Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
  General Ceramics & Steatite Corp., Keasbey, N. J.
  High Frequency Heating Co., 143 Glen Park Ave., Gary, Ind.
  Induction Heating Corp., 181 Wythe Ave., Brook-lyn 11 N. V.

- Induction Heating Corp., 181 Wythe Ave., Brook-lyn 11, N. Y.
  Inductive Equipment Co., Gettysburg, Pa.
  Johnson Co., E. F., Waseca, Minn.
  Lepel High Frequency Labs., Inc., 39 West 6th St., New York 23, N. Y.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  S-W Inductor Co., 1056 N. Wood St., Chicago, III
- TH.
- M. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### COILS-Flyback

- D X Radio Products Co., Inc., 2304 Armitage
- Ave., Chicago, Ill. **GENERAL ELECTRIC CO.**, Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. General Industries Co., Taylor & Olive Sts.,
- Elyria, Ohio Meissner Mfg. Div., Maguire Industries, Inc., Mt.
- Carmel, Ill.
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. SEE ADV. PG.
- 219. Vision Research, P. O. Box 52, Kew Gardens 15,
- Y. Zenith Radionics 5801 W. Dickens St., Chicago,
- Ill.

#### COILS—Magnet

- Acme Wire Co., New Haven 14, Conn
- Acme WIFE Co., New Haven 14, Conn.
  Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
  ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS 34, 35.
  American Electronics Corp., 226 N. Fourth St., Columbus Object
- Columbus, Ohio Columbus, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. Aray Mig. & Supply Co., 3107 Pine St., St. Louis 3, Mo.
- Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N J
- N. J.
- N. J. Bittermann Electric Co., Box 665, Canaan, Conn. BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212. Bunnell & Co., J. H., 215 Fulton St., New York,
- N. Y. Coil Winders Inc., 61 Bergen St., Brooklyn 2,
- N. Y Control Corp., 718 Central Ave., Minneapolis 14,
- Minn Cook Electric Co., 2700 Southport Ave., Chicago,
- Ill. Cooper Co., Clark, 374 N. Market St., Palmyra,
- COLCOIL CO., INC., 65 Pavilion Ave., Providence 5, R. I. SEE ADV. PG. 144.
   D. & M. Mfg. Co., 2 Delford Ave., Bergenfield,
- DANO ELECTRIC CO., Winsted, Conn. SEE ADV. PG, 192. Davis & Co., Dean W., Kentland, Ind. Davis Electric Co., Cape Girardeau, Mo. Eastern Specialty Co., Philadelphia 40, Pa.

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- Electrical Coil Winding Co., 2733 Saunders St., Camden, N. J. Electrical Windings, Inc., 2015 N. Kolmar Ave.,
- Chicago 39, Ill. Electricoil Transformer Co., 421 Canal St., New
- York 13, N. Y.
- Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. Electronic Coils, Inc., 44 Taylor St., Springfield,
- Mass ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.
- 200.
- 200. Electyme Motor Products Corp., 565 W. Wash-ington Blvd., Chicago 6, Ill. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio Harguise Electric & Mir. Co. Inc., 2500 Atlantic

- Foster Trainsonner Co., Inc., 3520 Coretain Press, Cincinnati 23, Ohio
  Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
  Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill.
  Inductive Equipment Co., Gettysburg, Pa.
  INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113.
  Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
  Magnetic Devices Corp., 232 Broad Ave., Pal-isades Park, N. J.
  Magnetic Products Corp., The, Norwalk, Conn.
  Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa.
  Mellaphone Corp., Rochester 2, N. Y.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Peerless Electrical Products Co., 6920 McKinley

- - Peerless Electrical Products Co., 6920 McKinley
  - Ave., Los Angeles, Calif. Phelps Dodge Copper Products Corp., 40 Wall St.,

  - New York 5, N. Y. Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y. Presto Electric Co., Inc., 4511 New York Ave.,
  - Union City, N. J. Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
  - Radionic Transformer Co., 411 S. Sangamon St.,

  - Chicago 7, Ill. S. N. C. Mfg. Co., Inc., Oshkosh, Wis. S.W. Inductor Co., 1056 N. Wood St., Chicago, TH.
  - Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif. Southwestern Industrial Electronic Co., 2831 Post
  - Oak Rd., Houston 19, Texas STANDARD COIL PRODUCTS CO., 2329 N. Pu-laski Rd., Chicago 39, Ill. SEE ADV. PG. 219. Standard Electrical Products Co., Dayton 3, Ohio SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG.

- 33.
  TELEX, INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170.
  Ther Electric & Machine Works, 17 S. Jefferson St., Chicago, Ill.
  Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
  Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 3, Calif.
  UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. Front Cover.
- Weymouth Instrument Co., 1440 Commercial St.,
- East Weymouth 89, Mass. Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

# COILS-Motor & Generator Field

- Bittermann Electric Co., Box 665, Canaan, Conn. CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Davis Electric Co., Cape Girardeau, Mo. Electronic Coils, Inc., 44 Taylor St., Springfield, Mass.
- Mass. W. 25th St., New York, N. Y. SEE ADV. PG. 200.
- Lou.
   Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
   Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio

GENERAL ELECTRIC CO., Schenectady 5, N. Y.

COILS

- GENERAL ELECTRIC (Co., Schenettady 5: N. 1: SEE ADV. PGS. 5-18.
   GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132.
   Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. National Electric Coil Co., Columbus 16, Ohio
- Pretless Electric Coll Co., Columbus 16, Ohio
  Peerless Electrical Products Co., 6920 McKinley
  Ave., Los Angeles 1, Calif.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Radex Corp., 2076 N. Elston Ave., Chicago 14, 11
- 111
- Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
- Ther Electric & Machine Works, 17 S. Jefferson
- St., Chicago, Ill. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **COILS**—Multiple Wound

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III.

- Acme Wire Co., New Haven 14, Conn. Acro Products Co., 5330 Baltimore Ave., Phila. Pa. Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa
- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Anaconda Wire & Cable Co., 25 Broadway, New
- York 4, N. Y.
- YOFK 4, N. Y.
  Arco Transformer & Electrical Co., 1602 S.
  Hanna St., Fort Wayne, Ind.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
- N J. BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
   C. B. Mfg. Co., 480 Broome St., New York 13,

Control Corp., 718 Central Ave., Minneapolis 14,

Cook Electric Co., 2700 Southport Ave., Chicago,

Corning Glass Works, Corning, N. Y. CoTO-COIL CO., INC., 65 Pavilion Ave., Provi-dence 5, R. I. SEE ADV. PG. 144. DANO ELECTRIC CO., Winsted, Conn. SEE ADV.

DANO ELECTRIC CO., Winsted, Conn. SEE ADV. PG. 192.
Davis & Co., Dean W., Kentland, Ind.
Davis Electric Co., Cape Girardeau, Mo.
Dietz Design & Mfg. Co., 5810 Park Ave., Kansas City 4, Mo.
Dinion Coil Co., Inc., Caledonia, N. Y.
Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
Electro Engineering Works, 6021 College Ave.,

Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. Electronic Coils, Inc., 44 Taylor St., Springfield,

ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.

Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.

Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG. 188.

Houlihan Co., T. J., 2508-14 W. Lawrence Ave.,

Houlinan Co., 1. J., 200-14 W. Lawlence Ave., Chicago, Ill. Inductive Equipment Co., Gettysburg, Pa. INSTRUMENT RESISTORS CO., 1936 Commerce Ave., Union, N. J. SEE ADV. PG. 113. K-V Transformer Corp., 4414 Park Ave., New

K-V Transformer Corp., 4414 Park Ave., June York 57, N. Y.
LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
Magnetic Devices Corp., 232 Broad Ave., Pal-isades Park, N. J.
Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa.
MEASUREMENTS CORP., Boonton, N. J. See ADV PG. 110

ADV. PG. 110. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.

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COILS

- Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles, Calif. Phelps Dodge Copper Products Corp., 40 Wall St.,

- Pheips Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  Presto Electric Co., Inc., 4511 New York Ave., Union City, N. J.
  Radex Corp., 2076 N. Elston Ave., Chicago 14, 10

S. N. C. Mfg. Co., Inc., Oshkosh, Wis. Sag Harbor Industries, Inc., The, Sag Harbor, N. Y.

Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,

Pa.

- Pa.
  Slepian Co., Arthur, Bridgeport, Conn.
  Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
  Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
  Standard Electrical Products Co., Dayton 3, Ohio
  SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 23 33

Ave., Los Angeles 4, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.

Front Cover. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. Wheeler Insulated Wire Co., Inc., Waterbury 91, Com

Conn.

#### COILS-Pickup

- Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III
- III. Corona Engineering Service, 94.52 Corona Ave.,

Elinhurst, N. Y. Davis & Co., Dean W., Kentland, Ind. Electronic Coils, Inc., 44 Taylor St., Springfield,

Mass

- ELECTRONIC TRANSFORMER CO. INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200
- Electyme Motor Products Corp., 565 W. Wash-ington Blvd., Chicago 6, Ill.

- Interview Products Corp., 500 W. Waln's ington Blvd., Chicago 6, Ill.
  Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
  Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132.
  Houlihan Company, T. J., 2508-14 W. Lawrence Ave., Chicago, Ill.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Precise Mig. Co., 24-34 New Chambers St., New York 7, N. Y.
  Presto Electric Co., Inc., 4511 New York Ave., Union City, N. J.
  Rowe Industries, 1702 Wayne St., Toledo 9, Ohio S. W. Inductor Co., 1056 N. Wood St., Chicago, Ill.
- III Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- Pa.
- Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif. Southwestern Industrial Electronic Co., 2831 Post
- Oak Rd., Houston 19, Texas SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J., SEE ADV.

- PG. 33.
   Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 3, Calif.
   Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

#### **COILS**—Power & a-f Coils Windings

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- Acme Wire Co., New Haven 14, Conn. Acro Products Co., 5330 Baltimore Ave., Phila. Pa.
- Pa.
  Acro Transformer & Mfg. Corp., 21-20 33rd
  Ave., Long Island City 6, N. Y.
  ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35.

4th St., St. Paul 1, Minn. SEE ADV. PG. 192. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. N. J.
 Bittermann Electric Co., Box 665, Canaan, Conn.
 BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
 BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45.
 COTO-COIL CO., INC., 65 Pavilion Ave., Provi-dence 5, R. I. SEE ADV. PG. 144.
 DE COURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. SEE ADV. PG. 176.
 Dinion Coil Co., Inc., Caledonia, N. Y.
 Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.

Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y. AMERICAN TELEVISION & RADIO CO., 300 E.

- Chicago 39, Ill. Electricoil Transformer Co., 421 Canal St., New

- Electricol Transformer Co., 421 Canal St., 197 York 13, N. Y. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
  ELECTRONIC TRANSFORMER CO., INC., 207 West 25th St., New York, N. Y. SEE ADV. PG. 200.

- 200.
  Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
  Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.
  Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 85.
  Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio

- Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
  GRAMER Co., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132.
  INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113.
  Islip Radio Mfg. Corp., Beech St., Islip, N. Y.
  Johnson Co., E. F., Waseca, Minn.
  Joyner Corp., The, 462 N. Parkside Ave., Chicago 44. Ill.

- 44, Ill. V Transformer Corp., 4414 Park Ave., New K-V
- K-V Iransformer Corp., 4414 Park Ave., New York 57, N. Y.
  Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
  Leonard Electric Products Co., 1562 61st St., Brooklyn, N. Y.
- Magnetic Devices Corp., 232 Broad Ave., Palisades Park, N. J. Magnetic Products Corp., The, Norwalk, Conn.
- Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill
- Melco Products, Inc., 22 E. Hennepen Ave., Min-neapolis 1, Minn.

- neapoils 1, Minn.
  Mellaphone Corp., Rochester 2, N. Y.
  Monroe Coil Co., 1606 N. California St., Chicago, Ill.
  NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Declarg Electrical Product Co. Control Medical Control Control Product Control Control Control Product Control Control
- Peerless Electrical Products Co., 6920 McKinley
- Ave., Los Angeles 1, Calif. Phelps Dodge Copper Products Corp., 40 Wall St.,
- New York 5, N. Y Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
- Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill.
- S. N. C. Mfg. Co., Inc., Oshkosh, Wis. Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
- Standard Electrical Products Co., Dayton 3, Ohio STANDARD TRANSFORMER CORP., Elston,
- Kedsie & Addison, Chicago 18, Ill. SEE ADV. PG. 207. SUPER ELECTRIC PRODUCTS CORP., 1057
- Summit Ave., Jersey City, N. J. SEE ADV. PG. 33.
- FG. 53.
  Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill.
  Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif.

- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside
- Conn.

#### COILS-r-f & i-f Receiving or Transmitting

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Automatic Mfg. Corp., 65 Governeur St., Newark,
- BARKER & WILLIAMSON, 235 Fairfield Ave.,
- Darby, Pa. SEE ADV. PG. 39.
  Bitternann Electric Co., Box 665, Canaan, Conn.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  C. B. Mfg. Co., 480 Broome St., New York 13, N V
- Y N
- CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG. 178.
- Carron Mfg. Co., 415 S. Aberdeen St. Chicago, TH
- Clippard Instrument Lab., Inc., 1125 Bank St.,
- Cincinnati 14, Ohio Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y.
- Continental Electronics Mfg. Co., 1728 Wood St., Dallas I, Texas Corning Glass Works, Corning, N. Y. Dietz Design & Mfg. Co., 5810 Park Ave., Kansas
- City 4, Mo. Electronic Coils, Inc., 44 Taylor St., Springfield, Mass ELECTRONIC DESIGNS, INC., Irvington, N. Y. ELECTRONIC DESIGNS, INC., Irvington, N. Y. SEE ADV. PG. 230.
  Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
  Elliott Manufacturing Co., 218 Prospect Ave., Binghamton, N. Y.
  Essex Electronics, Berkeley Heights, N. J.
  Federal Instrument Corp., 14-02 Broadway, Long Island City 2, N. Y.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  FILGLEMULTER LARDBATCHELES 398 Main St.

FUGLE-MILLER LABORATORIES, 398 Main St.,

Metuchen, N. J. SEE ADV. PG. 226. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.

Guthman Inc., Edwin I., 15 S. Throop St., Chi-

Hammarlund Mfg. Co., 460 W. 34th St., New

York 1, N. Y. HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG.

Heath Co., Benton Harbor, Mich. HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. SEE ADV. PG. 112.

PG. 112.
Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill.
Inductive Equipment Co., Gettysburg, Pa.
INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J., SEE ADV. PG. 113.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80

Johnson Co., E. F., Waseca, Minn. Joyner Corp., The, 462 N. Parkside Ave,. Chicago

44, Ill.
Leonard Electric Products Co., 1562 61st St., Brooklyn, N. Y.
LEWIS SPRING & MFG. CO., 2646 North Ave., Chicago 47, Ill. SEE ADV. PG. 44.
Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
Magning Inducting Ing. Electronics Dapt. Bridge

Maguire Industries Inc., Electronics Dept., Bridge-

Meissner Mfg. Div., Maguire Industries, Inc., Mount Carmel, Ill. Millen Mfg. Co., James, 150 Exchange St., Mal-

Miller Co., J. W., 5917 S. Main St., Los Angeles,

Monroe Coil Co., 1606 N. California St., Chicago,

Muter Co., 1255 S. Michigan Ave., Chicago, Ill.

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TIL.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Philoc Corp., Tioga & C Sts., Phila. 34, Pa. Polytron Corp., 133 Martine Ave., White Plains, N. Y.

- Precise Mig. Co., 24-34 New Chambers St., New York 7, N. Y. Precision Tube Co., Inc., 3828 Terrace St., Phila. 28, Pa.
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radex Corp., 2076 N. Elston Ave., Chicago 14,
- III.
- III. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Craftsmen, Inc., The, 1341 So. Michigan Ave., Chicago 5, III. Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio Poss Mire Co. 950 Wachington Co. D. V.
- Ross Mfg. Co., 860 Washington St., Burlington,
- Iowa S-W Inductor Co., 1056 N. Wood St., Chicago,
- III.
- III.
   Sickles Co., F. W., 165 Front St., Chicopee, Mass.
   Special Products Co., Silver Spring, Md.
   STANDARD COIL PRODUCTS CO., 2329 N. Pu-laski Rd., Chicago 39, Ill. SEE ADV. PG. 219.
   Standard Winding Corp., 44-62 Johnes St., New-burgh, N. V.
- Stanwyck Winding Co., 102-104 South Lander St., Newburgh, N. Y.
   SUPER ELECTRIC PRODUCTS CORP., 1057
- Summit Ave., Jersey City, N. J. SEE ADV. PG. 33
- Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y. U. S. Electronics Corp., 275 Warren St., Lynd-
- hurst, N. J.
- West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

#### COILS-Relay & Solenoid

- Acme Wire Co., New Haven 14, Conn. Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35 New York 21, N. Y. SEE ADV. PGS. 34, 35
- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35 Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.

- Bittermann Electric Co., Box 665, Canaan, Conn.
   BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
   Caltron Co., 1406 So. Hobart Blvd., Los Angeles
- 6, Calif.
- Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N.Y Cook Electric Co., 2700 Southport Ave., Chicago,
- III. Cooper Co., Clark, 374 N. Market St., Palmyra,
- T
- dence 5, R. I. SEE ADV. PG. 144. DANO ELECTRIC CO., Winsted, Conn. SEE ADV.
- DANO ELECTRIC CO., Winstea, Conn. SEE ADV. PG. 192. Davis & Co., Dean W., Kentland, Ind. Davis Electric Co., Cape Girardeau, Mo. Dinion Coil Co., Inc., Caledonia, N. Y. Electric Heat Control Co., 9123 Inman Ave., Cleveland 5, Ohio Electrical Coil Winding Co., 2733 Saunders St., Comdan N. J.

- Camden, N. J. Electrical Windings, Inc., 2015 N. Kolmar Ave.,
- Chicago 39, 111. Electrical Transformer Co., 421 Canal St., New York 13, N. Y.
- Delectro Engineering Works, 6021 College Ave., Oakland 18, Calif. Electronic Coils, Inc., 44 Taylor St., Spring-field, Mass.
- ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.
- 200.
- 200.
   Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
   Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.

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- Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill. Federal Instrument Corp., 14-02 Broadway, Long Island City 2, N. Y. Foster Transformer Co., Inc., 3820 Colerain Ave.,
- Cincinnati 23, Ohio GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132.
  Hercules Electric & Mig. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
  Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill.
  Inductive Equipment Co., Gettysburg, Pa.
  INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113.
  Joyner Corp., The, 462 N. Parkside Ave., Chicago 44, Ill.

- 44, Ill. V Transformer Co., 4414 Park Ave., New K-V
- York 57, N. Y. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
- Magnetic Devices Corp., 232 Broad Ave., Pali-sades Park, N. J. Magnetic Products Corp., The, Norwalk, Conn. Magnetic Windings, Div. of Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton,
- F eemansburg Ave. & Hobson Bivd., Easton, F a. Mel o Products, Inc., 22 E. Hennepen Ave., A inneapolis 1, Minn. Mej co Inc., 37 Madison Ave., Morristown. N. J. Not hern Communications Mfg. Corp., 210 E. 4 Jth St., New York 16, N. Y. Pee less Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif. Phe ps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Pre ise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y. Pre to Electric Co., Inc., 4511 New York Ave., Union City, N. J. Rat onic Transformer Co., 411 S. Sangamon S., Chicago 7, III.

- Sha lcross Mfg. Co., 10 Jackson Ave., Colling-
- Sha leross Mig. Co., 10 Jackson M.C., 2019 dile, Pa. Smi h Mig. Co., Nathan R., 105 Pasadena Ave., Suth Pasadena, Calif. ST/NDARD COIL PRODUCTS CO., 2329 N. Filaski Rd., Chicago 39, Ill. SEE ADV. PG.
- Sta dard Electrical Products Co., Dayton 3, Chio
- Chio ST/NDARD TRANSFORMER CORP., Elston, Fedzie & Addison, Chicago 18, Ill. SEE ADV. F 3. 207. SUIER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG.
- 33. Tele radio Engineering Corp., 99 Wall St., New
- Vork 5, N. Y. York 5, N. Y. Tried Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 3, Calif. UN TED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Logar
- Front Cover. WE ITINGHOUSE ELECTRIC CORP., P. O. Box § 38, Pittsburgh 30, Pa. SEE ADV. PGS. 66,
- 67.
- Wh eler Insulated Wire Co., Inc., Waterbury [1, Conn.

#### CO LS-Speaker

- Act e Wire Co., New Haven 14, Conn. ALI ED CONTROL CO., INC., 2 East End Ave., I ew York 21, N. Y. SEE ADV. PGS. 34, 35. Alt c Lansing Corp., 161 Avenue of the Americas, I ew York 13, N. Y. Bes Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.

- D. L. N. J.
   BO ID ELECTRONICS CORP., 88 Franklin Place, Sammit, N. J. SEE ADV. PG, 212.
   Cat on Mfg. Co., 415 S. Aberdeen St., Chicago, III.
   DA IO ELECTRIC CO., Winsted, Conn. SEE ADV. I G. 192. Da is & Co., Dean W., Kentland, Ind. Dir on Coil Co., Inc., Caledonia, N. Y. Ele tronic Coils, Inc., 44 Taylor St., Springfield,

- LI CTRONIC TRANSFORMER CO., INC., 207 V. 25th St., New York, N. Y. SEE ADV. PG. 200.

Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill. Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.

COILS

- Rochelle, N. Y. GRAMER COMPANY, THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG, 132. Houlihan Company, T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. Inductive Equipment Co., Gettysburg, Pa. Magnetic Windings, Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa
- Pa.
- Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa. Monroe Coil Co., 1606 N. California St., Chicago, III.
- Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.
- Charles, Ill. Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
- Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Philos Corp., Tioga & C Sts., Phila. 34, Pa.
  Precise Mig. Co., 24-34 New Chambers St., New York 7, N. Y.

- York 7, N. Y. Racon Electric Co., 52 E. 19th St., New York 3, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

Best Mfg. Co., Inc., 1200 Grove St., Irvington

Bittermann Electric Co., Box 665, Canaan, Conn. BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.

Coil Winders Inc., 61 Bergen St., Brooklyn 2,

N. Y. COTO-COIL CO., INC., 65 Pavilion Ave., Prov-idence 5, R. I. SEE ADV. PG. 144. Davis Electric Co., Cape Girardeau, Mo. Du Mont Labs., Allen B., 2 Main Ave., Passaic,

LECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.

200.
Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, III.
Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.
Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, III.
Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
GENERAL ELECTRIC CO., Schenectady 5, N. Y.
SEE ADV. PGS. 5-18.
GRAMER CO., THE, 2734 N. Pulaski Rd., Chicago 39, III. SEE ADV. PG. 132.
HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG. 188.

Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago 25, IN.

Indunian Co., 1. 5., 2000-14 W. Lawrence Ave., Chicago 25, IH.
 I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Phila. 30, Pa. SEE ADV. PGS. 48, 49.
 Inductive Equipment Co., Gettysburg, Pa.
 Joyner Corp., The, 462 N. Parkside Ave., Chicago A4, IU.

44, Ill. K-V Transformer Corp., 4414 Park Ave., New

Nork S7, N. Y. Magnetic Products Corp., 1414 Park Ave., New York S7, N. Y. Magnetic Products Corp., The, Norwalk, Conn. Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa. Meissner Mfg. Div., Maguire Industries Inc., Mt. Carmel, 111.

Monroe Coil Co., 1606 N. California St., Chicago,

Ill. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif. Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Philco Corp., Tioga & C Sts., Phila. 34, Pa. Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y. Polytron Corp., 133 Martine Ave., White Plains,

Polytron Corp., 133 Martine Ave., White Plains, N. Y.

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COILS—Television Focusing

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COILS

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Ross Mfg. Co., 860 Washington St., Burlington,
- Iowa
- W. Inductor Co., 1056 N. Wood St., Chicago, III
- Slepian Co., Arthur, Bridgeport, Conn. STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG.
- 910 SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG.
- 33. Telectron Co., The, 4019 Prospect Ave., Cleve-land 3, Ohio Teleradio Engineering Corp., 99 Wall St., New
- York 5, N. Y. TELvision Labs., Inc., 542 N. Parkside Ave., Chicago 44, Ill.
- U. S. Electronics Corp., 275 Warren St., Lynd-hurst, N. J. Wheeler Insulated Wire Co., Inc., Waterbury 91,
- Conn.

#### COILS-Toroidal

- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45.
  Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III.
  Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.

- Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
   Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri COTO-COIL CO., INC., 65 Pavilion Ave., Prov-idence 5, R. I. SEE ADV. PG. 144.
   DeCOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. SEE ADV. PG. 176
- 176 ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200

- 200. FREED TRANSFORMER CO., 1736 Weirfield St., Brooklyn 27, N. Y. SEE ADV. PG, 53. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. Lynch Co., F. W., 151 2nd St., San Francisco, Calif.
- Calif.
- Calli. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Polytron Corp., 133 Martine Ave., White Plains,
- N. Y. Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.

# COILS-Transformer Coils & Windings

- Acme Wire Co., New Haven 14, Conn. Acro Products Co., 5330 Baltimore Ave., Phila.
- Pa. Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign Inc., 241 Fairfield Ave., Upper Darby,

- Pa.
  Pa.
  ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35.
  Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
  AMERICAN TELEVISION & RADIO CO., 300 E.
  4th St., St. Paul 1, Minn. SEE ADV. PG. 192.
  Arco Transformer & Electrical Co., 1602 S.
  Hanna St., Fort Wayne, Ind.
  Associated Production Co., 2655 W. 19th St., Chicage 8, III.

- Associated Production Co., 2005 W. Tohn Co., Chicago 8, Ill.
  Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
  Bittermann Electric Co., Box 665, Canaan, Conn.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178.

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- Control Corp., 718 Central Ave., Minneapolis 14, Minn.
- Cooper Co., Clark, 374 N. Market St., Palmyra,
- N. J. COTO-COIL CO., INC., 65 Pavilion Ave., Prov-idence 5, R. I. SEE ADV. PG. 144. DX Radio Products Co., Inc., 2304 W. Armitage Ave., Chicago 47, Ill. DANO ELECTRIC CO., Winsted, Conn. SEE ADV.
- PG. 192. Davis & Co., Dean W., Kentland, Ind.

- Davis & Co., Dean W., Kentiand, Ind.
  Davis Electric Co., Cape Girardeau, Mo.
  Dinion Coil Co., Inc., Caledonia, N. Y.
  Dormitzer Electric & Mfg. Corp., 782 Commonwealth Ave., Boston 15, Mass.
  Eastern Specialty Co., Philadelphia 40, Pa.
  Electran Mfg. Co., 4596 Elston Ave., Chicago 30, III TIL
- Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio Electrical Windings, Inc., 2015 N. Kolmar Ave.,
- Chicago 39, Ill. Electricoil Transformer Co., 421 Canal St., New
- York 13, N. Y.
- YORK 13, N. Y.
   Electro Engineering Works, 6021 College Ave., Oakland 11, Calif.
   ELECTRONIC TRANSFORMER CO., INC., 207
   W. 25th St., New York, N. Y. SEE ADV. PG. 200.

- ELECTRONIC TRANSFORMER CO., InC., 201.
  W. 25th St., New York, N. Y. SEE ADV. PG. 200.
  Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
  Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.
  Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
  Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132.
  Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
  Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago, Ill.
  Inductive Equipment Co.. Gettysburg, Pa.
  Islip Radio Mfg. Corp., Beech St., Islip, N. Y.
  K. Y Transformer Corp., 4414 Park Ave., New York 57, N. Y.
  Langevin Manufacturing Corp., 37 W. 65th St., New York 23, N. Y.
  Langevin Manufacturing Corp., 232 Broad Ave., Palisade Sark, N. J.
  Magnetic Products Corp., The, Norwalk, Conn., Magnetic Windings Div., Essex Wire Corp.

- Magnetic Vindings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton,

- Preemansourg Ave. & Hooson Bivd., Easton, Pa.
  Mellaphone Corp., Rochester 2, N. Y.
  Miller, B. F., P. O. Box 568, Trenton 4, N. J.
  NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  PERMOFLUX CORP., 4900 W Grand Ave., Chicago, III. SEE ADV. PG. 230.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  Presto Electric Co., Inc., 4511 New York Ave., Union City, N. J.
  Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, III.

- St., Chicago 7, Ill. S. N. C. Mfg. Co., Inc., Oshkosh, Wisc. S.W. Inductor Co., 1056 N. Wood St., Chicago,
- III.
- Slepian Co., Arthur, Bridgeport, Conn. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Standard Electrical Products Co., Dayton 3, Ohio

STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV. PG. 207.

1949-1950 DIRECTORY of

- States Co., 19 New Park Ave., Hartford 6, Conn. SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33.
- Telectron Co., The, 4019 Prospect Ave., Cleve-land 3, Ohio Teleradio Engineering Corp., 99 Wall St., New
- York 5, N. Y. Ther Electric & Machine Works, 17 S. Jefferson
- Ther Electric & Machine Works, 17 S. Jefferson St., Chicago, Ill.
  Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
  Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif.
  UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
  Wheeler Losulated Wire Co., Inc., Waterbury 91,
- Wheeler Insulated Wire Co., Inc., Waterbury 91,
- Conn.

#### COILS-Width Control

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- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. General Industries Co., Taylor & Olive Sts.,
- Elyria, Ohio Guthman Co., E. I. 15 S. Throop St., Chicago,
- Ill. Meissner Mfg. Div., Maguire Industries Inc., Mt.
- Carnel, Ill. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG.

Vision Research, P. O. Box 52, Kew Gardens 15,

Airlectron, P. O. Box 151, Caldwell, N. J. American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. Brociner Electronics Lab., 1546 Second Ave., New York 28, N. Y.

Brociner-Mass Instruments, Inc., 1546 Second Ave., New York 28, N. Y. Coleman Instruments, Inc., 318 Madison St.,

Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
Electric Sorting Machine Co., 410 44th St., SW, Grand Rapids, Mich.
ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.
Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
GENERAL ELECTRIC Co., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.

GENERAL ELECTRIC CO., Schenectaly 5, N. F. SEE ADV. PGS. 5-18. National Technical Lab., 820 Mission St., S. Pasadena, Calif. Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y. Photovolt Corp., 95 Madison Ave., New York 16,

Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.

COMMUNICATION SYSTEMS-Aircraft

Air Associates, Inc., Teterboro, N. J. Aircraft Radio Corp., Boonton, N. J. American Electroneering Co., 2112 S. LaBrea Ave., Los Angeles, Calif. Audar Inc., Argos, Indiana Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla. Bendix Radio Div., Bendix Aviation Corp., Balti-more 4. Md.

Collins Radio Co., Cedar Rapids, Iowa Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.

COLORIMETERS—Photoelectric

Communications Co., Inc., 300 Greco Ave., Coral Gables 34. Fla.

- Gables 34, Fla. Eckstein Radio & Television Co., LeRoy, Minn. EL-TRONICS INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingeland B.d. Clifter N. L. SEE ADV.

- 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Lear, Inc., 110 Ionia Ave., NW, Grand Rapids 2, Mich. Mich
- Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
- Maguire Industries Inc., Electronics Dept., Bridge-
- port, Conn. Motorola Inc., 4545 W. Augusta Blvd., Chicago
- Mutdordia Inc., 4940 W. Augusta Bivd., Chicago 51, III.
   Murdock Mfg. Co., Wm. J., Chelsea, Mass.
   NORTHERN RADIO CO., INC., 143-145 W. 22nd
   St., New York 11, N. Y. SEE ADV. PGS. 153-155.

Racon Electric Co., 52 E. 19th St., New York 3, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div.,

- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
- Radio Development and Research Co., 26 Cornell-
- son Ave., Jersey City, N. J. RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163. Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn
- Conn. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51,
- 52 b2.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  Telephonics Corp., 350 W. 31st St., New York, N. Y.

- Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Wilcox Electric Co., 1400 Chestnut St., Kansas
- City, Mo.

#### COMMUNICATION SYSTEMS-Airport **Traffic Control**

Air Associates Inc., Teterboro, N. J.

- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
- Ave., Los Angeles, Calif. Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Audio Equipment Co., 80-20 45th Ave., Elm-hurst, N. Y. Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla. Collins Radio Co., Cedar Rapids, Iowa Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

- Gables 34, Fla. Dine & Co., Inc., F. E. 2221 Warwick Ave., Santa Monica, Calif. EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189. Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y. Farmer's Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa. FEDERAL TFIFPHONE AND PADIO CORD.

- Farmer's Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gates Radio Co., Quincy, III.
  Loral Electronics Corp., 794 E. 140th St., New York 54 N V
- York 54, N. Y. National Electronics Labs., Inc., 200 King St.,
- Alexandria, Va. Northeastern Engineering, Inc., Manchester,
- N Н PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG.
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- 213.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, INSIDE BACK AND BACK COVERS.

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- RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- 52.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  Webster Electric Co., 1900 Clark St., Racine, Wisc.

- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67 67.
- Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

### COMMUNICATION SYSTEMS --- Carrier Current

- Arlington Electric Products, Inc., 500 W. 52nd
- Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.
  Bunnell & Co., J. H., 215 Fulton St., New York, N. Y.
- Communication Accessories Co., Box 345,
- St. & Hillcrest Rd., Hickman Hills, Missouri Communication Equipment & Engineering Co., 5646 W. Race St., Chicago 44, Ill. Control Corp., 718 Central Ave., Minneapolis 14,
- Minn.
- Electronic Systems Co., 201 N. Wells St., Chi-III.
- cago 1, IIÌ. EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189. Farmers' Engineering Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, III.

- Cicero Ave., Chicago 38, III. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. Link Radio Corp., 125 W. 17th St., New York, N. Y.
- Lynch Co., F. W., 151 2nd St., San Francisco,
- Calif. Measurement Engineering Ltd., Arnprior, On-
- Metastement Engineering Ltd., Arnprior, On-tario, Canada Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. NORTHERN RADIO CO., INC., 143:145 W. 22nd St., New York 1, N. Y. SEE ADV. PGS. 153-155.

- Philco Corp., Tioga & C Sts., Philadelphia 34,
- Pa.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  Brooklyn 1, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Stromberg-Carlson Co., Rochester, N. Y.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  Techno-Scientific Co., 901 Nepperhan Ave., Yonk-ers 3, N. Y.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box

- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

# COMMUNICATION SYSTEMS—Facsimile

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton 64, Mass. Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass.

Automatic Electric Sales Corp., 1033 W. Van

- Buren St., Chicago 7, Ill. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Bunnell & Co., J. H., 215 Fulton St., New York, N. Y.

- N. Y. Communicating Systems Inc., 203 East 18th St., New York 3, N. Y. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y. Finch Telecommunications Inc., Passaic, N. J. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. McElroy Mfg. Corp., Littleton, Mass. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.

- 155.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radio Inventions, Inc., 155 Perry St., New York 14, N. Y.
  Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey P'way, Chicago 14, Ill.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  TelAutograph Corp., 16 W. 61st St., New York 23, N. Y.
- 23, N. Y. Times Facsimile Corp., 229 W. 43rd St., New
- York, N. Y. Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.

# COMMUNICATION SYSTEMS-Induction

Communication Equipment & Engrg. Co., 5646

- W. Race St., Chicago 44, 111. EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.
- Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

COMMUNICATION SYSTEMS-Marine

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft.

Communications Co., Inc., 300 Greco Ave., Coral

Lauderdate, Fia.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Erco Radio Labs, Inc., East Stewart Ave., Garden City, N. Y.
Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Gates Radio Co., Quincy, III.
Grady Instrument Co., 689 Belmont St., Belmont 78, Mass.

Gray Radio Co., 501 Forest Hill Blvd., W. Palm Beach, Fla. Hallicrafters Co., 4401 W. Fifth Ave., Chicago

Harvey Wells Electronics Inc., North St., Southbridge, Mass. Hoffman Radio Corp., 3716 S. Hill St., Los

Angeles 7, Calif. Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y. Intervox Corp., 2701 California Ave., Seattle, Wook

Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Jefferson, Inc., Ray, 40 E. Merrick Rd., Free-port, N. Y.

port, N. Y. Jefferson-Travis Inc., 76 Ninth Ave., New York 11, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Measurement Engineering Ltd., Arnprior, On-tario, Canada

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**Radio-Telephone** 

Lauderdale, Fla.

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# COMMUNICATION SYSTEMS

# NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.

Racon Electric Co., 52 E. 19th St., New York

Radio Development & Research Co., 26 Cornellson Ave., Jersey City, N. J.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Submarine Signal Div., Raytheon Mfg. Co., Waltham, Mass.
Technical Materiel Corp., The, 453 W. 47th St., New York 14, N. Y.
Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
Western Electric Co., Inc., ORP. P. O. Bey

York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

67. Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

#### COMMUNICATION SYSTEMS \_\_\_\_\_Microwave

Dalmo Victor Co., San Carlos, Calif. DeMornay-Budd Inc., 475 Grand Concourse, New

York 51, N. Y. ELECTRONIC MEASUREMENTS CO., Red Bank,

N. J. SEE ADV. PG. 172. Federal Telecommunication Labs., Inc., 500 Wash-

rederal Telecommunication Labs., Inc., 600 Washington Ave., Nutley 10, N. J.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Microwave Equipment Co., North Caldwell, N. J.
Motorola Inc., 4545 W. Augusta Blvd., Chicago 51 III

Motorola Inc., 4949 W. Augusta Diva., Chicago 51, Ill.
 Philco Corp., Tioga & C Sts., Phila. 34, Pa.
 Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
 RADIO CORP. OF AMERICA, RCA Victor Div.,

KADIO CORP. OF AMERILA, RCA victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
 Rowe Industries, 1702 Wayne St., Toledo 9, Obio

Ohio

Sierra Electronic Corp., Belmont & San Carlos,

SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51,

52. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y. Televiso Products Inc., 7466 W. Irving Park Rd., Chicago 34, Ill. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

66, 67.

#### COMMUNICATION SYSTEMS-Portable Installation

American Electroneering Co., 2112 S. La Brea American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
Audio Equipment Co., 80-20 45th Ave., Elm-hurst, N. Y.
Bogen Co., David, 663 Broadway, New York 12, N. Y.

Commercial Equipment Co., 112 W. 18th St.,

Commercial Equipment Co., 112 W. Fold St., Kansas City 8, Mo.
Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
Dashitth Badia Inc. 7421 Loomis Bldg., Chi-

Monica, Calif. Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago 36, Ill.

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EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. Erco Radio Labs., Inc., East Stewart Ave., Garden

Erco Radio Labs., Inc., East Stewart Ave., Galden City, N. Y.
Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV.
PGS. 129, 131, 133, 135.
Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio
Hallierafters Co. 4401 W. Fifth Ave., Chicago

Hallicrafters Co., 4401 W. Fifth Ave., Chicago

24, Ill. aar Engineering Co., 2815 Middlefield Rd., Kaar

Palo Alto, Calif. Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.

Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
Murdock Mfg. Co., Wm. J., Chelsea, Mass.
Phileo Corp., Tioga & C Sts., Philadelphia 34, Pa.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
Southwestern, Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
Stromberg-Carlson Co., Rochester, N. Y.
Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
U. S. Instrument Corp., 409 Broad St., Summit, N. J.
Webster Electric Co., 1900 Clark St., Racine, Wisc.

Webster Electric Co., 1900 Clark St., Racine, Wisc.

Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wisc. Wheeler Insulated Wire Co., Inc., Waterbury

91, Conn.

#### COMMUNICATION SYSTEMS-Radioteletype

Air Associates, Inc., Teterboro, N. J.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
 Boelnne Inc., H. O., 915 Broadway, New York,

N Y

N. Y. Collins Radio Co., Cedar Rapids, Iowa Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri Crystal Research Labs., Inc., 29 Allyn St., Hart-

Crystal Research Labs., Inc., 29 Aliyli St., Harv ford, Conn.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV.
PGS. 129, 131, 133, 135.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
Lurris Com. 60 Breadway, Brooklyn, N. Y.

Angeles , Can. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. McElroy Mfg. Corp., Littleton, Mass. Miles Reproducer Co., Inc., 812 Broadway, New

New York 3, N. Y.
 NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 705-108.
 NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.
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153-155. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio Frequency Labs., Inc., Boonton, N. J. Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

New York 19, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# COMMUNICATION SYSTEMS-Railroad

1949-1950 DIRECTORY of

Audio Equipment Co., 80-20 45th Ave., Elm-

hurst, N. Y. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Bendix Radio Div., Bendix Aviation Corp., Balti-

more 4, Md. Bogen Co., David, 663 Broadway, New York 12,

NY.

Bunnell & Co., J. H., 215 Fulton St., New York, N. Y. Communication Accessories Co., Box 345, 110th St. & Hillerert Pd. Higherer Hill Microsoft

Communication Accessories Co., Box 340, 110th
 St. & Hillcrest Rd., Hickman Hills, Missouri
 Communication Equipment & Engineering Co., 5646 W. Race St., Chicago 44, Ill.
 Communications Co., Inc., 300 Greco Ave., Coral
 Coble 24, Ele

Communications Co., Inc., 500 Greeb Ave., Colar Gables 34, Fla.
Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass.
Electronic Systems Co., 201 N. Wells St., Chi-cago 1, Ill.
Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa.
Farnsworth Television & Radio Corp., Ft. Wayne, Ind.

Ind.

Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Maguire Industries Inc., Electronics Dept., Bridge-

Conn port,

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Motorola Inc., 4545 W. Augusta Blvd., Chicago,

TH NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS.

153-155.

153-155.
Racon Electric Co., 52 E. 19th St., New York
3, N. Y.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

51, 52.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Stromberg-Carlson Co., Rochester, N. Y.
Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
Webster Electric Co., 1900 Clark St., Racine, Wisc.

Wisc. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Wise.

WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

COMMUNICATION SYSTEMS-Vehicular Alden Products Co., 117 N. Main St., Brockton,

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Audio Equipment Co., 80.20 45th Ave., Elm-

hurst, N. Y. Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md. Caltron Co., 1406 So. Hobart Blvd., Los Angeles

Caltron Co., 1406 So. Hobart Blvd., Los Angeles 6, Calif.
Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago 36, III.
Eckstein Radio & Television Co., LeRoy, Minn.
Electronic Mechanical Products Co., 13:15:17 N. Virginia Ave., Atlantic City, N. J.
EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh Pa.
Farnsworth Television & Radio Corp., Ft. Wayne,

Farnsworth Television & Radio Corp., Ft. Wayne,

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Ind.

- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Grady Instrument Co., 689 Belmont St., Belmont 78, Mass.

- Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
- Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Link Radio Corp., 125 W. 17th St., New York, N Y
- Link Ratio Corp., 194 E. 140th St., New Nork 54, N. Y. Measurement Engineering Ltd., Arnprior, On-

- tario, Canada Mobile Communications Co., 110 W. Ocean Blvd., Long Beach 2, Calif. Motorola Inc., 4545 W. Augusta Blvd., Chicago 51 Ju 111 51
- St., New York 11, N. Y. SEE ADV. PGS. 153-155.
- Philco Corp., Tioga & C Sts., Phila. 34, Pa. Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, INSIDE BACK AND BACK

- PGS. 197, INSIDE BACK AND BACK COVERS.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Weston Laboratories, Weston 93, Mass. Wilcox Electric Co., 1400 Chestnut St., Kansas
- City, Mo.

# COMPARATORS—Automatic Resistance

- Clippard Instrument Lab., Inc., 1125 Bank St.,
- Cincinnati 14, Ohio FREED TRANSFORMER CO., 1736 Weirfield St., Brooklyn 27, N. Y. SEE ADV. PG. 53. Industrial Instruments Inc., 17 Pollack Ave.,
- Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J. Maguire Industries, Inc., Electronics Dept., Bridge-
- port, Conn. Measurement Engineering Ltd., Arnprior, Ontario, Can.

# COMPARATORS-Crystal

- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Monitor Products Co., 815 Fremont St., So. Pasadena, Calif.
- PASadena, Calli, PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG.

#### COMPARATORS, SURFACE

See Analyzers, Surface

# COMPASSES-Electronic Gyro

- ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220. Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
- Lear, Inc., 110 Ionia Ave., NW, Grand Rapids 2, Mich.
- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS.
- Corp., 0 51, 52.

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#### COMPUTERS, ELECTRONIC

See Machines

#### CONDENSERS

See Capacitors

#### **CONES**—Speaker

- Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill. GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Hawley Products Co., St. Charles, Ill. Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38 UL
- Jensen Mtg. Co., 6601 S. Laramie Ave., Chicago 38, Ill. Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y. Magnavox Co., The, Components Div., Fort Wayne 4, Indiana National Molding Co., 2141 W. Washington Blvd., Los Angeles 7, Calif. Operadio Mfg. Co., 135th & Indiana Sts., St. Charles. Ill.

- Charles, Ill. Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
- Stromberg-Carlson Co., Rochester, N. Y. TELEX, INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170.

#### CONNECTORS—Cable Connectors & Couplings

- A B C Products, Inc., 2131-35 Stoner Ave., W. Los Angeles 25, Calif. Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. Aircraft Radio Corp., Boonton, N. J. Aircraft Marine Prods. Inc., 1523 N. Fourth St.,
- Aircrait-Marine Frois, Inc., 2020 A. Linden, Harrisburg, Pa. AIRTRON INC., 101 E. Elizabeth Ave., Linden, N. J. SEE ADV. PG. 146. Alden Products Co., 117 North Main St., Brock-
- ton 64, Mass. Aluminum Co. of America, Gulf Bldg., Pittsburgh,
- Pa. **AMERICAN PHENOLIC CORP.**, 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Ark-Les Switch Corp., 55 Water St., Water-town 72, Mass. **ATOMIC INSTRUMENT CO.**, 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Buchanan Electrical Products Corp., 1290 Cen-tral Ave. Hiliside N J

- Bud name Electrical Products Corp., 1290 Central Ave., Hillside, N. J.
   BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
   Buggie & Co., H. H., 2141 Madison Ave., Toledo
- 1, Ohio

- 1, Ohio Burndy Engineering Co., Inc., 107 Bruckner Blvd., New York 54, N. Y. Cannon Electric Development Co., 3209 Hum-boldt St., Los Angeles 31, Calif. Carter Radio Div., Precision Parts Co., 213 In-stitute Place, Chicago 10, Ill. CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. J.

- Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. J. Dante Electric Mfg. Co., Bantam, Conn. DIAL LIGHT CO. OF AMERICA, 900 B'way, New York 3, N. Y. SEE ADV. PG. 220. Diamond Instrument Co., North Ave., Wakefield,
- Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, New York, N. Y. Eastern Specialty Co., Phila. 40, Pa. Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.

- Electrix Corp., 150 Middle St., Pawtucket, R. I. Electrix Connector Corp., 110 W. Oxford St., Phila. 22, Pa.
- Phila. 22, Pa.
  Englewood Electrical Supply Co., 5801 S. Halsted St., Chicago, Ill.
  Frankel Connector Co., 177 Hudson St., New York, N. Y.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  General Cement Mfg. Co., 919 Taylor Ave., Rockford Ill.

- III ford.
- GENERAL ELECTRIC CO., Construction Materials Dept., Bridgeport 2, Conn. SEE ADV. PGS. 5.18

 b-18.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
 HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark 7, N. J. SEE ADV. PG. 223.
 Howard Mfg. Corp., 1401 S. Main St., Council Bluffs Lowa Bluffs, Iowa

- Hubbell Inc., Harvey, Bridgeport 2, Conn.
  Ilsco Copper Tube & Product Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio
  Industrial Products Co., Danbury, Conn.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Johnson Co., E. F., Waseca, Minn.
  JONES, HOWARD B., Div., Cinch Mfg. Corp., 2460 W. George St., Chicago 18, Ill. SEE ADV. PG. 190
  Kellogg Switchboard & Supply Co., 6650 S.

- ADV. PG. 190 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y. Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J. Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.
- Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn. Micarta Fabricators, Inc., 5324 Ravenswood Ave.,
- Chicago 40, Ill.

- Chicago 40, Ill.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Mines Equipment Co., 4235 Clayton Ave., St. Louis, Mo.
  Molded Insulation Co., Aircraft Control Div., 335 E. Prince St., Philadelphia, Pa.
  Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
  O. Z. Electrical Mfg. Co., Inc., 262 Bond St., Brooklyn 2, N. Y.
  Penn-Union Electric Corp., 315 State Street, Erie, Pa.
- Pyle-National Co., 1334 N. Kostner Ave., Chi-
- cago 51, Ill. Radio Development & Research Co., 26 Cor-nellson Ave., Jersey City, N. J. Rattan Mfg. Co., The, 10 Wall St., New Haven 7,

Rattan Mig. Co., Hie, 10 Han St., Ister Harten, Conn.
Conn.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
RUSSELL & STOLL CO., INC., 125 Barclay St., New York 7, N. Y. SEE ADV. PG. 225.
Schutter, Carl W., Rockville Centre, N. Y.
Scintilla Magneto Div., Bendix Aviation Corp., Sidney, N. Y.

Sidney, N. Y. Searle Aero Industries, Inc., Orange, Calif. Selectar Industries, Inc., 401 East 138th St., New York 54, N. Y. Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich. SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231. Thomas & Betts Co., Inc., 36 Butler St., Eliza-

Inomas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.
U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
Winchester Electronics Co., The, 6 East 46th St., New York 17, N. Y.

Winslow Co., Inc., The, 9 Liberty St., Newark 5,

Workshop Associates, Inc., The, 66 Needham St., Newton Highlands 61, Mass.

Aircraft Radio Corp., Boonton, N. J. Alden Products Co., 117 N. Main St., Brockton

Buggie & Co., H. H., 2141 Madison Ave., Toledo

Ohio
 CENTRALAB, Div of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
 General Ceramics & Statite Corp., Keasbey, N. J.
 Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.
 Scintilla-Magneto Div. Bandir, Avietica, Comp.

Scintilla-Magneto Div., Bendix Aviation Corp.,

Sidney, N. Y. Thomas Products, Inc., 9 Bentley St., Salem,

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CONNECTORS—Ceramic Cable

J. N

64. Mass

Ohio

Mass.

# CONNECTORS

#### CONNECTORS-Coaxial Cable

Aerolite Electronic Hardware Corp., 24 Cliff St.,

- Aerolite Electronic flatware cop., Dr och, J. Jersey City, N. J. AIRTRON, INC., 101 E. Elizabeth Ave., Linden, N. J. SEE ADV. PG. 146. Alden Products Co., 117 No. Main St., Brock-

- Alden Products Co., 117 No. Main St., Block-ton 64, Mass.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. See ADV. PG. 167.
  Andrew Corp., 363 E. 75th St., Chicago 19, 111.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Buggie & Co., H. H., 2141 Madison Ave., Toledo L Obio.
- 1, Ohio
- Cannon Electric Development Co., 3209 Hum-boldt St., Los Angeles 31, Calif. Decimeter, Inc., 1430 Market St., Denver 2,
- Colo. Diamond Instrument Co., North Ave., Wakefield, Mass.
- Mass.
   FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
   GENERAL RADIO CO., 275 Massachusetts Ave., GENERAL RADIO CO., 275 Massachusetts Ave., DECE 114, 115

- GENERAL RADIO CU., 275 Massachusetts AVE., Cambridge 33, Mass. SEE ADV. PGS. 114, 115. HERMETIC SEAL PRODUCTS CO., 29-37 So. 6th St., Newark, N. J. SEE ADV. PG. 223. Industrial Products Co., Danbury, Conn. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PC 200 80
- JONES, HOWARD B., Div., Cinch Mfg. Corp., 2460 W. George St., Chicago 18, Ill. SEE ADV. PG. 190.
- Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. Mines Equipment Co., 4235 Clayton Ave., St.

- Mines Equipment Co., 4250 Clayton Ave., Sc. Louis, Mo. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa. Schutter, Carl W., Rockville Centre, N. Y. Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
- Smith, Inc., Herman H., 405 44th St., Blockyn 20, N. Y.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Thomas & Betts Co., Inc., 36 Butler St., Eliza-heat, J. N. J.
- beth 1, N. J. Thomas Products, Inc., 9 Bentley St., Salem,
- Ihomas Products, Inc., 9 Bentley St., Satelli, Mass.
  Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
  Workshop Associates, Inc., The, 66 Needham St., Newton Highlands 61, Mass.

#### CONNECTORS-Stand-off & Cone

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
   Alden Products Co., 117 No. Main St., Brock-ton 64, Mass.

- ton b4, Mass. **AMERICAN PHENOLIC CORP.**, 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. **CENTRALAB**, Div. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27. Industrial Products Co. Declarate Comp.
- Industrial Products Co., Danbury, Conn. Interstate Mfg. Corp., 138 Sussex Ave., Newark
- 4. N.
- 4, N. J.
   Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.
   Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

# CONTACTORS

- Automatic Switch Co., 391 Lakeside Ave., Automatic Switch Co., The, 1146 E. 152nd St., Orange, N. J. Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio Cutler-Hammer Inc., 315 North 12th St., Mil-waukee 1, Wisc. 2200
- waukee 1, Wisc. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., No. Chicago, Ill. SEE ADV.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18.

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- GUARDIAN ELECTRIC MFG. CO., 1821 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60. McQuay-Norris Mfg. Co., 2320 Marconii Awe., St. Louis 10, Mo.
- R. B. M. Div., Essex Wire Corp., Logansport, Ind.
- WARD LEONARD ELECTRIC CO., 31 South St.,
- Martick Co., Chas. F., 16251 Hamilton Awe, Detroit 3, Mich. WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Zenith Electric Co., 152 W. Walton Sti, Chi-cago 10, Ill.

#### CONTACTS

See Metal Parts-Contacts

#### CONTAINERS-One Piece Drawn

Craft Mfg. Co., 3949 W. Schubert St., Chicago.

#### **CONTROLS**—Alarm System

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77.
- hart, Ind. SEE ADV. PGS. 76, 77. American Communications Corp., 306 Broadway, New York 7, N. Y. Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Autocall Co., The, Shelby, Ohio Automatic Electric Sales Corp., 1033 W. Van: Bu-ren St., Chicago 7, Ill. Brown Instrument Co., Wayne & Roberts: Aves., Philadelphia 44, Pa.

- Brown instrument Co., wayne & Roberts Aves., Philadelphia 44, Pa. BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179. Cannon Electric Development Co., 3209 Humboldt St. La Anacle 21 Coll.
- St., Los Angeles 31, Calif.
  C-O-Two Fire Equipment Co., P. O. Box 390, U. S. Highway 1, Newark 1, N. J.
  Cooper Co., Clark, 374 N. Market St., Palmyra,
- Cooper Co., Clair, Crain, Brain, Brain, Brain, West N. J. Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
- Electronic Engineers, 1039 B Pacific St., Santa Monica, Calif.
- delphia 33, Pa. SEE ADV. PG. 189. Fidelity Amplifier Co., 1632 No. Halsted St., Chi-
- cago 14, Ill. Fischer & Porter Co., Hatboro, Pa. Lumenite Electric Co., 407 S. Dearborn St., Chi-
- cago, Ill. Mack Electrical Devices, Inc., 43 Glenside Ave., Wyncote, Pa.
- Moulic Specialties Co., 1005-1007 W. Washing-
- ton St., Bloomington, Ill. Photobell Co., 116 Nassau St., New York 7, N. Y. Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill.
- Rowe Engineering Corp., 2422 N. Pulaski Rd.,
- Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
   SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
   Special Products Co., Silver Spring, Md.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
   TRANS-SONICS, INC., Bedford Airport, Bedford, Mass EFE ADV. PG. 129.
- Mass. SEE ADV. PG. 132.

#### CONTROLS—Auto Radio Remote

- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Croname, Inc., 3701 Ravenswood Ave., Chicago,
- Ill. Elliott Manufacturing Co., 218 Prospect Ave.,
- Binghamton, N. Y.
   STEWART MFG. CORP., F. W., 4311 Ravenswood Ave., Chicago 13, Ill. SEE ADV. PG. 172.
   WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. SEE ADV. PG, 191.

#### **CONTROLS**—Automatic Tuning

Collins Radio Co., Cedar Rapids, Iowa Elm Laboratories, 18 South Broadway, Dobbs-

1949-1950 DIRECTORY of

- Ferry, N. Y.
- Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn. Leland, Inc., G. H., 123 Webster St., Dayton 2,
- Ohio Reeves Instrument Corp., 215 E. 91st St., New
- York, N. Y. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.

#### **CONTROLS**—Chemical

- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland
- 10, Ohio Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
- bridge 38, Mass. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Foxboro Co., The, Foxboro, Mass. General Controls Co., Glendale, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PG. 161. La Motte Chemical Products Co., Towson 4, Bal-timore Md.

- timore, Md.
- Leeds & Northrup Co., 4970 Stenton Ave., Phila.
- 44, Pa. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. National Technical Lab., 820 Missien St., S. Deutica Calif.
- Pasadena, Calif.
- Pasadena, Calif. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Process & Instruments, 60 Greenpaint Ave., Brooklyn 22, N. Y. Ripley Co., Inc., P. O. Box 31., Middletown, Conn. ROBINETTE CO., W. C., 802. Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204. Thompson & Associates, John E., 7210 S. Yates. Ave., Chicago 49, Ill.

**CONTROLS**—Counting & Sorting

CONTROLS—Counting & Sorting
ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35.
ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
Autotron Co., Danville, Ill.
Do All Co., 254 N. Laurel Ave., Des Plaines, III.
Eagle Signal Corp., Moline, Ill.
ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. See ADV. PG. 188.
EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
Fielden Electronics, Inc., 1171 New York Ave., Huntington Station, N. Y.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y.
Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Rowe Engineering Corp., 2422 N. Pulaski Rd.

chelle, N. Y. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Special Products Co., Silver Spring, Md. Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. Thermo Labs., Inc., 355 W. 26th St., New York 1 N.Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.

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CONTROLS—Density

See Controls, Specific Gravity

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# CONTROLS-Dimension

- ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220.
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y.
  Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
  ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204.
  Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

#### CONTROLS-Door

- American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif. Electronic Control Corp., 1573 E. Forest St., De-
- Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y.
   Photoswitch, Inc., 77 Broadway, Cambridge 42, Marc
- Mass.

- Mass. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Special Products Co., Silver Spring, Md. Stanley Works, The, New Britain, Conn. Teletronics Laboratory, Inc., 352 Maple Ave., Westbury, L. I., N. Y. Warrick Co., Chas. F., 16251 Hamilton Ave., Detroit 3. Mich. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. 868, P. 66, 67.

#### CONTROLS—Electronic Motor

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Airlectron, P.O. Box 151, Caldwell, N. J. Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee
- 1. Wis Electric Machinery Mfg. Co., 1331 NE Tyler St., Minneapolis 13, Minn.
- Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif. Ess Instrument Co., 96 S. Washington Ave., Ber-
- genfield, N. J. Federal Electric Produets Co., 50 Paris St., New-
- ark, N. J. Flight Research Engineering Corp., P. O. Box 1-F, Richmond 1, Va. Gaveco Labs, Inc., 2 East End Ave., New York

- Gaveco Labs, Inc., 2 East End Ave., New York 21, N. Y.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Heller Co., Gerald K., 1540 Ridgely St., Baltimore 30, Md.
  Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.
  Hoffman Engineering Corp., Anoka, Minn.
  Industrial Electronics & Transformer Co., 1809
  E. Slauson Ave., Los Angeles 11, Calif.
  Jarvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, III.

- Jarvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, Ill.
  Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
  Mellaphone Corp., Rochester 2, N. Y.
  Mosher Electronic Controls, 130 W. 42nd St., New York, N. Y.
  OHMITE MFG. CO., 4935 W. Flournoy St., Chicago 44, Ill. SEE ADV. PG. 201.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  ROBINETTE CO., W. C., 802 Fair Oaks Ave., S. Pasadena, Calif. SEE ADV. PG. 204.
  Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
  Servo-Tek Products Co., 4 Godwin Ave., Paterson, N. J.
- Servomechanisms, Inc., 142 Mineola Blvd., Mine-
- ola, N. Y. Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y.
- Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.
- Synchro Start Products, Inc., 1046 W. Fullerton Ave., Chicago 14, Ill.
- Teletronics Laboratory, Inc., 352 Maple Ave., Westbury, L. I., N. Y.

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Trumbull Electric Mfg. Co., Plainville, Conn. Weltronic Co., 19500 West 8 Mile Rd., Detroit Mich

WESTINGHOUSE ELEC. CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# CONTROLS--Elevator Leveling

Airlectron, P.O. Box 151, Caldwell, N. J. Fielden Electronics, Inc., 1171 New York Ave., Huntington Station, N. Y.

# **CONTROLS**—Film Thickness

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Electronic Control Corp., 1573 E. Forest St., De-
- troit, Mich GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18.

# CONTROLS-Fluid Conductivity

- Brinnell Co., The, Granby, Conn. Foxboro Co., The, Foxboro, Mass.
- Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.
- Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
- 44, Pa. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Network Mfg. Corp., Bayonne, N. J. Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
- & Instruments, 60 Greenpoint Ave., Process Brooklyn 22, N. Y. Thompson & Associates, John E., 7210 S. Yates
- Ave., Chicago 49, Ill.
   UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG, 225.
   Warrick Co., Chas. F., 16251 Hamilton Ave., Detroit 3, Mich.

# CONTROLS-Fluid Flow

- Askania Regulator Co., 240 E. Ontario St., Chicago 11. Ill. ATOMIC INSTRUMENT CO., 160 Charles St.,
- Boston, Mass. SEE ADV. PG. 200, Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio

- Brinnell Co., The, Granby, Conn. Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Caltron Co., 1406 So. Hobart Blvd., Los Angeles 6, Calif.
- Coral Designs, P. O. Box 248, Forest Hills, N. Y. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.

- Teterboro, N. J. Fischer & Porter Co., Hatboro, Pa. Foxboro Co., The, Foxboro, Mass. General Controls Co., Glendale 1, Calif. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
- 44, ra.
   Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
   Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# CONTROLS—Food Processing

- Askania Regulator Co., 240 E. Ontario St., Chi-
- Askania Regulator Co., 240 E. Ontario Sc., Chicago 11, Ill.
  Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
  Coral Designs, P. O. Box 248, Forest Hills, N. Y.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Foxboro Co., The, Foxboro, Mass.
  Lumenite Electric Co., 407 S. Dearborn St., Chicago, Ill.

- Lumenite Electric Co., 407 S. Dearborn St., Chicago, III.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
  Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
  Ranco, Inc., 601 W. Fifth Ave., Columbus, Ohio Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y.

- Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
  Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, III.
  Ulanet Co., George, 413 Market St., Newark 5, N. J.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# CONTROLS-Frequency

Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio BARKER & WILLIAMSON, 235 Fairfield Ave.,

- Upper Darby, Pa. SEE ADV. PG. 39. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Gaveeo Labs., Inc., 2 East End Ave., New York
- 21, N. Y
- 21, N. Y. Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif. Minnesota Electronics Corp., 97 E. Fifth St., St. Drul 1. Mirco
- Paul 1, Minn. Monitor Products Co., 815 Fremont Ave., So. Pasedena, Calif. Rangertone, Inc., 73 Winthrop St., Newark 4,

Askania Regulator Co., 240 E. Ontario St., Chi-

cago 11, 111. Assembly Products, Inc., Chagrin Falls 6, Ohio Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.

Burling Instrument Co., 253 Springfield Ave.,

Burling Instrument Co., 295 Springheid Ave., Newark 3, N. J. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Foxboro Co., The, Foxboro, Mass. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS 5.18

GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Gordon Co., Claud S., 3000 S. Wallace St., Chi-cago 16, Ill. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Mack Electrical Devices, Inc., 43 Glenside Ave., Wurnerte Pa

Mack Electrical Devices, Inc., 43 Glenside Ave., Wyncote, Pa.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
Thwing Albert Instrument Co., 5351 Pulaski Ave., Philadelphia '44, Pa.
Tuttle & Kift, 1832 N. Monitor St., Chicago, Ill.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
Wheelco Instrument Co., 247, W. Hueler, St.

Wheelco Instruments Co., 847 W. Harrison St.,

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
Barber-Colman Co., Rockford, Ill.
Bristol Co., The, Waterbury 91, Conn.
Brown Instrument Co., Wayne & Roberts Aves., Phila 44 Pa

Brown Instrument Co., Wayne & Roberts Aves., Phila. 44, Pa. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Electronic Prods. Co., St. Charles, Ill. Foxboro Co., The, Foxboro, Mass. Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

Baltimore 4, Md. General Controls Co., Glendale 1, Calif. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Mack Electrical Devices, Inc., 43 Glenside Ave., Wirneste Pa

Winceapolis-Honeywell Regulator Co., 2753

Fourth Ave. S., Minneapolis, Minn. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Serdex, Inc., 91 Cambridge St., Boston, Mass.

D-39

Chicago 7, Ill.

**CONTROLS**—Humidity

#### CONTROLS-Gain

See Attenuators

**CONTROLS**—Heat Treating

# CONTROLS

Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
Techno-Scientific Co., 901 Nepperhan Ave., Yon-kers 3, N. Y.
Tenney Engineering Inc., 26 Avenue B, Newark, N. J.

#### **CONTROLS**—Illumination

- Autotron Co., The, Danville, Ill. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. Electronic Products Co., St. Charles, Ill. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21, Mass
- Mass GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J. Mack Electrical Devices, Inc., 43 Glenside Ave.,

- Mack Electrical Devices, Inc., 43 Gienside Ave., Wyncote, Pa.
  Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  ROBINETTE CO., W. C., 802 Fair Oaks Ave., S. Pasadena, Calif. SEE ADV. PG. 204.
  Varo Mfg. Co., Inc., Box 638, Garland, Texas
  WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE PG. 193.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# CONTROLS-Inspection

- Airlectron, P.O. Box 151, Caldwell, N. J. Electric Eye Equipment Co., 16 W. Fairchild St.. Danville, Ill.
- Danville, Ill.
  Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y.
  Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wisc.
  Photobell Co., 116 Nassau St., New York 7, N. Y.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.

- Radio Sonic Corp., 100 Child A. C., 1
  N. Y.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Special Products Co., Silver Spring, Md.
  Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
  Vacuum Electronic Engineering Co., 316 37th St., Brooklyn 2, N. Y.

#### **CONTROLS**—Liquid Level

- Alco Valve Co., 865 Kingsland, St. Louis 5, Mo. Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis.
- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Askania Regulator Co., 240 E. Ontario St., Chi-
- Askania Regulator Co., 240 E. Ontario St., Chi-cago 11, Ill. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Autocall Co., The, Shelby, Ohio Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio Bristol Co., The, Waterbury 91, Conn. Becure Lordermore Co. Wourse & Reberts Aves

- Bristor Co., 1ne, waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio
- Cook Electric Co., 2700 Southport Ave., Chicago,
- T11.
- III. Cutler-Hammer, Inc., 315 No. 12th St., Mil-waukee 1, Wis. Eclipse-Pioneer Div., Bendix Aviation Corp., Te-terboro, N. J. Electronic Prods. Co., St. Charles, III. Engineering Lab., Inc., 602 E. 4th St., Tulsa 3, Oklo
- Ökla.
- Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21,
- Mass.

- General Controls Co., Glendale 1, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PG. 5-18. GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60.

- Leupold & Stevens Instruments, 4445 N.E. Glisan St., Portland 13, Ore. Lumenite Electric Co., 407 S. Dearborn St., Chi-
- cago, Ill. Mercoid Corp., The, 4201 Belmont Ave., Chicago
- 41, Ill. Minneapolis-Honeywell Regulator Co., 2753
- Minneapolis-Honeywell Regulator Co., 2133 Fourth Ave. S., Minneapolis, Minn. Mosher Electronic Controls, 130 W. 42nd St., New York, N. Y. Photoswitch, Inc., 77 Broadway, Cambridge 42,
- Mass. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. **ROBINETTE CO.**, W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204. Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.

- Warrick Co., Chas. F., 16251 Hamilton Ave., Detroit 3, Mich. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, 1. 67.

#### **CONTROLS**—Loop Regulation

- Airlectron, P.O. Box 151, Caldwell, N. J. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, P 66, 67.

#### **CONTROLS**—Machine Safety

- American Radio Co., 611 E. Garfield Ave., Glen-

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
  Autotron Co., The, Danville, Ill.
  Brinnell Co., The, Granby, Conn.
  Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 1889.
  Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y.
  Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wisc.
  Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
  Hoffman Engineering Corp., Anoka, Minn.
  INDUSTRIAL ELECTRONICS, INC., 2457 Woodward Ave., Detroit 1, Mich. SEE ADV. PG. 226. 226

- 226. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Special Products Co., Silver Spring, Md. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, P 66, 67.

#### **CONTROLS**—Materials Thickness

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Brinnell Co., The, Granby, Conn. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Omaha Scientific Supply Co., 3623 Lake St., Ornshe 4. Neb
- Omaha 4, Neb.
- Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. Triplett & Barton, Inc., 831 N. Lake St., Bur-
- bank, Calif.

#### **CONTROLS**—Mechanical Switch

- AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Brinnell Co., The, Granby, Conn., Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles, 15, Calif. Giannini & Co., Inc., 285 W. Colorado St., Pasa-dena 1, Calif. Machine-O-Matic, Inc., P. O. Box 238, Ashley,
- Ohio
- Onio
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 77.

#### CONTROLS-Maisture

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.

1949-1950 DIRECTORY of

- Silver Spring, Md. Brown Instrument Co., Wayne & Roberts Aves., Phila. 44, Pa. Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y. Foxboro Co., The, Foxboro, Mass. Mack Electrical Devices Inc., 43 Glenside Ave., Wurpcote Pa

- Mack Electrical Devices Inc., 45 Gienside Ave., Wyncote, Pa. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis 5, Minn. Minnesota Electronics Corp., 97 E. Fifth St., St.
- Paul 1, Minn. Moisture Register Co., P. O. Drawer No. 910, Alhambra, Calif.

- Amamora, Laui. Network Mfg. Corp., Bayonne, N. J. Serdex, Inc., 91 Cambridge St., Boston, Mass. Thwing-Albert, Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

# CONTROLS-Nuclear Counter

- Airlectron, P.O. Box 151, Caldwell, N. J. American Radio Co., 611 E. Garfield Ave., Glen-
- dale, Calif. Arlington Electric Products, Inc., 500 W. 52nd

- Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N.Y.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
  Autotron Co., The, Danville, Ill.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
  Berkeley Scientific Co., 6th & Nevin, Richmond, Calif. Calif. Brinnell Co., The, Granby, Conn. Electronic Control Corp., 1573 E. Forest St., De-

Brinner Co., The, Granby, Conn.
Electronic Control Corp., 1573 E. Forest St., Detroit, Michigan
EL-TRONICS, INC., 2647 No. Howard St., Philadelphia 33, Pa. SEE ADV. PG, 189.
Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
Entwistle Co., James L., P. O. Box 305, Providence, R. I.
Fielden Electronics, Inc., 1171 New York Ave., Huntington Station, N. Y.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
Gorrell & Gorrell, Haworth, N. J.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60.
Hetherington & Son, Inc., Robert, Sharon Hill, Pa.

Pa. Hoffman Engineering Corp., Anoka, Minn. Lansing Engineering Co., Electronics Div., 735 E. Kalaunazoo St., Lansing, Mich. North American Philips Co., 100 E. 42nd St., New York 17, N. Y. Nuclear Instrument & Chemical Co., 223 W. Erie St., Chicago 10, Ill. Omaha Scientific Supply Co., 3623 Lake St., Omaha 4, Neb.

Omaha 4, Neb. Photobell Co., 116 Nassau St., New York 7, New York

Photoswitch Inc., 77 Broadway, Cambridge 42,

Mass.
Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill.
Radiation Counter Lab., Inc., 1844 W. 21st St., Chicago 8, Ill.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Radioactive Products, Inc., 3201 E. Woodbridge St., Detroit 7, Mich.
Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
Sherron Electronics Corp., 1201 Flushing Ave., Brooklyn 6, N. Y.
Special Products Co., Silver Spring, Md.
Technitrol Engineering Co., 3212 Market St., Phila., Pa.

Phila., Pa. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y. Tracerlab Inc., 55 Oliver St., Boston 10, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Wilson & Co., G. C., 2 N. Passaic Ave., Chatham,

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Pa.

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Phila., Pa.

N. J.

#### CONTROLS-Oxygen

Leeds & Northup Co., 4970 Stenton Ave., Philadelphia 44. Pa.

#### CONTROLS—Ozone

Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich. Thermionic Engineering Corp., Pompton Plains,

N. J.

# CONTROLS-PH

Bristol Co., The, Waterbury, Conn. Brown Instrument Co., Wayne & Roberts Aves.,

Phila. 44, Pa. Elm Laboratories, 18 South Broadway, Dobbs

- Ferry, N. Y. LaMotte Chemical Products Co., Towson 4, Bal-
- timore, Md. eeds & Northrup Co., 4970 Stenton Ave., Phila-Leeds
- delphia 44, Pa. Minneapolis-Honeywell Regulator Co., 2753

Fourth Ave., S., Minneapolis, Minn. National Technical Lab., 820 Mission St., S. Pasadena, Calif.

#### CONTROLS—Package Wrapping

- Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
- Datvine, in.
   Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
   Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
   Ulanet Co., George, 413 Market St., Newark 5, N. J.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66. 67.

#### **CONTROLS**—Photoelectric

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Aerolux Light Corp., 653 11th Ave., New York
- 19, N. Y
- 19, N. Y. Airlectron, P. O. Box 151, Caldwell, N. J. ALLIED CONTROL CO. INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. American Radio Co., 611 E. Garfield Ave., Glen-American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Autotron Co., The, Danville, III.
  C-O-Two Fire Equipment Co., P. O. Box 390, U. S. Highway 1, Newark 1, N. J.
  Combustion Research Laboratories, Inc., 104-18 Metropolitan Ave., Forest Hills, N. Y.
  De Jur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y.
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. J.
  Electronic Prods. Co., St. Charles, III.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG, 189.
  Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J.
  Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21, Marce

- Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21,
- Mass. FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City, N. Y. SEE ADV. PG. 90. GENERAL CONTROL COMPANY, 1200 Soldiers Field Rd., Boston 34, Mass. SEE ADV. PG.
- 161 GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Inductive Equipment Co., Gettysburg, Pa. Lumenite Electric Co., 407 S. Dearborn St., Chi-
- Lumente Electric Co., 407 S. Dearborn St., Chicago, Ill.
  Mettler Co., Lee B., 406 S. Main St., Los Angeles 13, Calif.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  Markie Construction Control 1005 1007, M. W. Markie Construction

- Moulic Specialties Co., 1005-1007 W. Washing-ton St., Bloomington, Ill. National Technical Lab., 820 Mission St., S. Decedera Colit
- Pasadena, Calif. Photobell Co., 116 Nassau St., New York 7, N. Y.

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- Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
- Radio Sonic Corp., 186 Union Ave., New Rochelle,
- N. Y.
- N. Y. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Special Products Co., Silver Spring, Md. Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66 67

- 868, Pittsburgh 30, Pa. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP.,
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- Wilmotte Inc., Raymond M., 1469 Church St., N.W., Washington 5, D. C.Wilson & Co., G. C., 2 N. Passaic Ave., Chatham,
- N. J. Worner Electronic Devices, Rankin, Ill.

# **CONTROLS**—Photographic Exposure

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. Y. Industrial Timer Corp., 115 Edison Pl., Newark 5 N J.
- 5. N. J.
- Minnesota Electronics Corp., 97 E. Fifth St., St.
- Paul 1, Minn. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. WESTON ELECTRICAL INSTRUMENT CORP.,
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG, 193.

# CONTROLS-Positioning

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220.
- Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.

- Cago 11, 11. Barber Colman Co., Rockford, Ill. Collins Radio Co., Cedar Rapids, Iowa Eclipse Pioneer Div., Bendix Aviation Corp., Te-terboro, N. J. Elliott Mfg. Co., 218 Prospect Ave., Binghamton, N. Y.
- Fairchild Camera & Instrument Corp., 88-06 Van
- Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y.
  Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y.
  FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City, N. Y. SEE ADV. PG. 90.
  Foxboro Co., The, Foxboro, Mass.
  Gaveco Laboratories, Inc., 2 East End Avenue, New York 21, N. Y.

- New York 21, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Giannini & Co., G. M., 285 W. Colorado St., Pasadena 1, Calif.
- Hetherington & Son., Inc., Robert, Sharon Hill,
- Pa. Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids
- 2, Mich Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
- Minneapolis-Honeywell Regulator Co., 2753
- Fourth Ave., S., Minneapolis, Minn. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
- Ave., Flushing, N. Y. Reeves Instrument Corp., 215 E. 91st St., New
- York, N. Y. ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204. Servo-Tek Products Co., 4 Godwin Ave., Paterson, NJ
- Standard Electronics Research Corp., 2 East End
- Ave., New York 21, N. Y.
   SUPERIOR ELECTRIC CO., 83 Laurel St., Bristol, Conn. SEE ADV. PGS. 142, 143.
   Synchro Start Products, Inc., 1046 W. Fullerton Ave., Chicago 14, Ill.

CONTROLS

Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# CONTROLS-Power Level

Brinnell Co., The, Granby, Conn.

#### CONTROLS—Pressure

- Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
- Autocall Co., The, Shelby, Ohio Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio

SEE ADV. PGS. 5-18.

41, Ill.

66,

Louis 6, Mo.

CONTROLS—Printing

- Barber-Colinan Co., Rockford, Ill. Brinnell Co., The, Granby, Conn. Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Caltron Co., 1406 So. Hobart Blvd., Los Angeles 6. Calif.
- 6, Calif. Cook Electric Co., 2700 Southport Ave., Chicago,
- III. Cooper Co., Clark, 374 N. Market St., Palmyra,
- N. J. Coral Designs, P. O. Box 248, Forest Hills, N. Y.
- Cutler-Hammer, Inc., 315 No. 12th St., Mil-waukee 1, Wis. Walkee 1, W15. Eclipse-Pioneer Div., Bendix Aviation Corp., Te-terboro, N. J. Foxboro Co., The, Foxboro, Mass. General Controls Co., Glendale 1, Calif. **GENERAL ELECTRIC CO.**, Schenectady 5, N. Y.

Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y. McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo. Mercoid Corp., The, 4201 Belmont Ave., Chicago

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Ranco, Inc., 601 W. Fifth Ave., Columbus, Ohio **ROBINETTE CO.**, W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204. Skaneateles Mfr. Co. Inc. 122 Distance St

Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y. Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.

United Electric Controls Co., 85 School St., Wa-tertown 72, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

White-Rodgers Electric Co., 1209 Cass Ave., St.

Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee 1, Wis. Electric Eye Equipment Co., 16 W. Fairchild St.,

Danville, Ill. Ess Instrument Co., 96 So. Washington Ave.,

Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J.
FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City, N. Y. SEE ADV. PG. 90.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

606, 67.
WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.

Babcock Radio Engineering, Inc., 6164 Sepulveda Blvd., Van Nuys, Calif.

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CONTROLS—Radio Remote

# CONTROLS

- BARKER & WILLIAMSON, 235 Fairfield Ave.,
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bell Sound Systems, Inc., 555 Marion Rd., Col-umbus 7, Ohio
  Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, North Hollywood, Calif.
  Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md.

- Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.
  Collins Radio Co., Cedar Rapids, Iowa
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri Dual Remote Control Co., Garden City, Mich.
  Electronic Engineers, 1039 B Pacific St., Santa Monica, Calif.
  Elliott Mfg. Co., 218 Prospect Ave., Binghamton,
- Elliott Mfg. Co., 218 Prospect Ave., Binghamton,
- N. Y. Elm Laboratories, 18 South Broadway, Dobbs

- Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  Erco Radio Labs., Inc., East Stewart Ave., Gar-den City, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
  Jefferson Inc., Ray, 40 E. Merrick Rd., Freeport,
- Jefferson Inc., Ray, 40 E. Merrick Rd., Freeport, NY
- Link Radio Corp., 125 W. 17th St., New York,

- Link Radio Corp., 125 W. 17th St., New Tork, N. Y.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila. 44, Pa.
  Northeastern Engineering, Inc., Manchester, N. H.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Reeves Instrument Corp., 215 E. 91st St., New York N. Y.

- York, N. Y. Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C. Searle Aero Industries, Inc., Orange, Calif. Selectar Industries, Inc., 401 E. 138th St., New Vorte 54 N. V.
- Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y. Shakespeare Products Co., 241 E. Kalamazoo Ave., Kalamazoo, Mich. Sierra Electronic Corp., Belmont & San Carlos, Calif.

- Calif. Simpson Mfg. Co., Inc., Mark, 32.28 49th St., Long Island City 3, N. Y. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y. Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y. Teletronics Laboratory, Inc., 352 Maple Ave., Westbury, L. I., N. Y. Transmitter-Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. SEE ADV. PG. 191.
- PG. 191. Yates Engineering Services, Box 67, Cranford,
- N. J.

# **CONTROLS**—Refrigeration Defrosting

- CRAMER CO., INC., R. W., Centerbrook, Conn.
- SEE ADV. PG. 99. Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee 1, Wis.
- Ree 1, WIS. Fielden Electronics, Inc., 1171 New York Ave., Huntington Station, N. Y. General Controls Co., Glendale 1, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Paragon Electric Co. Two Piyers Wig
- SEE ADV. FGS. 5-18. Paragon Electric Co., Two Rivers, Wis. Ranco, Inc., 601 W. Fifth Ave., Columbus, Ohio Tenney Engineering, Inc., 26 Avenue B., Newark 5, N. J.
- Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
- White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.

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#### **CONTOLS**—Register

- Autotron Co., The, Danville, Ill. Electric Eye Equipment Co., 16 W. Fairchild St., Danville 111
- Danville, Ill. FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City, N. Y. SEE ADV. PG. 90. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Machine-O-Matic, Inc., P. O. Box 238, Ashley,
- Ohio
- Nuclear Instrument & Chemical Corp., 223 W. Erie Street, Chicago 10, Ill. Photoswitch, Inc., 77 Broadway, Cambridge 42,
- Mass. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Worner Electronic Devices, Rankin, Ill.

#### **CONTROLS**—Register Cutter

- Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
- Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21,
- Mass. FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City, N. Y. SEE ADV. PG. 90. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
- Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich.
- 2, Mich. Nuclear Instrument & Chemical Co., 223 W. Erie St., Chicago 10, Ill. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### CONTROLS-Servo

- Airlectron, P. O. Box 151, Caldwell, N. J. ALLIED CONTROL CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35.
- PGS. 34, 35. ARMA CORP., 254 36th St., Brooklyn, 32, N. Y. SEE ADV. PG. 220. Askania Regulator Co., 240 E. Ontario St., Chi-cago 11, 11.
- cago 11, Ill. Barber-Colman Co., Rockford, Ill. Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif. Collins Radio Co., Cedar Rapids, Iowa Eclipse-Pioneer Div. of Bendix Aviation Corp., Teterboro, N. J. ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. Fairchild Camera & Instrument Corp., 88-06 Van Wyck Byd Jamaica 1, N. Y.

- Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y.
  Flight Research Engineering Corp., P. O. Box 1-F, Richmond 1, Va.
  FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City, N. Y. SEE ADV. PG. 90.
  Gaveco Laboratories, Inc., 2 East End Avenue, New York 21, N. Y.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS, 5-18.
- SEE ADV. PGS. 5-18. Giannini & Co., Inc., 285 W. Colorado St., Pasa-dena 1, Calif.
- Heller Co., Gerald K., 1540 Ridgely St., Balti-more 30, Md.
- more 30, Ma. Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 38, Ill. Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich. National Technical Lab., 820 Mission St., S. Decodero Colif.

- National Technical Lab., 820 Mission St., S. Pasadena, Calif.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
  ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204.
  Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
  Servo-Tek Products Co., 4 Godwin Ave., Paterson, N. J.
  Servomechanisms. Inc., 142 Mineola Blvd., Mine-
- Servomechanisms, Inc., 142 Mineola Blvd., Mineola, N. Y. Standard Electronics Research Corp., 2 East End
- Ave., New York 21, N. Y.

Techno-Schientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y. Televiso Products Inc., 7466 West Irving Park Road, Chicago 34, Ill.

1949-1950 DIRECTORY of

- Road, Chicago 34, 111. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66 67
- 66, 67.
- Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.

#### **CONTROLS**—Skew

N. Y.

10, Calif.

Wis.

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Gaveco Labs., Inc., 2 East End Ave., New York 21, N. Y.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.

#### **CONTROLS**—Smoke & Combustion

- Autotron Co., The, Danville, Ill. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland, Ohio
- Bristol Co., The, Waterbury 91, Conn Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
- Philadelphia 44, Pa. Combustion Control Corp., 77 Broadway, Cam-bridge 42, Mass. Combustion Research Laboratories, Inc., 104-18 Metropolitan Ave., Forest Hills, N. Y. Electronic Control Corp., 1573 E. Forest St., De-troit, Mich.
- troit, Mich. Electronic Products Co., St. Charles, Ill. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Leeds & Northrup Co., 4970 Stenton Ave., Phila-delphia 44, Pa. Paragon Electric Co., Two Rivers, Wis. Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

N. Y. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill. Worner Electronic Devices, Rankin, Ill.

**CONTROLS**—Sound System

CONTROLS—Sound System
CENTRALAB, DIV. of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.
Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y.
Daven Co., 191 Central Ave., Newark 4, N. J.
Electronic Systems Co., 201 N. Wells St., Chi-cago 1, Ill.
EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
Gray Mfg. Co., 16 Arbor St., Hartford, Conn.
Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.

Minnesota Electronics Colp., 51 D. Thin co., 54
 Paul I, Minn.
 RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
 PGS. 197, Inside Back and Back Covers.
 Remler Co., Ltd., 2101 Bryant St., San Francisco

Calif.
 Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
 Stackpole Carbon Co., St. Marys, Pa.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
 Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
 Webster Electric Co., 1900 Clark St., Racine, Wie

Askania Regulator Co., 240 E. Ontario St., Chi-

cago 11, Ill. Brown Instrument Co., Wayne & Roberts Aves., Phila. 44, Pa. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J.

**CONTROLS**—Specific Gravity

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Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.

Minneapolis-Honeywell Regulator ( Fourth Ave., S. Minneapolis, Minn. Co., 2753

#### CONTROLS-Strain

Brinnell Co., The, Granby, Conn. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.

# **CONTROLS**—Temperature

- Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wisconsin
- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. American Radio Co., 611 E. Garfield Ave., Glen-
- dale, Calif. Askania Regulator Co., 240 E. Ontario St., Chi-

- Askania Regulator Co., 240 E. Ontario St., Chi-cago 16, Ill. Assembly Products, Inc., Chagrin Falls 6, Ohio Autocall Co., The, Shelby, Ohio Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio

- Barber-Colman Co., Rockford, Ill. Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
- Burling Instrument Co., 253 Springfield Ave., Newark 3, N. J. Cook Electric Co., 2700 Southport Ave., Chicago,
- III.
- Cooper Co., Clark, 374 N. Market St., Palmyra,

- Cooper Co., Clark, 514 N. Annuelli, N. J.
  Edison Inc., Thomas A., Instrument Div., West Orange, N. J.
  ELECTRIC SOLDERING IRON CO., W. Elm St., Deep River, Conn. SEE ADV. PG. 30.
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181.
- Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y. Fischer-Smith, Inc., 164 State St., West Engle-

- Fischer-Smith, Inc., 164 State St., West Englewood, N. J.
  Foxboro Co., The, Foxboro, Mass.
  Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
  Gaveco Labs., Inc., 2 East End Ave., New York 21, N. Y.
  General Controls Co., Glendale 1, Calif.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y.
  SEE ADV. PGS. 5-18.
  Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio

- St., Mansfield, Ohio Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill. Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich.
- Leeds & Northrup Co., 4970 Stenton Ave., Phila-
- delphia 44, Pa.
- Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck, Conn. MacDONALD & CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. SEE ADV. PG. 118.
- Mack Electrical Devices, Inc., 43 Glenside Ave.,
- Mack Electrical Devices, Inc., 10 Marconi Ave., Wyncote, Pa.
   McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
   Mercoid Corp., The, 4201 Belmont Ave., Chicago
- 41, Ill.
- 41, 111.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
  Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  Monitor Products Co., 815 Fremont St., So.

- Monitor Products Co., 819 Fremont St., So. Pasadena, Calif. Nuclear Instrument & Chemical Co., 223 W. Erie St., Chicago 10, Ill. Nurnberg Thermometer Co., Inc., 4 Corey St., Boston 32, Mass. Philadelphia Thermometer Co., 4401 N. Sixth St., Dhiladelphia Pa
- Philadelphia, Pa.
- Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Ranco, Inc., 601 W. Fifth Ave., Columbus, Ohio Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands, Mass.

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- Sarco Co., Inc., Empire State Bldg., New York 1, N
- SPENCER-KENNEDY LABS, INC., 186 Massa-chusetts Ave., Cambridge 39, Mass. SEE ADV. PG. 208.
- Spencer Thermostat Co., 34 Forest St., Attleboro, Mass. Standard Electronics Research Corp., 2 East End
- Ave., New York 21, N. Y. Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
- Tenney Engineering Inc., 26 Avenue B, Newark 5, N. J
- Thwing-Albert Instrument Co., 5351 Pulaski Ave.,
- TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.
   Tuttle & Kift, 1832 N. Monitor St., Chicago, Ill.
- Ulanet Co., George, 413 Market St., Newark 5,
- United Electric Controls Co., 85 School St., Wa-
- tertown 72, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Wheelco Instruments Corp., 847 W. Harrison St.,
- Chicago 7, III. White-Rodgers Electric Co., 1201 Cass Ave., St. Louis 6, Mo. Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

# CONTROLS—Tentering

- Airlectron, P. O., Box. 151, Caldwell, N. J. Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
- Pulaski Ave., Philadelphia 44, Pa. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Fielden Electronics, Inc., 1171 New York Ave., Huntington Station, N. Y. Foxboro Co., The, Foxboro, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 268 Ditteburgh 20 Da SEE ADV PCS
- 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# CONTROLS—Timing

- Acme Telectronix Div. of NEA Service, Inc., West

- Acme felectronix Div. of NEA Service, Inc., west Third & Lakeside, Cleveland 13, Ohio ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. Airlectron, P. O., Box. 151, Caldwell, N. J. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. American Radio Co., 611 E. Garfield Ave., Glen-dale Calif. dale. Calif
- ATOMIC INSTRUMENT CO., 160 Charles St.,

ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADG. PG. 200.
Autotron Co., Danville, III.
AVIOMETER DIV. of Roanwell Corp., 662\*Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
Brinnell Co., The, Granby, Conn.
Bristol Co., The, Waterbury 91, Conn.
CRAMER CO., INC., R. W., Centerbrook, Conn., SEE ADV. PG. 99.
Cutler-Hammer, Inc., 315, No. 12th, St. Mil.

- SEE ADV. PG. 99.
  Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee 1, Wis.
  Eagle Signal Corp., Moline, Ill.
  Edison, Inc., Thomas A., Instrument Div., West Orange, N. J.
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  EL-TRONICS, INC., 2647 No. Howard St., Philadelphia 33, Pa. SEE ADV. PG. 189.
  Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21, Mass.

- Mass.
- **GENERAL CONTROL COMPANY**, 1200 Soldiers Field Rd., Boston 34, Mass. SEE ADV. PG. 161.

- 101.
  General Controls Co., Glendale 1, Calif.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
  Industrial Timer Co., 115 Edison Pl., Newark 5, N. J.
- N. J.
- Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Lektra Labs., 30 E. 10th St., New York, N. Y. Lumenite Electric Co., 407 S. Dearborn St., Chi-
- cago, Ill. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Maritime Quality Hardware Co., Inc., Belfast, Maine

- Mercoid Corp., The, 4201 Belmont Ave., Chicago 41, Ill. Minneapolis-Honeywell Regulator
- Co., 2753 Fourth Ave., S., Minneapolis, Minn. Fourth Ave., S., Minneapolis, Minn. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Paragon Electric Co., Two Rivers, Wis. Photovolt Corp., 95 Madison Ave., New York 16, N
- N. Y.
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Reynolds Electric Co., 2650 W. Congress St.,
- Chicago 12, Ill.
- Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Robotron Corp., 5570 W. Chicago Blvd., Detroit 4, Mich.
- 4, Mich.
  Sciaky Bros., 4915 W. 67th St., Chicago 38, Ill.
  Simpson Mfg. Co., Inc., Mark, 3228 49 St., Long Island City 3, N. Y.
  Standard Electric Time Co., 89 Logan St., Spring-Guld Merger
- field, Mass.
- Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J. TELECHRON, INC., Homer Ave., Ashland, Mass. SEE ADV. PG. 85. Ulanet Co., George, 413 Market St., Newark 5, N J
- N. J. Walser Automatic Timer Co., Graybar Bldg., New

York, N. Y. WARD LEONARD ELECTRIC CO., 31 South St.,

Mt. Vernon, N. Y. SEE ADV. PG. 151. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.

White-Rodgers Electric Co., 1209 Cass Ave., St.

Wilson & Co., G. C., 2 N. Passaic Ave., Chatham,

Brinnell Co., The, Granby. Conn. Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.

Gaveco Laboratories, Inc., 2 East End Ave., New York 21, N. Y. Reeves Instrument Corp., 215 E. 91st St., New York, N. Y. ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204. Servo-Tek Products Co., 4 Godwin Ave., Pater-

Soli, N. J. TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.

National Technical Lab., 820 Mission St., S. Pasadena, Calif. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, 111.

Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri Radio Sonic Corp., 186 Union Ave., New Rochelle,

Televiso Products Inc., 7466 West Irving Park Road, Chicago 34, 111. Vendo Co., 7400 E. 12th St., Kansas City 8, Mo.

Brown Instrument Co., Wayne & Roberts Aves.,

Phila. 44, Pa. Cutler-Haminer, Inc., 315 N. 12th St., Milwau-

Cutter-mannier, Inc., Oro II, Tatte S., Miss. Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y. Fredericks Co., Geo. E. Bethayres, Pa. National Research Corp., 70 Memorial Drive, Combridge 42 Mass.

National Research Corp., 70 Memorial Drive, Cambridge 42, Mass.
Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y.
Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.

Tenney Engineering Inc., 26 Avenue B., Newark 5, N. J.

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Worner Electronic Devices, Rankin, Ill.

66, 67.

N. J.

Louis 6, Mo.

CONTROLS-Torque

CONTROLS-Turbidity

**CONTROLS**—Ultrasonic

CONTROLS-Vacuum

N. Y.

# CONTROLS

- Thompson & Associates, John E., 7210 S. Yates, Ave., Chicago 49, Ill.
  United Electric Controls Co., 85 School St., Wa-tertown 72, Mass.
  Wallace & Tiernan Products, Inc., Belleville 9,
- N. J.

#### **CONTROLS**—Ventilating Control System

Barber Colman Co., Rockford, Ill.

- Barber Colman Co., Rockford, Ill.
  Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
  Coral Designs, P. O. Box 248, Forest Hills, N. Y.
  Foxboro Co., The, Foxboro, Mass.
  General Controls Co., Glendale 1, Calif.
  Minneapolis-Honeywell Regulator Co., 2753
  Fourth Ave., S., Minneapolis, Minn.
  Parker Kalon Corp., 200 Varick St., New York 14, N. Y.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn. **ROBINETTE CO., W. C.**, 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204.
  Rotron Division, 7-9 Schoonmaker Lane, Wood-stock, N. Y.

- Kotion Division, Y. C. Balerin, N. Y.
   WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, F
- White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo. Worner Electronic Devices, Rankin, Ill.

#### CONTROLS-Volume & Tone

- Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
   CENTRALAB, DIV. of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS.

- 26, 27.
  Chicago Telephone Supply Corp., 1142 W. Beardsley Ave., Elkhart, Ind.
  Clarostat Mfg. Co., Inc., 130 Clinton St., Brooklyn 2, N. Y.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  Daven Co., 191 Central Ave., Newark 4, N. J.
  INTERNATIONAL RESISTANCE CO., 401 N.
  Broad St., Philadelphia 8, Pa. SEE ADV.
  PGS. 20, 21.
  Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
- Jensen Mig. Co., 6001 S. Latanice France France Strain 38, III. Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y. MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- National Union Radio Corp., 350 Scotland Rd.,
- National Onion Radio Colp., Solo Octobalia Ind., Orange, N. J.
   OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201.
   Owens-Illinois Glass Co., Toledo 1, Ohio
   Rowe Industries, 1702 Wayne St., Toledo 9, Oct.

- Ohio Shallcross Mfg. Co., 10 Jackson Ave., Colling-

dale, Pa. Stackpole Carbon Co., St. Marvs, Pa. Wirt Co., 5221 Greene St., Philadelphia, Pa. Worner Electronic Devices, Rankin, Ill.

#### **CONTROLS**—Water Detector

- Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J. Lumenite Electric Co., 407 S. Dearborn St., Chi-
- cago, Ill.
- National Technical Lab., 820 Mission St., S. Pasadena, Calif. Network Mfg. Corp., Bayonne, N. J. Warrick Co., Chas. F., 16251 Hamilton Ave., Detroit 3, Mich.
- Worner Electronic Devices, Rankin, Ill.

#### CONTROLS—Weight

D-44

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Foxboro Co., The, Foxboro, Mass. Worner Electronic Devices, Rankin, Ill.

#### CONTROLS-Welding

- Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wis.
- 1, Wis. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Electronic Products Co., St. Charles, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn, N. Y. Lyman Electronic Corp., 12 Cass St., Springfield, Mass.

- Mass. OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Robotron Corp., 5570 W. Chicago Blvd., Detroit 4 Mich.
- 4. Mich.
- Sciaky Bros., 4915 W. 67th St., Chicago 38, Ill. Vangtronic Corp., 237 John St., Bridgeport 3, Conn.
- Weltronic Co., 19500 West 8 Mile Rd., Detroit 19 Mich
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### CONVERTERS-f-m

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo. Crystal Devices Co., Inc., 50 Mill Rd., Freeport,
- N Y
- N. Y. DeWald Radio Mfg. Corp., 35-15 37th Ave., Long Island City, N. Y. EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189. Ferris Instrument Co., 110 Cornelia St., Boon-tee N. J.
- ton, N. J.
- Gothard Mfg. Co., 2110 Clear Lake Ave., Spring-field, Ill.
- Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada Meissner Mfg. Div., Maguire Industries, Inc., Mt.
- Meissner Mfg. Div., Maguire Industries, Inc., Mr. Carmel, Ill.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  Simpson Mfg. Co., Inc., Mark. 32-28 49th St., Long Island City 3, N. Y.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

#### **CONVERTERS**—Frequency Shift

- Aermotive Equipment Corp., 1632-8 Central St.,
- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
  Boehme Inc., H. O., 915 Broadway, New York, N V
- N. Y.
- N. Y. Collins Radio Co., Cedar Rapids, Iowa ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. Erco Radio Labs., Inc., East Stewart Ave., Gar-den City, N. Y. Gothard Mfg. Co., 2110 Clear Lake Ave., Spring-fold U.
- field, Ill.

- field, Ill. McElroy Mfg. Corp., Littleton, Mass. Measurement Engineering Ltd., 61 Duke St., Toronto, Canada NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155. Prace Wireless Mfg. Co. Inc., Cantiague Rd.,
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
- Hicksville, L. I., N. Y. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

#### **CONVERTERS**—High Frequency

1949-1950 DIRECTORY of

- Babcock Radio Engineering, Inc., 6164 Sepulveda Blvd., Van Nuys, Calif. Columbus Electronics Corp., 229 S. Waverly St.,
- Yonkers, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18.
- Gorham Co., Bronze Div., Providence 7, R. I. Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y. Leland Electric Co., The, 1501 Webster St., Day-
- Leland Electric Co., The, 1501 Webster St., Dayton 1, Ohio
  Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  Waterproof Electric Co., 72 E. Verdugo Ave., Burbank, Calif.

#### **CONVERTERS**—Low Frequency

- Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
  Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
  Eicor, Inc., 1501 W. Congress St., Chicago 7, Ill.
  Electric Specialty Co., 211 South St., Stamford, Corp.
- Conn. ELECTRONIC MEASUREMENTS CO., Red Bank,
- N. J. SEE ADV. PG. 172. Furst Electronics, 10A S. Jefferson St., Chicago 6,
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Geophysical Instrument Co., 1820 N. Nash St.,
- Arlington, Va. Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill. Great Lakes Electric Mfg. Co., 17 S. Desplaines
- St., Chicago 6, Ill. Leland Electric Co., The, 1501 Webster St., Dayton 1, Ohio
- Measurement Engrg. Ltd., Arnprior, Ontario,

Canada

Ill.

CONVERTERS-Rotary

Canada RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y. Varo Mfg. Co., Inc., Box 638, Garland, Texas Waterproof Electric Co., 72 E. Verdugo Ave., Burbank, Calif.

CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, Ill. SEE ADV. PG. 218. CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Eicor Inc., 1501 W. Congress St., Chicago 7, Ill. Janette Mfg. Co., 556 W. Monroe St., Chicago 6, Ill

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. SEE ADV.

Fourth St., St. Paul 1, Minn. SEE ADV. PG. 192. CORNELL-DUBILIER ELECTRIC CORP., In-dianapolis, Ind. SEE ADV. PG. 87. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. Electronic Labs., Inc., 24 W. 24th St., Indian-apolis 4, Ind. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Maguire Industries Inc., Electronics Dept., Bridge-

Maguire Industries Inc., Electronics Dept., Bridgeport, Conn. Miles Reproducer Co., Inc., 812 Broadway, New

York 3, N. Y. Radiart Corp., The, 3571 W. 62nd St., Cleveland

2, Ohio Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

**COOKERS**—Electronic

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RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.

CONVERTERS-Vibrator Type

# CORD SETS

- Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- American Electric Cable Co., Holyoke, Mass. Art Specialty Co., 3245 W. Lake St., Chicago, Ill.
- AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Belden Mfg. Co., 4647 W. Van Buren St., Chi-cago 44, III.
- Birnbach Radio Co., Inc., 145 Hudson St., New

- Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
  Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24.
- CORNISH WIRE CO., 10 Park Row, New York (, N. Y. SEE ADV. PG. 24.
  Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
  Eckstein Radio & Television Co., LeRoy, Minn.
  Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, L-J
- Ind.
- Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City 1, N. Y. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill. GENERAL ELECTRIC CO., Construction Mate-rials Dept., Bridgeport, Conn. SEE ADV. PGS. 5-18
- General Insulated Wire Works, Inc., 69 Gordon
- Ave., Providence 5, R. I. Haft & Sons Inc., 79 Third St., Brooklyn 31,
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Long Island City, N. Y. SEE ADV. PG. 80. Interstate Mfg. Corp., 138 Sussex Ave., Newark
- 4, N. J. Kellogg Switchboard & Supply Co., 6650 S.

- Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Lowell Insulated Wire Co., Lowell, Mass.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
  Pacific Electricord Company 9304 Santa Monica Blvd., Beverly Hills, Calif.
  Phalo Plastics Corp., 25 Foster St., Worcester 8 Mass
- Mass.
- o, Mass. Plastoid Corp., 10 Mill Rd., Hamburg, N. J. Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. Standard Telephones & Cables Ltd., Connaught
- House, Aldwych, London, W. C. 2, England U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y. Whitney Blake Co., New Haven, Conn. Wood Electric Co., Inc., C. D., 70-17 83rd St., Glendale, N. Y.

# CORDS-Dial Cords & Cables

- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- N. Y. American Electric Cable Co., Holyoke, Mass. Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. I.
- N. J. General Cement Mfg. Co., 919 Taylor Ave.,

- General Cement Mig. Co., 919 Taylor Ave., Rockford, Ill.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  New England Electrical Works Inc., Lisbon, N. H.
- N. H.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W. C. 2, England

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## CORDS-Line

- Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. Alden Products Co., 117 No. Main St., Brock-ton 64, Mass. Alpha Wire Corp., 50 Howard St., New York,
- N. Y. American Electric Cable Co., Holyoke, Mass. Birnbach Radio Co., Inc., 145 Hudson St., New
- York, N. Y. Boston Insulated Wire & Cable Co., 63 Bay St.,
- Boston 13 Bay St., Boston 25, Mass. Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill. Cords Ltd., 780 Frelinghuysen Ave., Newark 5,

- N. J. CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24. Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y. Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind.
- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. Haft & Sons, Inc., 79 Third St., Brooklyn 31, N. Y.

- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- Interstate Mfg. Corp., 138 Sussex Ave., Newark

- Interstate Mfg. Corp., 138 Sussex Ave., Newark 4, N. J.
  F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kellogg Switchboard & Supply Co., 66550 S. Cicero Ave., Chicago 38, Ill.
  LaMagna Mfg. Co., Inc., East Rutherford, N. J. Lowell Insulated Wire Co., Lowell, Mass.
  Pacific Electricord Company, 9304 Santa Monica Blvd., Beverly Hills, Calif.
  Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass.

- 8. Mass.
  Plastoid Corp., 10 Mill Rd., Hamburg, N. J.
  ROME CABLE CORP., 330 Ridge St., Rome, N. Y. SEE ADV. PG. 38.
  Rupp's Assembling & Mfg. Works, 2341 N. Seminary Ave., Chicago 14, 111.
  Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif.
  Whitney Blake Co., New Haven, Conn.
  Wood Electric Co., Inc., C. D., 70-17 83rd St., Glendale, N. Y.

# CORDS-Line Resistance

- Alden Products Co., 117 Main St., Brockton 64, Mass.
- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- American Electric Cable Co., Holyoke, Mass. Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
- Birnbach Ratio Co., Inc., 140 Industri Sc., Itch. York, N. Y.
  Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. J.
- General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford,
- INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- 80.
- J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
   Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.

## CORDS—Patch

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- Audio Equipment Sales, 153 W. 33rd St., New
- York 1, N. Y. AUDIO DEVELOPMENT CO., 2833 S. 13th Avenue, Minneapolis 7, Minn. SEE ADV.
- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25 Marc
- Boston 25, Mass. Buggie & Co., H. H., 2141 Madison Ave., Toledo Ohio
- Collins Radio Co., Cedar Rapids, Iowa Cords Ltd., 780 Frelinghuysen Ave., Newark 5, FEDERAL TELEPHONE AND RADIO CORP.
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  INSULINE CORP. OF AMERICA, 36.02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- 80.
- Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### CORES—Ceramic

Pa

Ohio

CORES-Iron

TH

- Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J. Electrical Refractories Co., 50 Clark St., East
- Palestine, Ohio General Ceramics & Steatite Corp., Keasbey,
- Ν. Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y.

Sidney, N. Y. Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.

# CORES-High Permeability Magnetic Allegheny-Ludlum Steel Corp., Pittsburgh 22,

Armco Steel Corp., 703 Curtis St., Middletown,

Ohio ARNOLD ENGINEERING CO., 147 E. Ontario St., Chicago 11, 111. SEE ADV. PG. 140. GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Philadelphia 30, Pa. SEE ADV. PGS. 48, 49.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Phila. 30, Pa. SEE ADV. PGS. 48, 49.
MAGNETIC CORE CORP., 142 South Highland Ave., Ossining, N. Y. SEE ADV. PG. 130.
MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis 6, Ind. SEE ADV. PGS. 71, 74.

NATIONAL MOLDITE CO., Hillside 5, N. J. SEE ADV. PG. 146. North American Philips Co., 100 E. 42nd St., New York 17, N. Y. Powdered Metal Products Corp., Franklin Park,

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

Aladdin Radio Industries, Inc., 501 W. 35th

Aladdin Radio Industries, Inc., 501 W. 35th St., Chicago 16, Ill.
Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG, 196.
MAGNETIC CORE CORP., 142-144 South High-land Ave., Ossining, N. Y. SEE ADV. PG, 130.

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**CORES**—Powdered Iron

# CORES

- NATIONAL MOLDITE CO., Hillside 5, N. J. SEE ADV. PG. 146. Pyroferric Co., 621 E. 216th Street, New York 67, N. Y.
- 67, N. I. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Buskington, B
- Ross Mfg. Co., 860 Washington St., Burlington, Iowa

Speer Resistor Corp., St. Marys, Pa. Stackpole Carbon Co., St. Marys, Pa. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

# CORES—Slug Tuning Units

- Coil Winders Inc., 61 Bergen St., Brooklyn 2,
- N. Y. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Malden, Mass. NATIONAL MOLDITE CO., Hillside 5, N. J. SEE ADV. PG. 146. Pyroferric Co., 621 E. 216th St., New York 67,
- N. Y. RADIO CORP. OF AMERICA, RCA Victor Div
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Ross Mfg. Co., 860 Washington St., Burlington,
- Iowa
- Stackpole Carbon Co., St. Marys, Pa.

#### CORTICAL STIMULATORS

ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. Lektra Labs., 30 E. 10th St., New York, N. Y. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222.

# COUNTERS, ELECTRON AND NUCLEAR

See Indicators, Geiger Counter or Controls, Nuclear Counter

#### **COUPLERS**—Directional

- Gorham Co., Bronze Providence 7, R. I.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R.R., West Chester, Pa.

#### COUPLINGS, SHAFT-Reducers and Extensions

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Birnbach Radio Co., Inc., 145 Hudson St., New
- York, N. Y. BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV.
- Ave., I PG. 80.
- Millen Mig. Co., James, 150 Exchange St., Malden, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Piezo Mig. Corp., 110 E. 42nd St., New York 17, N. Y.
- Reeves Instrument Corp., 215 E. 91st St., New
- York, N. Y. Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y.

## COUPLINGS, SHAFT—Rigid & Flexible

- Alden Products Co., 117 No. Main St., Brock-
- Alden Products Co., 117 No. Main St., Block-ton 64, Mass.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  Cardwell Mfg. Co., Allen D., 97 Whiting St., Plainville, Conn.
- **D-46**

- Congress Tool & Die Div., Tann Corp., 3300 Denton Ave., Detroit 12, Mich. Crocker-Wheeler Electric Mfg. Co., Div. of Joshua Hendy Corp., Ampere, N. J. Elliott Mfg. Co., 218 Prospect Ave., Bingham-ton, N. Y. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill. Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y. Hammariuna Mig. Co., 460 W. 34th St., New York 1, N. Y.
   HEWLETT PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
   INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80
- Ave., Lo PG. 80.
- Johnson Co., E. F., Waseca, Minn. Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids Lear, Inc., 2, Mich.
- LORD MFG. CO., 1635 W. 12th St., Erie, Pa. SEE ADV. PG. 103. Millen Mfg. Co., James, 150 Exchange St.,
- SEE ADV. PG. 103. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Piezo Mfg. Corp., 110 E. 42nd St., New York 17, N. Y.
- N. Y. Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
   WHITE DENTAL MFG. CO., S. S. Industrial Div., 10 E. 40th St., New York, N. Y. SEE ADV. PG. 191.

# CRYSTAL ANALYSIS EQUIPMENT

- Bassett, Inc., Rex, 307-11 N. W. 1st Ave., Fort Lauderdale, Fla. Commercial Equipment Co., 112 W. 18th St.,

- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Crystal Research Labs., Inc., 29 Allyn St., Hartford, Con.
  ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
  Elematic Equipment Corp., 6046 S. Wentworth Ave., Chicago 21, Ill.
  LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182.
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Thermionic Engineering Corp., Pompton Plains, N. J.

## CRYSTAL CARTRIDGES

- Astatic Corp., The, Conneaut, Ohio BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Sandwick-Bowen Corp., 4712 Bethesda Ave., Betheeda Md
- Bethesda, Md. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.
- 240-244.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

# CRYSTALS-Frequency Control

- Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft.
- Lauderdale, Fla. Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md. BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91. Breon Labs., 1520 Evergreen Rd., Williamsport, Pa.
- Pa. Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Crystal Research Labs., Inc., 29 Allyn St., Pa.

- Hartford, Conn. Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.

Dallons Labs., 2066 Santa Monica Blvd., Los Angeles, Calif.
 Eidson Electronic Co., 1802 N. Third St., Temple, Texas
 GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
 HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56.

Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Miller, August E., 9226 Hudson Blvd., North Bergen, N. J.

1949-1950 DIRECTORY of

- Bergen, N. J. Monitor Products Co., 815 Fremont St., So.
- Pasadena, Calif. zbel Lab., R. E., 1104 Lincoln Place, Brooklyn Pasauc., R Nebel Lab., R

- Pasadena, Calif.
  Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
  Petersen Radio Co., Inc., 2800 W. Broadway, Council Bluffs, Iowa
  Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
  Premier Crystal Labs. Inc., 79-89 Seventh Ave., New York 11, N. Y.
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Scientific Radio Products Co., 738 W. Broad-way, Council Bluffs, Iowa
  Scientific Radio Service, 4301 Sheridan St., University Park, Mo.
  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 Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

# **CRYSTALS**—Frequency Multiplier

- BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91. Breon Labs., 1520 Evergreen Rd., Williamsport,
- Pa.
  Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
  CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG, 175.
- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Eidson Electronic Co., 1802 N. Third St.,
- Temple, Texas GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56.
- Knights Co., James, 131 S. Wells St., Sandwich,
- LAVOIE LABORATORIES, Morganville, N. J. LAVOIE LABORATORIES, Morgantine, I. C. SEE ADV. PG. 182. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Monitor Products Co., 815 Fremont St., So.

Monitor Products Co., 815 Fremont St., So. Pasadena, Calif.
Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y. **REEVES-HOFFMAN CORP.**, 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
Scientific Radio Products Co., 738 W. Broadway, Council Bluffs, Iowa
Scientific Radio Service, 4301 Sheridan St., University Park, Md.
Standard Piezo Co., 127 Cedar St., Carlisle, Pa.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
Westerin Electric Co., Inc., 195 Broadway, New York 7, N. Y.
Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft.

Bassett Inc., Rex. 50(11 N. W. 1st Ave., re. Lauderdale, Fla.
 BILILEY ELECTRIC CO., Union Station Bidg., Erie, Pa. SEE ADV. PG. 91.
 Breon Labs., 1520 Evergreen Rd., Williamsport,

Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.

Burnett Raub Davin San Diego, Calif. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Dallons Labs., 5066 Santa Monica Blvd., Los

Angeles, Calif. Angeles, Calif. Eidson Electronic Co., 1802 N. Third St., Temple, Texas Finch Telecommunications, Inc., Passaic, N. J. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

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**CRYSTALS**—Frequency Standard

Pa

HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56. Knights Co., James, 131 S. Wells St., Sandwich,

ELECTRONIC and ALLIED PRODUCTS

- III. LAVOIE LABORATORIES, Morganville, N. J.
- LAVOIE LABURATURES, Bargentur, SEE ADV. PG. 182. Millen Mg. Co., James, 150 Exchange St., Malden, Mass. Miller, August E., 9226 Hudson Blvd., North Bergen, N. J. Bergen, N. J.

- Malden, Mass.
  Miller, August E., 9226 Hudson Blvd., North Bergen, N. J.
  Monitor Products Co., 815 Fremont St., So. Pasadena, Calif.
  Norrman Labs., Ernst, Williams Bay, Wis.
  Petersen Radio Co., Inc., 2800 W. Broadway, Council Bluffs, Iowa
  Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
  Premier Crystal Labs. Inc., 79-89 Seventh Ave., New York, 11, N. Y.
  Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
  Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Oregon
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Scientific Radio Service, 4301 Sheridan St., University Park, Md.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Valpey Crystals, Highland St., Holliston, Mass.
  Westime Electronics Co., 11660 Olympic Blvd., Los Angeles 25. Calif.
- Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

#### **CRYSTALS**—Germanium

- GENERAL ELECTRIC CO., Electronics Dept., Svracuse, N. Y. SEE ADV. PGS. 5-18. RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### **CRYSTALS**—*i-f* Filter

- Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft.
- Lauderdale, Fla. BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175.
- Commercial Equipment Co., 112 W. 18th St.,
- Kansas City 8, Mo. Crystal Research Labs. Inc., 29 Allyn St., Hart-
- ford, Conn. Dallons Labs., 5066 Santa Monica Blvd., Los

- ford, Conn.
  Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
  Knights Co., James, 131 S. Wells St., Sandwich, Ill.
  Miller, August E., 9226 Hudson Blvd., North Bergen, N. J.
  Monitor Products Co., 815 Fremont St., So. Pasadena, Calif.
  Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
  Premier Crystal Labs. Inc., 79-89 Seventh Ave., New York 11, N. Y.
  Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Scientific Radio Products Co., 738 W. Broadway, Council Bluffs, Iowa
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Valpey Crystals, Highland St., Holliston, Mass., Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

## **CRYSTALS**—Microwave

- CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175. HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56. Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y.

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- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### **CRYSTALS**—Piezoelectric

- Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla
- Lauderdale, ria. Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
- Baltimore 4, Md. BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91. Breon Laboratories, 1520 Evergreen Rd., Wil-
- liamsport, Pa. BRUSH DEVELOPMENT CO., 3405 Perkins Ave.,
- Cleveland 14, Ohio. SEE ADV. PGS. 168, 169. arnett Radio Lab., Wm., W. L., 4814 Idaho Cleveland 14, Ohio. SEE ADV. PGS. 108, 109, Burnett Radio Lab., Wm., W. L., 4814 Idaho St., San Diego, Calif. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175. Crystal Research Labs., Inc., 29 Allyn St., Hartford Comm.

- Hartford, Conn. Edo Corp., College Point, Long Island, N. Y. Knights Co., James, 131 S. Wells St., Sandwich, ш
- Monitor Products Co., 815 Fremont Ave., So.
- Pasadena, Calif. Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn 13, N. Y.

- Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn 13, N. Y.
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Scientific Radio Service, 4301 Sheridan St., University Park, Md.
  Standard Piezo Co., 127 Cedar St., Carlisle, Pa.
  Valpey Crystals, Highland St., Holliston, Mass.
  Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

#### CRYSTALS-Quartz

- Aeronautical Radio Mfg. Co., 155 First St., Mineola, N. Y. Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
- Badderdale, Fla.
  Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91.
  Breon Labs., 1520 Evergreen Rd., Williamsport, Destruction Research Station Research Research Station Research Research Station Research Researc
- Pa
- Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175.
- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Crystal Research Labs., Inc., 29 Allyn St., Hart-

- Crystal Research Labs., Inc., 29 Anya S., Inc., ford, Conn.
  Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
  Diamond Drill Carbon Co., 53-63 Park Row, New York 7, N. Y.
  Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
  Eidson Electronic Co., 1802 N. Third St., Temple. Texas
- Eidson Electronic Car Temple, Texas FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- 129, 131, 133, 135.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Hollister Crystal Co., Boulder, Colo.
  HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56.
  Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.
  Knights Co., James, 131 S. Wells St., Sandwich, III.

- тũ Miller, August E., 9226 Hudson Blvd., North
- Bergen, N. J. Monitor Products Co., 815 Fremont St., South
- Pasadena, Calif. National Technical Lab., 820 Mission St., S. Pasadena, Calif.
- Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn 13, N. Y. 13, N. Y. Petersen Radio Co., Inc., 2800 W. Broadway, Council Bluffs, Iowa

CRYSTALS

- Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
- Baton Rouge, La. Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y. Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Oregon **REEVES-HOFFMAN CORP.**, 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104. Scientific Radio Products Co., 738 W. Broad-way, Council Bluffs, Iowa Sentry Crystal Co., 206 S. W. Washington St., Portland 4, Ore. **STANDARD COIL PRODUCTS CO.**, 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219. Standard Crystal Co., 321 East Gregory, Kansas City 5, Mo.

- City 5, Mo. Standard Piezo Co., 127 Cedar St., Carlisle, Pa. Televiso Products Inc., 7466 W. Irving Pk. Rd.,
- Releviso Products Inc., 7466 W. Irving Pk. Rd., Chicago 34, Ill.
  Valpey Crystals, Highland St., Holliston, Mass.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  Westline Electronics Co., 11666 Olympic Blvd., Los Angeles 25, Calif.
  Wilcox Electric Co., 1400 Chestnut St., Kansas City Me.
- City, Mo.

# **CRYSTALS**—Receiver Control

- Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft.
- Lauderdale, Fla. Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md. BLILEY ELECTRIC CO., Union Station Bldg., Errie, Pa. SEE ADV. PG. 91.
- Breon Laboratories, 1520 Evergreen Rd., Wil-
- Breon Laboratories, 1920 Evergreen Rd., Marlboro, liamsport, Pa.
  CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Crystal Research Labs., Inc., 29 Allyn St., Hartford Conn.
- Crystal Research Laos, Judy Device Ave., Hartford, Conn. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Eidson Electronic Co., 1802 N. Third St.,

Eidson Electronic Co., 1802 N. Tillity St., Temple, Texas GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56. Kaar Engineering Co., 2815 Middlefield Rd., Palo

Alto, Calif. Knights Co., James, 131 S. Wells St., Sand-

Knights Co., James, 131 S. Wells St., Sandwich, Ill.
Miller, August E., 9226 Hudson Bivd., North Bergen, N. J.
Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif.
Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn 13, N. Y.
Petersen Radio Co., Inc., 2800 W. Broadway, Council Bluffs. Iowa

Petersen Radio Co., Inc., 2800 W. Broadway, Council Bluffs, Iowa
Precision Piezo Service, 427 Mayflower St-Baton Rouge, La.
Premier Crystal Labs. Inc., 79-89 Seventh Ave., New York 11, N. Y.
Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
Scientific Radio Products Co., 738 W. Broad-way, Council Bluffs, Iowa
Scientific Radio Service, 4301 Sheridzn St., University Park, Md.
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.

BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169. Tibbetts Industries, Inc., Camden, Maine

Carron Mfg. Co., 415 S. Aberdeen St., Chicago,

5066 Santa Monica Blvd., Los

D-47

**CRYSTALS**—Rochelle Salt

**CRYSTALS**—Silicon

III

Dallons Labs., Angeles, Calif.

# CRYSTALS

- RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  Western Electric Co., Inc., 195 Broadway, New York 7 N. Y.

York 7, N. Y.

## **CRYSTALS**--- Tourmaline

- American Gem & Pearl Co., 6 W. 48th St., New York 19, N. Y. Miller, August E., 9226 Hudson Blvd., North
- Miller, August E., 9226 Hudson Biva, North Bergen, N. J.
  Premier Crystal Labs. Inc., 79-89 Seventh Ave., New York 11, N. Y.
  Valpey Crystals, Highland St., Holliston, Mass.
  Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

# CRYSTALS—Ultrasonic

- BLILEY ELECTRIC CO., Union Station Bldg.,
- Erie, Pa. SEE ADV. PG. 91. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175.
- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Crystal Research Labs., Inc., 29 Allyn St., Hart-
- Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn.
  Edo Corp., College Point, Long Island, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56.
  Knights Co., James, 131 S. Wells St., Sandwich, Ill.
  Miller, August E., 9226 Hudson Blvd., North Bergen, N. J.

- Miller, August E., 9226 Hudson Bivd., North Bergen, N. J.
  Monitor Products Co., 815 Fremont St., So. Pasadena, Calif.
  Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
  Premier Crystal Labs. Inc., 79-89 Seventh Ave., New York 11, N. Y.
  Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y.
  DEFENSE HOFFMAN CORP. 321 Cherry St.
- chelle, N. Y. **REEVES-HOFFMAN CORP.**, 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104. Scientific Radio Products Co., 738 W. Broadway,

- Scientific Radio Frontis Co., 158 W. Bloadway, Council Bluffs, Iowa Standard Piezo Co., 127 Cedar St., Carlisle, Pa. Standard Telephones & Cables Ltd., Connaight House, Aldwych, London, W. C. 2, England Televiso Products Inc., 7466 W. Irving Pk. Rd.,
- Chicago 34, Ill. Valpey Crystals, Highland St., Holliston, Mass. Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.
- **DECADE BOXES**—Capacitance
- CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV.
- PG. 87. Electronic Engineers, 1039 B Pacific St., Santa
- Monica, Calif. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,
- 115. Jarvey Wells Electronics, Inc., North St., South-
- larvey Wells Electronics, Inc., North St., South-bridge, Mass.
  Industrial Instruments, Inc., 17 Pollack Ave., Jersey City 5, N. J.
  Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
  Measurement Engineering Ltd., Arnprior, On-tario, Canada
  Metersetican Electronics & Instruments Co.

- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Special Products Co., Silver Spring, Md. Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

#### **DECADE BOXES**—Inductance

D-48

- BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Electronic Engineers, 1039 B Pacific St., Santa Monica, Calif.

- GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
- Wells Electronics, Inc., North St., Harvey Wells Elec Southbridge, Mass.
- Magnetic Products Corp., The, Norwalk, Conn. Measurement Engineering Ltd., Arnprior, Ontario, Canada
- tario, Canada
  Metropolitan Electronics & Instruments Co.,
  42 Warren St., New York 7, N. Y.
  NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
  UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
- Front Cover.

#### **DECADE BOXES**—Resistance

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
- Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon Bunnell & Co., J. H., 215 Fulton St., New York,
- N. Y. Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Chema Engineering Co., 1810 W. Verduge Ave., Burbank, Calif.
  Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y.
  Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  Daven Co., 191 Central Ave., Newark 4, N. J.
  Electronic Engineers, 1039 B Pacific St., Santa Monica Calif.
- Monica, Calif.
- Fidelity Amplifier Co., 1632 No. Halsted St.,
- Chicago 14, III. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Harvey Wells Electronics Inc., North St., South-
- Harvey Wells Electronics Inc., North St., South-bridge, Mass. Industrial Instruments, Inc., 17 Pollack Ave., Jersey City 5, N. J. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Measurement Engineering Ltd., Arnprior, On-tario, Canada

- tario, Canada
  Metropolitan Electronics & Instruments Co.,
  42 Warren St., New York 7, N. Y.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
  OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201.
  Precision Resistor Co., 334 Badger Ave., Newark 8 N J

- 8, N.
- Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa. Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- Shallcross Mig. Co., 10 Jackson Ave., Coung-dale, Pa. Special Products Co., Silver Spring, Md. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Technology Instrument Corp., 1058 Main St., Waltham, Mass.
- Thwing-Albert Instrument Co., 5351 Pulaski
- Ave., Philadelphia 44, Pa. Winslow Co., Inc., The, 9 Liberty St., Newark 5,
- N. J.

#### DEFLECTION YOKES

Davis Electric Co., Cape Girardeau, Mo

- DuMont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
- DuMont Labs., Inc., Alen D., 2 Main Arcs, Passaic, N. J.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  I-T-E- CIRCUIT BREAKER CO., 19th & Hamil-ton Sts., Philadelphia 30, Pa. SEE ADV. PGS. 48, 49.
  RADIO CORP. OF AMERICA, RCA Victor Div., Enate & Conner Sts. Camden, N. J. SEE
- SEE Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
- Sickles Co., F. W., 165 Front St., Chicopee, Mass
- STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219. Telectron Co., The, 4019 Prospect Ave., Cleve-
- land 3, Ohio TELvision Labs., Inc., 542 N. Parkside Ave.,
- Chicago 44, Ill. Todd-Tran Corp., 156 Gramatan Ave., Mt. Ver-non, N. Y.

## **DEHYDRATORS**—Automatic

Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.

1949-1950 DIRECTORY of

Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.

# DENSITOMETERS

- Applied Research Labs., 4336 San Fernando Rd., Glendale 4, Calif. Baird Associates, Inc., 33 University Rd., Cam-
- bridge 38, Mass. Bausch & Lomb Optical Co., 635 St. Paul St.,
- Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. Eastman Kodak Co., Industrial Photographic Sales Div., 343 State St., Rochester 4, N. Y. Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. J. Jarrell-Ash Co., 165 Newbury St., Boston 16, Marc
- Mass.
- Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Photovolt Corp., 95 Madison Ave., New York 16,
- N. Y. Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn. Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y. WESTON ELECTRICAL INSTRUMENT CORP.
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

#### DERMOHMETERS

- Electro-Medical Lab. Inc., Holliston, Mass. Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y.

#### **DETECTORS**—Alpha

Pasadena, Calif.

**DETECTORS**—Beta

Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
Berkeley Scientific Co., 6th & Nevin Richmond, Calif.
National Technical Lab., 820 Mission St., S.
Berkeleya Calif.

Nuclear Development Lab., Box 7601, Kansas City, Mo. Omaha Scientific Supply Co., 3623 Lake St.,

Omaha Science Supply Co., 5055 Lane by Omaha 4, Neb. Television Equipment Corp., 238 William St., New York 7, N. Y.

Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
Berkeley Scientific Co., 6th & Nevin, Richmond, Calif.
Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y.
Dormitzer Electric Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass.
Geophysical Instrument Co., 1820 N. Nash St., Arlington, Va.

wealth Ave., Boston 15, Mass.
Geophysical Instrument Co., 1820 N. Nash St., Arlington, Va.
National Technical Lab., 820 Mission St., S. Pasadena, Calif.
Nuclear Development Lab., Box 7601, Kansas City, Mo.
Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.
Omaha Scientific Supply Co., 3623 Lake St., Omaha 4, Neb.
Radioactive Products, Inc., 3201 E. Woodridge St., Detroit 7, Mich.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
Television Equipment Corp., 238 William St., New York 7, N. Y.

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## DETECTORS—Crystal

- DETECTORS—Crystal
  Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y.
  Carborundum Co., The, Globar Div., Niagara Falls, N. Y.
  Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  National Electronic Mfg. Co., 35-05 36th St., Long Island City 5, N. Y.
  Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
  RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. 240-244
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

# DETECTORS—Crystal Germanium

- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

# DETECTORS—Crystal Silicon

- RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240.244
- 240-244.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

# DETECTORS—Explosive Gas

- Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland
- 10, Ohio Bristol Co., The, Waterbury 91, Conn. Heiland Research Corp., 130 E. 5th Ave., Denver 9, Colo

#### **DETECTORS**—Fire

- C-O-Two Fire Equipment Co., P. O. Box 390, U. S. Highway I, Newark I, N. J. Fenwal, Inc., 43A Pleasant St., Ashland, Mass. Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y. Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill. Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
- Uniform Tubes, Shurs Lane & Laruiston St., Rox-borough, Phila, Pa.

# DETECTORS-Flaw & Defect

- Branson Instruments, Inc., 436 Fairfield Ave.,
- Stanford, Conn. BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 1000 169.
- Development Engineering Co., Inc., The, 1818 Ashland St., Houston 8, Texas Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. Thermionic Engineering Corp., Pompton Plains, N J
- N. J.
- N. J. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y. Vacuum Electronic Engineering Co., 316 37th St., Brooklyn 2, N. Y.

## DETECTORS-Galena

Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill. National Electronic Mfg. Co., 35-05 36th St., Long Island City 5, N. Y.

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# DETECTORS—Gamma Radiation

- Anton Electronic Laboratories, Inc., 1226-1238
  Flushing Ave., Brooklyn 6, N. Y.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  BALLANTINE LABORATORIES, INC., Boonton, N. J. SEE ADV. PG. 134.
  Berkeley Scientific Co., 6th & Nevin, Richmond, Cailf

- Cailf.
- Dormitzer Electric & Mfg. Corp., 782 Com-monwealth Ave., Boston 15, Mass. Geophysical Instrument Co., 1820 N. Nash St.,
- Arlington, Va. National Technical Lab., 820 Mission St., S. Pasadena, Calif.
- North American Philips Co., 100 E. 42nd St., New York 17, N. Y. Nuclear Development Lab., Box 7601, Kansas

- Nuclear Development Lab., Box 7601, Kansas City, Mo.
  Omaha Scientific Supply Co., 3623 Lake St., Omaha 4, Neb.
  Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill.
  Radioactive Products, Inc., 3201 E. Woodridge St., Detroit 7, Mich.
  RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
  Standard Electronics Research Corn. 2 East End
- Ave., New York 21, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500
- 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Television Equipment Corp., 238 William St., New York 7, N. Y.

#### DETECTORS-Impedance

GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

# DETECTORS-Null

- GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Harvey Radio Labs., 447 Concord Ave., Cam-
- bridge, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Network Mfg. Corp., Bayonne, N. J. Rubicon Co., 3751 Ridge Ave., Philadelphia,
- Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale, Pa. Thermo Labs., Inc., 355 W. 26th St., New York
- N. Weston Laboratories, Inc., Weston 93, Mass.

## 

RADIO CORP. OF AMERICA, RCA Victor Div. Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

# DETECTORS—Reactance

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
   Bendix Aviation Corp., Pacific Div., 11600
   Sherman Way, N. Hollywood, Calif.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.

# DETECTORS—Vibration

- Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
  BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
- Calidyne Co., The, 751 Main St., Winchester, Mass
- Mass. Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif. Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.

DIALS

- Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
  Heiland Research Corp., 130 E. 5th Ave., Denver 9, Colo.
  M B MFG. CO., 1060 State St., New Haven 11, Com. SEE ADV. PG. 221.
  Scott Inc., Herman Hosmer, 385 Putnain Ave., Cambridge 39, Mass.
  Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  Televiso Products Inc., 7466 West Irving Park
- Televiso Products Inc., 7466 West Irving Park Rd., Chicago 34, Ill.

# DETECTORS—Water Leak

- Allen-Howe Electronics Corp., Peabody, Mass. Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
- Lumenite Electric Co., 4075 Dearborn St.,
- Chicago, Ill. Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.

#### DIAL CRYSTALS

Pa.

Pa.

III.

Ohio

DIALS-Instrument

Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.

- N. Y. Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. Flock Process Co., Velvetone Div., 3 Quincy St., Norwalk, Conn. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. Inland Plastic of America, Inc., 20 W. 30th

- Inland Plastic of America, Inc., 20 W. 30th St., New York, N. Y. Kilburn Glass Co., Inc., J. R., 22 S. Worcester St., Chartley, Mass. La Magna Mfg. Co., Inc., East Rutherford, N J
- N. J. Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.
- Chicago 9, Ill. Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y. Printloid Inc., 95 Mercer St., New York, N. Y. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif. Sillcocks-Miller Co., 10 Parker Ave. W. So. Orange, N. J. Steel Co., Herman D., Lafayette Bldg., Phila. 6, Pa.

Anderson & Sons, Inc., Westfield, Mass. Austin Co., O., 335 Throop Ave., Brooklyn 21,

BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. Consolidated Molded Products Corp., Scranton 2,

Croname, Inc., 3701 Ravenswood Ave., Chicago.

II. Electric Auto-Lite Co., Toledo 1, Ohio Emeloid Co., Inc., The, 1239 Central Ave., Hillside 5, N. J. Etched Products Corp., 39-01 Queens Blvd., L. I. City, N. Y. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, III. Gadgets, Inc., 3629 N. Dixie Dr., Dayton 5, Ohio

Ohio GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Grammes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa. HELIPOT CO., 1011 Mission St., So. Pasadena, Calif. SEE ADV. PG. 25. Hopp Press Inc., 460 W. 34th St., New York, N. Y. Inductial Davies Inc. 22 State Pd. Edge

Industrial Devices, Inc., 22 State Rd., Edge-

water, N. J. Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

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1949-1950 DIRECTORY of

- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Lamicoid Fabricators, Inc., 4545 Cortland St., Chicare 20.

Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill.
Mica Insulator Co., Schenectady 1, N. Y.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
Parisian Novelty Co., 3510 S. Western Ave., Chicago 9, Ill.
Plastic Accessories, Inc., 460 Broome St., New

Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y. Plastic Fabricators Co., 440 Sansome St., San

Plastic Fabricators Co., 440 Sansome St., San Francisco 11, Calif.
Premier Metal Etching Co., 21-03 44th Ave., Long Island City, N. Y.
Printloid, Inc., 95 Mercer St., New York, N. Y.
Radiocrafters, 1156 Commonwealth Ave., Bos-ton 34, Mass.
Sillooks Miller Co. 10 Parker Ave. W. So.

Radiocratters, 1136 Commonwealth Ave., Boston 34, Mass.
 Sillocoks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.
 Sun Dial Corp., E. Passaic Ave., Caldwell Townstein W. J.

Shih Old, C.J.
 Tablet & Ticket Co., 1021 W. Adams St., Chicago 7; Ill.
 Thomas Products, Inc., 9 Bentley St., Salem,

Mass

U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

Vallorbs Jewel Co., Lancaster, Pa. Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Philadelphia 31, Pa.

#### DIALS-Precision

- Acromark Co., 9-13 Morrell St., Elizabeth 4, N. J. Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- Boehme, Inc., H. O., 915 Broadway, New York,

Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Croname, Inc., 3701 Ravenswood Ave., Chicago,

III.

York 13, N. Y. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.

Etched Products Corp., 39-01 Queens Blvd., L. I.

City, N. Y. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. Gaertner Scientific Corp., 1201 Wrightwood Ave.,

Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, 11. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. HELIPOT CORP., 1011 Mission St., So. Pasadena, Calif. SEE ADV. PG. 25. Millen Mfg. Co., James, 150 Exchange St., Mal-don Mass

Millen Mig. Co., James, 150 Exchange St., Maiden, Mass.
Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
Printleid Lee, 95 Margar St., New York N. Y.

Printloid, Inc., 95 Mercer St., New York, N. Y. Sun Dial Corp., E. Passaic Ave., Caldwell Town-

ship, N. J. Tablet & Ticket Co., 1021 W. Adams St., Chicago 7, Ill.

#### DIAPHRAGMS

**D**-50

Auburn Mfg. Co., Middletown, Conn. Cook Electric Co., 2700 Southport Ave., Chicago,

III Cooper Co., Clark, 374 N. Market St., Palmyra,

N. J.

- N. J. Hawley Products Co., St. Charles, Ill. Mica Insulator Co., Schenectady 1, N. Y. National Molding Co., 2141 W. Washington Blvd., Los Angeles 7, Calif. Phosphor Bronze Corp., 2200 Washington Ave., Philadelphia 46, Pa. Racon Electric Co., 52 E. 19th St., New York 3, N V

N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

- American Diathermy Products, 11240 W. Olympic Blvd., Los Angeles 25, Calif. American Radio Co., 611 E. Garfield Ave., Glen-
- dale. Calif Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.

Birtcher Corp., 5087 Huntington Dr., Los Angeles

- Bogen Co., David, 663 Broadway, New York 12, N. Y.
- Branston Electric Mfg. Co., 61-65 Gill Pl., Buffalo 13, N.Y.

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
Electronic Engineers, 1039 B Pacific St., Santa Monica, Calif.
Electronic Supply Co., 207 Main St., Worcester, Marc

Mass. General Electric X-Ray Corp., 4855 W. McGeoch Ave., Milwaukee, Wis. Liebel-Flarsheim Co., 303 W. Third St., Cincinnati 2, Ohio

Molded Insulation Co., Aircraft, Control Div., 335 E. Price St., Philadelphia, Pa. Mooradian High Frequency Labs., 13 E. Fort Lee

Mooradian High Frequency Labs., 15 E. Fort Lee Rd., Bogota, N. J.
Peerless X-Ray Labs. & Mfg. Corp., 467 10th Ave., New York 18, N. Y.
RAYTHEON MFG. CO., Power Tube Div., Waltham 54, Mass. SEE ADV. PG. 55.
Thermio Labs., Inc., 355 W. 26th St., New York 1, N. Y.
87 W. 26th St. New York 10

Wappler, Inc., 27 W. 24th St., New York 10, N Y.

# DIATHERMY ACCESSORIES

Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y. Birtcher Corp., 5087 Huntington Dr., Los Angeles

32, Calif. Bogen Co., David, 663 Broadway, New York 12,

Υ. Branston Electric Mfg. Co., 61-65 Gill Pl., Buffalo

Branstein Electric Hig: Co., 01-00 cmit H, 2 13, N. Y. Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif. Lektra Labs., 30 E. 10th St., New York, N. Y. Liebel-Flarsheim Co., 303 W. Third St., Cincin-cati 2, Okia

nati 2, Ohio Peerless X-Ray Labs. & Mfg. Corp., 467 10th Ave., New York 18, N. Y. Wappler, Inc., 27 W. 24th St., New York 10, N. Y.

## DIELECTRIC HEATING

See Heating, Dielectric

## DIELECTRIC-Liquids & Solids

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

N. Y. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill. Dow Chemical Co., Midland, Mich. Dow Corning Corp., Midland, Mich. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-ford Ul. ford, Ill.

Iord, III. General Cerannics & Steatite Corp., Keasbey, N. J. General Chemical Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y. Halowax Prods. Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y. INSULATION MANUFACTURERS CORP., 565 W. Wachington Blue, Chinaga 6, III SEF ADV

Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137

P.G. 137.
Mica Insulator Co., Schenectady 1, N. Y.
Sun Oil Co., 1608 Walnut St., Philadelphia 3, Pa.
Syncor Products Co., Malden, Mass.
United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England

# DIES

N. Y.

Minn.

Mass.

Ill.

240-244.

DIRECTION FINDERS

Blvd., Van Nuys, Calif.

ton Ave., Nutley, N. J. June, 1949 --- MID-MONTH --- ELECTRONICS BUYERS' GUIDE

Ace Mfg. Corp., 1255 E. Erie Ave., Philadelphia 24, Pa.

Acromark Co., 9-13 Morrell St., Elizabeth 4, N. J. ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV.

PG. 174 PG. 174.
Atlas Metal Stamping Co., Castor & Kensington Avenues, Philadelphia 24, Pa.
Congress Tool & Die Div., Tann Corp., 3300 Denton Ave., Detroit 12, Mich.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, 10.

Chicago 41, Ill.

Dochler-Jarvis Corp., 386 Fourth Ave., New York 16, N. Y. Felsenthal & Sons. Inc., G., 4100 W. Grand Ave., Chicago 51, 111.

Felt Prods. Mfg. Co., 1504 W. Carroll Ave., Chi-cago 7, Ill. Flock Process Co., Velvetone Div., 3 Quincy St.,

Norwalk, Con. Gadgets, Inc., 3629 N. Dixie Dr., Dayton 5, Ohio Greene Mfg. Corp., G. G., Warren, Pa. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

209.

209.
Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.
Instrument Development & Mfg. Corp., 3018 E. Foothill Blvd., Pasadena 8, Calif.
La Magna Mfg. Co., Inc., East Rutherford, N. J. Lansky Die Cutting Co., 192½ Greene St., New York 12, N. Y.

Magnetic Metals Co., Hayes Ave. at 21st St.,

Camden, N. J. Maritime Quality Hardware Co., Inc., Belfast, Me. Micacraft Products, Inc., 701 McCarter Highway, Newark 5, N. J.

Minute Man Products, Inc, 309 E. 22nd St., New York 10, N. Y. Multi-Products Tool Co., 123 Sussex Ave., Newark 4, N. J. National Lead Co., 111 Broadway, New York 6,

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. O'Neil Irwin Mfg. Co., 316 8th Ave., Lake City,

Paul & Beekman, Inc., 1801 Cortland St., Phila-

delphia 48, Pa. Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass. Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

Sperman Metal Specialties, 27 Columbia Place,

Sperman Metal Specialties, 27 Columbia Place, Brooklyn 2, N. Y.
STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.
SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.
Taylor Mfg. Co., 3056 W. Meinecke Ave., Mil-waukee 10, Wisc.
Thomas Products, Inc., 9 Bentley St., Salem, Mass

Toman & Co., E., 2621 W. 21st Place, Chicago

8, Ill.
Viewlex, Inc., 35-01 Queens Blvd., Long Island City 1, N: Y.
WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
Whistler & Sons, Inc., S. B., 752 Military Rd., Buffalo 17, N. Y.
Wiedemann Machine Co., 4272 Wissahickon Ave., Philadelphia 32, Pa.

DILATOMETERS—Automatic Recording

Bristol Co., The, Waterbury 91, Conn. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

Airlectron, P. O. Box 151, Caldwell, N. J. American Electroneering Co., 2112 S. LaBrea Ave., Los Angeles, Calif.

Babcock Radio Engineering, Inc., 6164 Sepulveda

Federal Telecommunication Labs., 500 Washing-

FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Jarvis Electronics Corp., 6058 Fullerton Ave., Chicae 20, 10

Chicago 39, Ill. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.

Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2,

- Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
  O'Connor & Co., John T., West Orange, N. J.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
- N. Y. N. 1.
   Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
   Submarine Signal Div., Raytheon Mfg. Co., Wal-
- tham, Mass.

#### DISCS—Blank Recording

- Advance Recording Products Co., 36-12 34th St., L. I. City, N. Y. Aim Industries, 41 Union Square, New York 3,
- N. Y.
- N. Y. Allied Recording Products Co., 21-09 43rd Ave., Long Island City 1, N. Y. Audar Inc., Argos, Indiana AUDIO DEVICES, INC., 444 Madison Ave., New York 22, N. Y. SEE ADV. PG. 70. Caltron Co., 1406 So. Hobart Blvd., Los Angeles S. Colit
- 6. Calif.
- Duotone Co., 799 Broadway, New York, N. Y. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
- Gould Moody Co., 396 Broadway, New York, N. Y. Gray Mfg. Co., 16 Arbor St., Hartford, Conn. Home Recording Products Corp., Freeport, L. I.,
- N. Y Mirror Record Corp., 1133 Broadway, New York
- National Gasket & Mfg. Co., 122 E. 25th St., New York 10, N. Y.
   PRESTO RECORDING CORP., Paramus, N. J.
- SEE ADV. PGS. 40, 41. 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 22, N. Y. SEE ADV. PG. 199.
  Rek-O-Kut Co., Inc., 38-01 Queens Blvd., Long Island City, N. Y.
  Sonic Recording Products, Inc., 50 Mill Road, Freeport, N. Y.
  Wagner Recorder Mfg. Corp., 292 Madison Ave., New York 17, N. Y.
  Wilcox-Gay Corp., Charlotte, Mich.
  Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.
  Zephyr Products Co., 160 E. 116th St., New York 29, N. Y.

# DRAFTING EQUIPMENT

- American Photocopy Equipment Co., 2849 N. Clark St., Chicago, Ill. Bruning Co., Inc., Charles, 4754 Montrose Ave., Chicago 41, Ill. Clearprint Paper Co., 677 Folsom St., San Fran-

- Clearprint Paper Co., 677 Folsom St., San Fran-cisco, Calif. Dietzgen Co., Eugene, 2425 Sheffield Ave., Chi-cago, Ill. Dixon Crucible Co., Joseph, Jersey City, N. J. Eagle Pencil Co., 703 East 13th St., New York, N. Y. Eberbard Fell
- N. Y. Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y. Holliston Mills, Inc., The, Norwood, Mass. Koh-I-Noor Pencil Co., Bloomsburg, N. J. Jiffy Sales Co., 1820 East 37th St., Cleveland 14,
- Óhio
- Keuffel & Esser Co., Hoboken, N. J. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.

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- Ozalid Div. of General Aniline & Film Corp., 770 Ansco Rd., Johnson City, N. Y. Paragon-Revolute Corp., 71 South Ave., Roches-
- ter 4. N. Y.
- Pease Company, C. F., 2601 W. Irving Park Rd., Chicago 18, Ill. Peck & Harvey, 5736-38 N. Western Ave., Chi-
- cago 45, Ill. Post & Co., Frederick, Chicago, Ill. Rapid Design, Inc., P. O. Box 592, Glendale,
- Ċalif.
- Ave., Cleveland 14, Ohio Weber Co., F., 1220 Buttonwood St., Phila. 23,
- Pa. Weil & Co., J. H., 1315 Cherry St., Phila. 7, Pa.

# DRIVERS—Recording

Spring, Md.

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton
- 64, Mass.
- Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Clarke Instrument Corp., 910 King St., Silver

## **DRIVES**—Small Electric Drive Mechanisms

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- 64, Mass. Boehme Inc., 915 Broadway, New York, N. Y. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Flight Research Engineering Corp., P. O. Box 1-F, Bichmend 1 V.
- Richmond 1. Va.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
- SEE ADV. PGS. 5-18.
  Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.
  HAYDON MFG. INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
  KOLLSMAN INSTRUMENT DIV. OF SQUARE D
  CO. 9.464 Auto. Elmohurgt. N. Y. SEE
- CO., 80-08 45th Ave., Elmhurst, N. Y. SEE ADV. PG. 36.
- Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
- Magnetic Products Corp., The, Norwalk, Conn. ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204. Rowe Industries, 1702 Wayne St., Toledo 9, Ohio

# DRYERS, ELECTRONIC—Dehydration and Drying

Barrett Co., Leon J., P. O. Box 378, Worcester 1, Mass.

Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Phila. 20, Pa.

# DYNAMOMETERS

- BENDIX AVIATION CORP., Red Bank Div., Red Bank, N. J. SEE ADV. PGS. 22, 23.
- DARK, N. J. SEE ADV. PGS. 22, 23.
  Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224.
  Dillon & Co., Inc., W. C., 5410 W. Harrison St., Chicago 44, Ill.
  Elestein Products Co. 1725 Clarkstona Bd. Clava.
- Electric Products Co., 1725 Clarkstone Rd., Cleve-
- Electric Products Co., 1225 Clarkstone Rd., Clevelland 12, Ohio
   GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
   Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
- held, III. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. L. A. B. Corp., 31 Union Pl., Summit, N. J. Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2,
- Mich. Mission Electric Mfg. Co., 132 W. Colorado Blvd.,
- Mission Electric Mig. Co., 152 W. Colorado Bivd., Pasadena, Calif. Ruge-DE Forest, Inc., 76 Massachusetts Ave., Cambridge 39, Mass. Statham Laboratories, Inc., 9328 Santa Monica Blvd., Beverly Hills, Calif. Taylor Mfg. Co., 3056 W. Meinecke Ave., Mil-waukee 10, Wisc.

Thwing-Albert Instrument Co., 5351 Pulaski Ave.,

Philadelphia 44, Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## DYNAMOTORS

See Generators, Motor

ELECTRO MAGNETS

See Magnets

### **ELECTROCARDIOGRAPHS**

Amplifier Corp. of America, 396 Broadway, New York 13, N. Y. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Edin Electronics Co., 207 Main Street, Worcester,

- Mass. Electro Physical Laboratories, Inc., 290-8 Dyck-man St., New York 34, N. Y. Electrofax Corp., 30 Burtis Ave., New Canaan,
- Conn.
- Electronic Supply Co., 207 Main St., Worcester, Mass.

- Mass. General Electric X-Ray Corp., 4855 W. McGeoøh Ave., Milwaukee, Wis. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. Lektra Labs., 30 E. 10th St., New York, N. Y. Miles Reproducer Co., Inc., 812 Broadway, New York 3 N Y York 3. N. York 3, N. Y.
  RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222.
  SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.

Etched Products Corp., 39-01 Queens Blvd., Long

La Rose & Associates, W. T., 646 Second Ave., Troy, N. Y.

La Rose & Associates, W. 1., 046 Second Ave., Troy, N. Y. Short Wave Plastic Forming Co., 2921 W. Ala-meda St., Burbank, Calif. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

Hickok Electrical Instrument Co., 10514 Dupont

RICKOK Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass. Roller-Smith, Bethlehem, Pa. Triplett Electrical Instrument Co., 286 Harmon Road, Bluffton, Ohio

Amplifier Corp. of America, 396 Broadway, New York 13, N. Y. Edin Electronics Co., 207 Main St., Worcester,

Electrofax Corp., 30 Burtis Ave., New Canaan,

Electro-Medical Lab., Inc., Holliston, Mass. Electro-Physical Laboratories, Inc., 290-8 Dyck-man St., New York 34, N. Y. Electronic Supply Co., 207 Main St., Worcester,

Mass. Offner Electronics Inc., 5320 N. Kedzie Ave.,

Offner Electronics Inc., 5320 N. Redzle Ave., Chicago 25, Ill.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222.
West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

Electro-Medical Lab., Inc., Holliston, Mass. LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182.

Offner Electronics Inc., 5320 N. Kedzie Ave.,

Chicago 25, III. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222.

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**ELECTROMYOGRAPHS** 

**ELECTRODES**—High Frequency

ELECTRODYNAMOMETERS

**ELECTROENCEPHALOGRAPHS** 

Island City, N. Y.

Calif.

Mass.

Conn.

# **ELECTROPLETHYSMOGRAPHS**

#### **ELECTROPLETHYSMOGRAPHS**

- Electro-Physical Laboratories, Inc., 290-8 Dyck-man St., New York 34, N. Y. Inductograph Laboratory, Box 76, Brookfield,
- Conn. RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222.

#### ELECTRO-SHOCK THERAPY APPARATUS

- Aerolux Light Corp., 653 11th Ave., New York
- 19, N. Y.
   ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
   Edin Electronics Co., 207 Main St., Worcester,
- Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y. Electronic Supply Co., 207 Main St., Worcester, Mass.

- Mass. Lektra Labs., 30 E. 10th St., New York, N. Y. O'Connor & Co., John T., West Orange, N. J. Offner Electronics Inc., 5320 N. Kedzie Ave., Chicago 25, Ill. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222. Wappler, Inc., 27 W. 24th St., New York 10, N. Y.
- N. Y.

# ELECTRO-SURGICAL APPARATUS

- Birtcher Corp., 5087 Huntington Dr., Los Angeles
- 32, Calif. Bogen Co., David, 663 Broadway, New York 12, N. Y.
- Branston Electric Mfg. Co., 61-65 Gill Pl., Buffalo 13, N. Y. Dallons Labs.,
- 5066 Santa Monica Blvd., Los Angeles, Calif. Edin Electronics Co., 207 Main St., Worcester,
- Mass. ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. Electronic Supply Co., 207 Main St., Worcester,
- Mass. Lektra Labs., 30 E. 10th St., New York, N. Y. Liebel-Flarsheim Co., 303 W. Third St., Cincin-
- nati 2, Ohio Mooradian High Frequency Labs., 13 E. Fort Lee
- Rd., Bogota, N. J. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Wappler, Inc., 27 W. 24th St., New York, N. Y. Webster Engineering Co., 105 Tenth St., N. E., Codar Banide, Low
- Cedar Rapids, Iowa

## ELEMENTS, HEATING-Crystal Oven

- Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y. Monitor Products Co., 815 Fremont St., So. Pasa-dena, Calif.
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Westline Electronics Co., 11660 Olympic Blvd.,
- Los Angeles 25, Calif.

### ESCUTCHEONS

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- ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG. 32
- American Communications Corp., 306 Broadway, New York 7, N. Y. New York 7, N.
- American Emblem Co., P. O. Box 116 R, Utica,
- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- N. Y. Catalin Corp. of America, 1 Park Ave., New York 16, N. Y. Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Control Corp. 718 Central Ave. Minneapolis, 14
- Control Corp., 718 Central Ave., Minneapolis 14, Minn.
- Electrical Insulation Co., Inc., 12 Vestry St., New York 13, N. Y.

- ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. Flock Process Co., Velvetone Div., 3 Quincy St.,
- Norwalk, Conn. Gemloid Corp., 79-10 Albion Ave., Elmhurst,
- N. Y.
- Grammes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa. Hopp Press Inc., 460 W. 34th St., New York,
- Y.
- N. Y. Instrument Development & Mfg. Corp., 3018 E. Foothill Blvd., Pasedena 8, Calif. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.

- Ave., Chicago 38, 111. Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y. Midwest Molding & Mfg. Co., 319 N. Whipple St., Chicago 12, 111. Parisian Novelty Co., 3510 South Western Ave., Chicago 9, 111. Partish Corr 2110. Patterns. Bd. Talada 6.
- Prestole Corp., 3119 Bellevue Rd., Toledo 6, Ohio
- Stokes Molded Products, Inc., Taylor St., at Webster, Trenton, N. J. Syracuse Ornamental Co., 581 So. Clinton St.,
- Syracuse, N. Y.
- Tablet & Ticket Co., 1021 W. Adams St., Chicago 7. III.
- Waterbury Companies, Inc., Waterbury 90, Conn. Willson Plastics, Div. Willson Magazine Camera Co., 6022 Media St., Philadelphia 31, Pa.

#### EYELETS

- American Brass Co., Waterbury 88, Conn. Astrup Co., 2933 W. 25th St., Cleveland 13, Ohio Atlas Tack Corp., Pleasant St., Fairhaven, Mass. Carby Mfg. Co., Inc., 62 Cottage Place, Water-bury 5, Conn.
- Chase Brass & Copper Co., Inc., 1939 Plant St., Waterbury, Conn.
- Eyelet Specialty Co., 48 State St., Waterbury, Conn.

Goat Co., Inc., Fred, 314 Dean St., Brooklyn, N. Y. Platt & Bros., Co., Waterbury, Conn. Waterbury Brass Goods Corp., Waterbury, Conn. Wilcox Crittenden & Co., Inc., 77 S. Main St., Middletown, Conn.

#### FABRIC

See Insulation Materials

#### FACSIMILE

See Recorders, Facsimile

FACSIMILE RECORDING PAPERS

See Papers, Facsimile Recording

#### FANS-Tube Cooling

- Dynamic Air Engineering Inc., 1619 S. Alameda St., Los Angeles, Calif.
- Eastern Air Devices, Inc., 585 Dean St., Brook-lyn 17, N. Y.

- lyn 17, N. Y.
  Fasco Industries, Inc., Rochester 2, N. Y.
  Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.
  Johnson Fan & Blower Corp., 1319 W. Lake St., Chicago 7, Ill.
  Magnetic Products Corp., The, Norwalk, Conn.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio
  Rotron Division, 7-9 Schoonmaker Lane, Wood-stock, N. Y.
- stock, N. Y. Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.

#### FASTENERS & FASTENING DEVICES

- Aircraft Radio Corp., Boonton, N. J. Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- ALLEN MFG. CO., Hartford, Conn. SEE ADV. 209
- PG. ALLMETAL SCREW PRODUCTS CO., INC., Greene St., New York 13, N. Y. SEE ADV. PG. 32.

- American Screw Co., Providence, R. I.

1949-1950 DIRECTORY of

- Aniertan Sciew Co., Thousenet, R. I. Bristol Co., The, Waterbury 91, Conn. Camloc Fastener Corp., 420 Lexington Ave., New York 17, N. Y. Central Screw Co., 3501 Shields Ave., Chicago 9, W.
- Ill.
- Cherry Rivet Co., 231 Winston St., Los Angeles Calif.
- Calif.
   CINCH MFG. CORP., 2335 W. Van Buren St., Chi-cago 12, Ill. SEE ADV. PG. 190.
   Corbin Screw Div., American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.
   Cuyahoga Spring Co., 10272 Berea Rd., Cleve-land, Ohio
   Dimege Grav. Co., 207 E. Sixth St., Dayton, Ohio.

Jand, Unio
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio
 Dzus Fastener Co., Inc., Box 785, Babylon, N. Y.
 Federal Screw Products, Inc., 224 W. Huron St., Chicago 10, Ill.

- Garrett Co., Inc., George K., 1421 Chestnut St., Philadelphia 2, Pa.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. Grammes & Sons Inc., L. F., 389 Union St., Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa. Greene Mfg. Corp., G. G., Warren, Pa. Harper Co., The, H. M., 2620 Fletcher St., Chi-cago 18, III.

- Hassall, Inc., John, Clay & Oakland Sts., Brooklyn, N. Y.
  Heli-Coil Corp., 47-23 35th St., Long Island City 1, N. Y.
- 1, N. Y. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 180. Maritime Quality Hardware Co., Inc., Belfast, Me. National Screw & Mfg. Co., Cleveland 4, Ohio PALNUT CO., INC., 77 Cordier St., Irvington 11, N. J. SEE ADV. PG. 126. Parker-Kalon Corp., 200 Varick St., New York 14 N. V.

Penn Engineering & Mfg. Corp., Box 311, Doyles-town, Pa.

town, Pa. Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50,

Prestole Corp., 3119 Bellevue Rd., Toledo 6,

Ono
 PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212.
 Russell, Burdsall & Ward Bolt and Nut Co., Mid-land Ave., Port Chester, N. Y.
 Scovill Mfg. Co., Waterville Screw Products Div., Water Concernence Concernence

Waterbury, Con. Shakeproof Inc., Div. of Ill. Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill. Simmons Fastener Corp., North Broadway, Albany 1, N. Y.

I, N. I. Standard Pressed Steel Co., Jenkintown, Pa. STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188. Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, III.

o, III. Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y. Stronghold Screw Products, Inc., 216-22 West Hubbard St., Chicago 10, Ill. Tinnerman Products, Inc., 2038 Fulton Rd., Cleve-

Tinnerman Products, Inc., 2000 land 13, Ohio Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. United-Carr Fastener Corp., Canbridge 42, Mass. United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill. Volkert Metal Stampings, Inc., John, 141 Spencer St., Brooklyn 5, N. Y.

St., Brooklyn 5, N. Y. Waldes Kohinoor Inc., Long Island City 1, N. Y.

Felt Products Mfg., 1504 W. Carroll Ave., Chi-

General Cement Mfg. Co., 919 Taylor Ave., Rock-

Moore Co., Howard J., 108 Park Row, New York 7, N. Y.

Western Felt Works, 4029 Ogden Ave., Chicago,

Whe-Gro Co., 315-17-19 N. Cardinal Ave., St.

Felters Co., The, 210 South St., Boston, Mass.

FELTS & FELT PARTS

cago 7, Ill.

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Louis, Mo.

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Auburn Mfg. Co., Middletown, Conn.

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Ohio

### FERRITE CORES & SHIELDS

General Ceramics & Steatite Corp., Keasbey, N. J.
GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
INDIANA STEEL PRODUCTS CO., 6 N. Michigan Ave., Chicago 2, Ill. SEE ADV. PG. 198.
PHILLIPS CONTROL CORP., 612 N. Michigan Ave., Chicago 11, Ill. SEE ADV. PG. 164.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. Pgs. 197, Inside Back and Back Covers.
Stackpole Carbon Co., St. Marys, Pa.

Stackpole Carbon Co., St. Marys, Pa.

#### FIBRE

See Insulation Materials

#### FILTERS—Antenna

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.

- Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Continental Electronics Mfg. Co., 1728 Wood St., Dallas 1, Texas
- Crystal Devices Co., Inc., 50 Mill Rd., Freeport, NY
- Decimeter, Inc., 1430 Market St., Denver 2, Colo.
- Coto. Dietz Design & Mfg. Co., 5810 Park Ave., Kansas City 4, Mo. Johnson Co., E. F., Waseca, Minn. K.V Transformer Co., 4414 Park Ave., New York

- K.V Transformer Co., 4414 Park Ave., New York 57, N. Y.
  LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182.
  Network Mfg. Corp., Bayonne, N. J.
  Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG 55.
  Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3,
- Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3,
- Calif
- S-W Inductor Co., 1056 N. Wood St., Chicago, Ill. Sprague Electric Co., North Adams, Mass.

## FILTERS-Band Elimination

- Acro Products Co., 5330 Baltimore Ave., Phila., Pa.
- Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa
- Pa.
  Pa.
  AMERICAN TRANSFORMER CO., 178 Emmet St., Newark, N. J. SEE ADV. PG, 116.
  AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. SEE ADV. PG. 94.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45.
  Chicago Electronic Engineering Co., 3223 W. Armitare Ave., Chicago 47. III.

- Armitago Liectonic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
- Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri Crystal Devices Co., Inc., 50 Mill Rd., Freeport, N
- Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn. DeCOURSEY ENGINEERING LABS., P. O. Box
- 235, Los Angeles 25, Calif. SEE ADV. PG. 176. Deustchmann Corp., Tobe, Norwood, Mass. Dietz Design & Mfg. Co., 5810 Park Ave., Kansas
- City 4, Mo. Electronic Transformer Co. Inc., 207 W. 25th St.,
- New York, N. Y.

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- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Filtron Co., Inc., The, 38-25 Bell Blvd., Bayside, L. I., N. Y.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  Inductive Equipment Co., Gettysburg, Pa.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
  Kalbfell Labs., Inc., 1076 Morena Blvd., San Di-ego 10, Calif.
  KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.
  LENKURT ELECTRIC CO., INC., San Carlos.

- LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. Miller Co., J. W., 5917 S. Main St., Los Angeles,
- Calif.
- Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Network Mfg. Corp., Bayonne, N. J. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.

- Ave., Alpha, N. J. SEE ADV. PG. 156.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J.
  PICKERING & CO., 309 Wood Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. Pgs. 197, Inside Back and Back Covers.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
- Y N
- N. Y. S-W Inductor Co., 1056 N. Wood St., Chicago, Ill. Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- Pa.
- Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

- New York 19, N. Y. Thordarson Electric Mg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover
- Front Cover. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

# FILTERS-Band Pass

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Acro Products Co., 5330 Baltimore Ave., Phila., Inc.,
- Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- AMERICAN TRANSFORMER CO., 178 Emmet St., Newark, N. J. SEE ADV. PG. 116. Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
- AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. SEE ADV. PG. 94. Babcock Radio Engineering Inc., 6164 Sepulveda

- Minneapoins 7, Minn. SEE ADV. PG. 94.
  Babcock Radio Engineering Inc., 6164 Sepulveda Blvd., Van Nuys, Calif.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  BURNELL & CO., 45 Warburton Ave., Yonkers 2, N.Y. SEE ADV. PG. 45.
  Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.
  Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
  Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Communication Accessories Co., Box 345, 110th St. & Hillerest Rd., Hickman Hills, Missouri Continental Electronics, Ltd., 252 Norman Ave., Brooklyn 22, N.Y.
- Brooklyn 22, N. Y. Crystal Research Labs., Inc., 29 Allyn St., Hart-
- ford, Conn.

- 200.
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Inductive Equipment Co., Gettysburg, Pa. Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago
- 8, Ill. K-V Transformer Corp., 4414 Park Ave., New
- Kev Halstolmer Coly, 4414 Park Ave., New York 57, N. Y.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.
- Knights Co., James, 131 S. Wells St., Sandwich, TH
- LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. Magnetic Products Corp., The, Norwalk, Conn. Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Network Mfg. Corp., Bayonne, N. J. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.

- Ave., Alpha, N. J. SEE ADV. PG. 156.
  Northern Communication Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J.
  PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
  S.W Inductor Co., 1056 N. Wood St., Chicago, III.

Scott, Inc., Hermon Hosiner, 385 Putnam Ave., Cambridge 39, Mass. Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,

Sierra Electronic Corp., Belmont & San Carlos,

Calit. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Sprague Electric Co., North Adams, Mass. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y. Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Horn St., Chicago 10, III

Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif.
 UNITED TRANSFORMER CO.. 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
 West Covert Electronics Co. 1601 S. Ruelington

West Coast Electronics Co., 1601 S. Burlington

Ave., Los Angeles, Calif.
 Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.

Acro Products Co., 5330 Baltimore Ave., Phila.,

Acro Products Co., 5530 Baltimore Ave., Phila., Pa.
Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y.
Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. SEE ADV. PG. 94.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.

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FILTERS—Electric Wave Section

**FILTERS**—Detonation

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# FILTERS

- BIRD ELECTRONIC CORP., 1800 E. 36th St., Cleveland 14, Ohio. SEE ADV. PG. 217. BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45. Chicago Transformer Div., Essex Wire Corp., 3501 W. Addican St. Chicago 18, III

- Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III.
  Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri Communication Equipment & Engrg. Co., 5645 W. Race St., Chicago 44, III.
  Communications Parts, 1101 N. Paulina St., Chi-cago 22, III.
  DeCOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. SEE ADV. PG. 176.
  Deustchmann Corp., Tobe, Norwood, Mass.
  Dietz Design & Mfg. Co., 5810 Park Ave., Kansas City 4, Mo.
  ELECTRONIC TRANSFORMER CO., INC., 207 25th St., New York, N. Y. SEE ADV. PG. 200.
- FEDERAL TELEPHONE AND RADIO CORP.,
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Filtron Co., Inc., The, 38-25 Bell Blvd., Bayside, L. I., N. Y.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.
- LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. Lynch Co., F. W., 151 2nd St., San Francisco, Calif.
- Magnetic Products Corp., The, Norwalk, Conn. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
- NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-

- 155.
  PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  S-W Inductor Co., 1056 N. Wood St., Chicago, Ill. Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
  Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif.
  UNITED TRANSFORMER CO.. 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.

#### FILTERS—Equalizer

- Acro Products Co., 5330 Baltimore Ave., Phila.,
- Pa.
   Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y.
   Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
   Arlington Electric Products, Inc., 500 W. 52nd St. New York 19, N. Y.

- Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. SEE ADV. PG. 94. Audio Equipment Sales, 153 W. 33rd St., New

- Audio Equipment Sales, 100 W. Solu St., 101, York 1, N. Y.
  BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45.
  Collins Radio Co., Cedar Rapids, Iowa
  Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri
  DeCOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. SEE ADV. PG. 176.
  ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.

- ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.
  Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
  FREED TRANSFORMER CO., 1736 Weirfield St., Brooklyn 27, N. Y. SEE ADV. PG. 53.
  KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.

- 139
- LENKURT ELECTRIC CO., INC., San Garlos, Calif. SEE ADV. PG. 196.

- Magnetic Products Corp., The, Norwalk, Conn. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
  PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130.
  PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  S-W Inductor Co., 1056 N. Wood St., Chicago, II.

- III.
- Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- Snaleross ang. Co., Inc., Mark, 32-28 49th St., Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. Stephens Mfg. Corp., 8538 Warner Drive, Culver
- City, Calif.
- Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill. Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Errort Cover.
- Front Cover.

## FILTERS-Lighting (for radio towers)

- Andrew Corp., 363 E. 75th St., Chicago 19, Ill. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Collins Radio Co., Cedar Rapids, Iowa Continental Electronics Mfg. Co., 1728 Wood St., Dalka I. Tavas

- Continental Electronics Mig. Co., 1728 Wood St., Dallas 1, Texas Gates Radio Co., Quincy, Ill. Johnson Co., E. F., Waseca, Minn. Kopp Glass Inc., 1 E. 42nd St., New York 17, N.Y.
- Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif
- Calif. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside
- Front Cover.

## FILTERS—Needle Scratch

- BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45. Collins Audio Products Co., P. O. Box 368, West-
- field, N. J.
- field, N. J. Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri DeCOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. SEE ADV. PG. 176. Electronic Transformer Co., Inc., 207 W. 25th St., New York, N. Y. K-V Transformer Co., 4414 Park Ave., New York 57 N V.
- 57, N. Y. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. Miller Co., J. W., 5917 S. Main St., Los Angeles,
- Calif. Minnesota Electronics Corp., 97 E. Fifth St., St.

- Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.
  NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
  PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130.
  Scott, Hermon Hosmer, Inc., 385 Putnam Ave., Cambridge 39, Mass.
- Cambridge 35, Mass.
   Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
   UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.

#### FILTERS—Radio Interference

PG. 87.

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Aeronautical Radio Mfg. Co., 155 First St., Mine-

- Aeronautical Radio Mig. Co., 199 First St., 199 ola, N. Y. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV.

DeCOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. SEE ADV. PG. 176. Dumont Electric Co., 308 Dyckman St., New York, N. Y.

1949-1950 DIRECTORY of

- Deutschmann Corp., Tobe, Norwood, Mass. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200
- Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, Ill. FEDERAL TELEPHONE AND RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Filtron Co., Inc., The, 38-25 Bell Blvd., Bayside, L. I., N. Y.

- Hittoit Co., Hul, Yud, Oct. 2010, Schenectady 5, N. Y.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y.
  SEE ADV. PGS. 5-18.
  Inductive Equipment Co., Gettysburgh, Pa.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn 57, N. Y. SEE ADV. PG. 112.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

- K-V Iransformer Corp., 4414 Faik Ave., Hew York 57, N. Y.
   LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
   MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Minnesota Electronics Corp., 97 E. Fifth St., St.
- Paul 1, Minn. Network Mfg. Corp., Bayonne, N. J. Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J. Potter Co., 1850 Sheridan Rd., No. Chicago, Ill. Pyramid Electric Co., 155 Oxford St., Paterson, N. J.
- N. J. S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
- Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y. Scott, Hermon Hosmer, Inc., 385 Putnam Ave.,
- Cambridge 39, Mass. Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J. Sprague Electric Co., North Adams, Mass.

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217. Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.

Crystal Devices Co., Inc., 50 Mill Rd., Freeport, N. Y.

N. I. Deutschmann Corp., Tobe, Norwood, Mass. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. FEDERAL TELEPHONE AND RADIO CORP., 100

FEDERAL IELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
 Filtron Co., Inc., The, 38-25 Bell Blvd., Bayside, L. I., N. Y.
 HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG. 188

K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. LAVOIE LABORATORIES, Morganville, N. J.

SEE ADV. PG. 182.
Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J.
Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
Racon Electric Co., 52 E. 19th St., New York 3,

Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3,

SPERRY GYROSCOPE CO., Div. of The Sperry

Corp., Great Neek, N. Y. SEE ADV. PGS. 51, 52. Sprague Electric Co., North Adams, Mass. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif. Weymouth Instrument Co., 1440 Commercial St.,

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SEE ADV. PG. 182.

East Weymouth 89, Mass.

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#### FINISHES-Crystal

- Centro Research Laboratories, Inc., Briarcliff Manor, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford. Ill.
- Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J.
- Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.
- Pasadena, Calli. REEVES-HOFFMAN CORP., 321 Cherry St., Car-lisle, Pennsylvania. SEE ADV. PG. 104. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

#### FINISHES—Enamel

- Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio Centro Research Laboratories, Inc., Briarcliff
- Manor, N. Y. Dolph Co., John C., Monmouth Junction, N. J. du Pont de Nemours & Co. Inc., E. I., Wilming-
- du Pont de Nemours & Co. Inc., E. I., Winning-ton 98, Delaware
  Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y.
  Franklin Paint & Varnish Co., Benjamin, 4820 Langdon St., Philadelphia 24, Pa.
  General Cement Mfg. Co., 919 Taylor Ave., Rock-ford Ul.
- ford, Ill.
- ford, Ill.
  GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
  Haynes Labs., Inc., C. W., 61 Chandler St., Springfield, Mass.
  Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
  Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J.
  Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio
  Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.

- Pasadena, Calif.
- Pasadena, Calit. PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212. SCHENECTADV VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111. Sherwin-Williams Co., 101 Prospect Ave., N. W., Clauded 1. Ohio.
- Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1, Ohio
  Standard Varnish Works, 2600 Richmond Terr., Staten Island, N. Y.
  U. S. Rubber Co., Mechanical Goods Div., 1280 Avenue of the Americas, New York 20, N. Y.

### FINISHES—Lacauer

- Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio Centro Research Laboratories, Inc., Briarcliff Manor, N. Y.
- Manor, N. Y. Dolph Co., John C., Monmouth Junction, N. J. du Pont de Nemours & Co., Inc., E. I., Wilming-ton 98, Delaware Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y. Franklin Paint & Varnish Co., Benjamin, 4820 Langdon St., Philadelphia 24, Pa. General Cement Mfg. Co., 919 Taylor Ave., Rock-ford. III.

- General Cemerit Mig. Co., 513 Taylor Ave., Rock ford, Ill.
   Haynes Labs., Inc., C. W., 61 Chandler St., Springfield, Mass.
   Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
   INSULATION MANUFACTURERS CORP., 565 W.
   Workington Phyloretry Blud, Chicago 6, III SEE ADV
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
- Pot. 131.
  Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J.
  Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio
  Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.

- Pasadena, Calif. **PRODUCTION ENGINEERING CO.**, 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212. Radiocrafters, 1156 Commonwealth Ave., Boston
- 34, Mass. Sherwin-Williams Co., 101 Prospect Ave., N. W.,
- Cleveland 1, Ohio Standard Varnish Works, 2600 Richmond Terr., Staten Island, N. Y.

## **FINISHES**—Luminous Materials

- Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- N. Y. Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y.

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- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J. Mission Electric Mfg. Co., 132 W. Colorado Blvd.,
- Pasadena, Calif. Shannon Luminous Materials Co., 7346 Santa
- Monica Blvd., Hollywood 46, Calif.

#### FINISHES—Ripple

- Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio General Cement Mfg. Co., 919 Taylor Ave., Rock-
- General Cement Mig. Co., 919 Taylor Ave., Rock-ford, Ill. Haynes Labs., Inc., C. W., 61 Chandler St., Springfield, Mass. Maas & Waldstein Co., 438 Riverside Ave., New-ark 4, N. J. Mission Electric Mfg. Co., 132 W. Colorado Blvd., Benedara Calif.
- Pasadena, Calif. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif. Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y.

## FINISHES—Varnish

- Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio Centro Research Laboratories, Inc., Briarcliff Manor, N. Y. du Pont de Nemours & Co., Inc., E. I., Wilming-
- ton 98, Del. Franklin Paint & Varnish Co., Benjamin, 4820 Langdon St., Philadelphia 24, Pa. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. Haynes Labs., Inc. Springfield, Mass. Inc., C. W., 61 Chandler St.,
- Springfield, Mass. Heresite and Chemical Co., Manitowoc, Wis. Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y. **INSULATION MANUFACTURERS CORP.**, 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Maas & Waldstein Co., 438 Riverside Ave., New-cold A. N. L.

- Malas & Waldstein Co., 438 Riverside Ave., New-ark 4, N. J. Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.
- Pasadena, Calit. PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212. SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111. Sherwin-Williams Co., 101 Prospect Ave., N. W., Claveland 1. Obja
- Cleveland 1, Ohio Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y.

# FLEXIBLE SHAFT EQUIPMENT

See Machines

## FLOCK & FLOCKED PAPER

- Auburn Mfg. Co., Middletown, Conn. Bestcraft Products, 14 Delancey St., New York,
- N. Y. Cellusuede Products, Inc., Rockford, Ill. Flock Process Co., Velvetone Div., 3 Quincy St., Norwalk, Conn.
- Norwark, Conn.
   General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
   Haynes Labs., Inc., C. W., 61 Chandler St., Springfield, Mass.
   Maas & Waldstein Co., 438 Riverside Ave., New-
- ark 4, N. J.
- Radiocrafters, 1156 Commonwealth Ave., Boston
- 34, Mass. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

## FLUORESCENT COMPOUNDS—Phosphors

- du Pont de Nemours & Co., E. I., Patterson Screen Div., Towanda, Pa. EISLER ENGINEERING CO., INC., 740 S. 13th
- St., Newark 3, N. J. SEE ADV. PG. 128. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. U. S. Radium Corp., 535 Pearl St., New York 7, N V
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **FLUOROMETERS**

- Coleman Instruments, Inc., 318 Madison St., May-
- wood, Ill. Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y. National Technical Lab., 820 Mission St., S.

Pasadena, Calif. Rubicon Co., 3751 Ridge Ave., Phila., Pa.

# FLUX—Brazing Compounds

- AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.
- American Solder & Flux Co., 2152 E. Norris St.,
- Phila. 25, Pa. Chase Brass & Copper Co., Inc., Waterbury 91,
- Cons. Cons. Eutetic Welding Alloys Corp., 40 Worth St., New York 13, N. Y. Farrelloy Co., 1245 N. 26th St., Philadelphia 21,
- Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn, N. Y Goldsmith Bros. Smelting & Refining Co., 109

- Goldsmith Bros. Smelting & Rehning Co., 109 N. Wabash Ave., Chicago 2, 111. HANDY & HARMAN, 82 Fulton St., New York 7, N. Y. SEE ADV. PG. 204. SOLDERING SPECIALTIES CO., Summit, N. J. SEE ADV. PG. 58. Special Chemicals Corp., 30 Irving PL, New York 2 N V
- 3, N. Y. Superior Flux Co., 1302 Ontario St., Cleveland 13, Ohio
- Tricon Mfg. Co., 8318 S. Racine Ave., Chicago, TШ WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.

American Solder & Flux Co., 2152 E. Norris St., Phila. 25, Pa. Division Lead Co., 836 W. Kinzie St., Chicago

Division Lead Co., 850 W. Kinzle St., Chicago 22, III.
 Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y.
 Eutetic Welding Alloys Corp., 40 Worth St., New York 13, N. Y.

Farrelloy Co., 1245 N. 26th St., Philadelphia 21,

Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn,

Goldsmith Bros. Smelting & Refining Co., 109

N. Wabash Ave., Chicago 2, Ill. HANDY & HARMAN, 82 Fulton St., New York 7, N. Y. SEE ADV. PG. 204. Johnson Mfg. Co., Inc., Mt. Vernon, Iowa Lenk Mfg. Co., The, 30 Cummington St., Boston 15 Mase

15, Mass. Linick Chemical Co., 29 E. Madison St., Chicago

2, Ill. MAKEPEACE CO., D. E., Attleboro, Mass. SEE

ADV. PG. 84. SOLDERING SPECIALTIES CO., Summit, N. J. SEE ADV. PG. 58. Special Chemicals Corp., 30 Irving Pl., New York

3, N. Y. Superior Flux Co., 1302 Ontario St., Cleveland 13, Ohio

Tricon Mfg. Co., 8318 S. Racine Ave., Chicago,

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

Allen Co., Inc., L. B., 6751 Bryn Mawr Ave., Chicago 31, 111.
Alpha Metals, Inc., 363 Hudson Ave., Brooklyn 1, N. Y.
Aluminum Co. of America, Gulf Bldg., Pittshurgh, Details

Pa. American Solder & Flux Co., 2152 E. Norris St.,

Phila. 25, Pa. BRITISH INDUSTRIES CORP., 315 Broadway,

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New York 7, N. Y. SEE ADV. PG. 81.

FLUX—Brazing & Soldering

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FLUX—Soldering

N. Y.

# FLUXMETER

- Burnley Battery & Mfg. Co., Clay St., North East,
- Pa. Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- Cook Electric Co., 2700 Southport Ave., Chicago, **TIL**
- Decimeter Inc., 1430 Market St., Denver 2, Col. Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
- Dunton Co., The, M. W., 670 Eddy St., Providence 3, R. I.
- du Pont de Nemours & Co., Inc., E. I., Wilmington 98. Delaware
- Eastern Metals Industries, 250 W. 54th St., New
- York 19, N. Y. Eutetic Welding Alloys Corp., 40 Worth St., New York 13, N. Y. Farrelloy Co., 1245 N. 26th St., Philadelphia 21,
- Pa. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford. Ill.
- GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Glaser Lead Co., Inc., 31 Wycoff Ave., Brooklyn,
- N. Y. Johnson Gas Appliance Co., 520 Ave. E., N. W., Cedar Rapids, Iowa Johnson Mfg. Co., Inc., Mt. Vernon, Iowa KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 33, Ill. SEE ADV. PG. 150. Lenk Mfg. Co., 30 Cummington St., Boston 15, Mass. N. Y.

- Mass. Linick Chemical Co., 29 E. Madison St., Chicago
- 2. Ill.
- <sup>2</sup>, 111.
   Merck & Co., Inc., Rahway, N. J.
   MULTICORE SOLDERS LTD., Meillier House, Albemarle St., London, W. 1, England. SEE ADV. PG. 81.
   National Lead Co., 111 Broadway, New York 6,
- N. Y. Ruby Chemical Co., 68 MacDowell St., Columbus,

- Ruby Chemical Co., 68 MacDowell St., Columbus, Ohio
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  SOLDERING SPECIALTIES CO., Summit, N. J. SEE ADV. PG. 58.
  Special Chemicals Corp., 30 Irving Place, New York 3, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Superior Flux Co., 1302 Ontario St., Cleveland 13. Ohio
- 13, Ohio Tricon Mfg. Co., 8318 S. Racine Ave., Chicago,
- III. Weaver Specialty Co., 6344 Aurelia St., Pitts-
- Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

#### FLUXMETER

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- Associated Research, Inc., 3758 W. Belmont,
- Associated Research, Inc., 5156 W. Bennott, Chicago 18, III. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Leeds & Northrup Co., 4970 Stenton Ave., Phila.
- Pa
- 44, Fa. MARION ELECTRICAL INSTRUMENT CO., Man-chester, N. H. SEE ADV. PG. 79. Rawson Electrical Instrument Co., 110 Potter St.,
- Cambridge 42, Mass. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.

# FORKS-Electrically Driven Tuning

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 19, N. Y. SEE ADV. PG. 216. Columbus Electronics Corp., 229 S. Waverly St., Verberg N. Y.
- Yonkers, N. Y. Gaertner Scientific Corp., 1201 Wrightwood Ave.,
- Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, 11. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
- Heiland Research Corp., 130 E. 5th Ave., Denver
- 9. Colo.

- Macleod & Hanopol, Joiner St., Charlestown 29, Mass.
- Norrman Labs., Ernst, Williams Bay, Wis. Times Facsimile Corp., 229 W. 43rd St., New York, N. Y.

#### FORMS-Antenna

Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N. Y.

## FORMS-Coil

See Also Bobbins

- Alden Products Co., 117 N. Main St., Brock-
- Alden Products Co., 117 N. Main St., Brockton 64, Mass.
  AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  Auburn Mfg. Co., Middletown, Conn. Beach Precision Parts Co., Boonton, N. J.
  BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
  Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio

- 1, Ohio Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill. CENTRALAB DIV. of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS.
- 26. 27
- Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill.
   CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. SEE ADV. PG. 1990
- 183.
- Coil Winders Inc., 61 Bergen St., Brooklyn 2,
- CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122.

- 119-122.
  Corning Glass Works, Corning, N. Y.
  Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
  Electrical Insulation Co., Inc., 12 Vestry St., New York 13, N. Y.
  Electronic Mechanics, Inc., 70 Clifton Blvd., Clifton, N. J.
  ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109.
  Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, 11.
- Chicago 51, Ill. General Ceramics & Steatite Corp., Keasbey,
- GENERAL ELECTRIC CO., Chemical Dept., Pitts-

- GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. 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. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- 80.
- 80.
  Johnson Co., E. F., Waseca, Minn.
  Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
  Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.
  Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
  Willer Mfg. Co., Lamos 150, Exchange St.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Millen Mas. Corp. of AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124, 125. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. NATIONAL MOLDITE CO., Hillside 5, N. J. SEE ADV. PG. 146
- NATIONAL MULDITE CO., Hillside 5, N. J. SEE ADV. PG. 146.
   NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
   Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
   Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
   PRECISION PAPER TURE CO.

- York 13, N. Y. PRECISION PAPER TUBE CO., 2033 W. Charles-ton St., Chicago 47, Ill. SEE ADV. PG. 112. Printloid Inc., 95 Mercer St., New York, N. Y. Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa. Rogers Corp., Manchester, Conn. Speer Resistor Corp., St. Marys, Pa. Stackpole Carbon Co., St. Marys, Pa. Steward Mfg. Co., D. M. Chattanooga, Tenn.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78

1949-1950 DIRECTORY of

- Pa. SEE ADV. PG. 78.
  Synthane Corp., Oaks, Pa.
  Taylor Fibre Co., Norristown, Pa.
  Taylor Mfg. Co., 3056 W. Meinecke Ave., Milwaukee 10, Wisc.
  TELEX, INC., Telex Park, Minneapolis 1, Minn.
  SEE ADV. PG. 170.
  Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  Waterbury Companies, Inc., Waterbury 90, Conn. Conn.

### FORMS—Resistor

- Alden Products Co., 117 No. Main St., Brock-
- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
  CENTRALAB, Div of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
  Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
  Corning Glass Works, Corning, N. Y.
  General Ceramics & Steatite Corp., Keasbey, N. J.

Pa., SEE ADV. PG. 78.

FORMS—Wire

209.

- N. J.
- N. J. Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y. MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clinton, N. J. SEE ADV. PGS. 124, 125. PRECISION PAPER TUBE CO., 2033 W. Charles-ton St., Chicago 47, Ill. SEE ADV. PG. 112. Stackpole Carbon Co., St. Marys, Pa. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.

Accurate Spring Mfg. Co., 3811 W. Lake St.,

Chicago, Ill. Alden Products Co., 117 No. Main St., Brock-ton 64, Mass. American Steel & Wire Co., U. S. Steel Corp. Sub., Rockefeller Bldg., Cleveland 13, Ohio ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232. Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.

Cuyahoga Spring Co., 10272 Berea Rd., Cleve-land, Ohio Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

Hubbard Spring Co., M. D., Central Ave.,

Hubbard Spring Co., M. D., Central Ave., Pontiac, Mich.
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
Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.
WEBSTER SPRING CORP., 97 S. 5th St., Brook-lyn 11, N. Y. SEE ADV. PGS. 229, 233.

Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

SEE ADV. PGS. 5-18. Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.

BUSSMANN MFG. CO., St. Louis 7, Mo. SEE

Cook Electric Co., 2700 Southport Ave., Chicago, Ill. agle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.

FREQUENCY STANDARDS

See Standards-Frequency

FUSE HOLDERS See Blocks

ADV. PG. 210.

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FUSES

Eagle

FURNACES—High Frequency

- Economy Fuse & Mfg. Co., 2717 Greenview Ave., Chicago 14, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Jefferson Electric Co., Bellwood, Ill. Littelfuse, Inc., 4757 Ravenswood Ave., Chicago 40, Ill

- 40, 11. Pierce Renewable Fuses, Inc., 211 Hertel Ave., Buffalo 7, N. Y. Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee
- Wise
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, 66, 67,

#### **GAGES**—Comparator

- ARMA CORP., 254 35th St., Brooklyn 32, N. Y. SEE ADV. PG. 220. DoAll Co., 254 No. Laurel Ave., Des Plaines,
- TIL. Engineers Specialties Div., Universal Engraving & Colorplate Co., 980 Ellicott St., Buffalo 8, N. Y.
- Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y.
- Huntington Station, N. Y. GÉNERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.
- 9, Colo. O'Connor & Co., John T., West Orange, N. J. Pratt & Whitney Div., Niles-Bement-Pond Co., West Hartford 1, Conn. Scherr Co., Inc., Geo., 200 Lafayette St., New York 12, N. Y. Sheffield Corp., The, Dayton 1, Ohio Starrett Co., L. S., 165 Crescent St., Athol, Mass

Mass.

## GAGES—Displacement Measuring

- BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169. Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill. Electronic Control Corp., 1573 E. Forrest St., Detroit, Mich.
- Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
- Massa Laboratories, 3868 Carnegie St., Cleveland, Ohio
- land, Ohio Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif. Statham Labs., Inc., 9328 Santa Monica Blvd., Beverly Hills, Calif. Televiso Products Inc., 7466 West Irving Park Road, Chicago 34, Ill. TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.

## GAGES-Electronic Fuel Indicator

- Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
- Melpar, Inc., 452 Swann Ave., Alexandria, Va. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

# **GAGES**—Electronic Inspection

- ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220. Autotron Co., The, Danville, Ill. Branson Instruments, Inc., 436 Fairfield Ave.,
- Stamford, Conn.

- Stamford, Conn. Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill. Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y. Hoffman Engineering Corp., Anoka, Minn. INDUSTRIAL ELECTRONICS, INC., 2457 Wood-ward Ave., Detroit 1, Mich. SEE ADV. PG.
- 226. LaRose & Associates, W. T., 646 Second Ave., Troy, N. Y.
- Troy, N. Y. O'Connor & Co., John T., West Orange, N. J. Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif. Pratt & Whitney Div., Niles-Benient-Pond Co., West Hartford 1, Conn. Ripley Co., Inc., P. O. Box 31, Middletown, Conn.

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- Sheffield Corp., The, Dayton 1, Ohio

- Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.

### GAGES—Electronic Spring Checking

Link Engineering Co., 13581 Elmira St., Detroit 27, Mich.

#### GAGES-lonization

- Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y. Eitel-McCullough, Inc., San Bruno, Calif. Fredericks Co., Geo. E., Bethayres, Pa. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. National Research Corp., 70 Memorial Drive, Cambridge 42. Mass.

- Cambridge 42, Mass.
- National Technical Lab., 820 Mission St., S. Pasadena, Calif. National Union Radio Corp., 350 Scotland Rd.,
- Orange, N. J.
- Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill. Omaha Scientific Supply Co., 3623 Lake St.,
- Omaha 4, Neb. Process & Instruments, 60 Greenpoint Ave.,

- Process & Instruments, 60 Alexan Brooklyn 22, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE PGS. 197, Inside Back & Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. DCS 240,244 Thermionic Engineering Corp., Pompton Plains,
- N
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## GAGES-Paint Depth

- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. Branson Instruments, Inc., 436 Fairfield Ave.,
- Stamford, Conn. Electronic Control Corp., 1573 E. Forest St., De-

- Electronic Control Corp., 1975 E. Polest St., De-troit, Mich. Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Tracerlab, Inc., 55 Oliver St., Boston 10, Mass.

### GAGES—Photoelectric Dimension

- Alden Products Co., 117 No. Main St., Brockton 64, Mass. CONTINENTAL ELECTRIC CO., Geneva, Ill. SEE ADV. PG. 176.

- SEE ADV. PG. 176.
  Electronic Control Corp., 1573 E. Forest Street, Detroit, Mich.
  La Rose & Associates, W. T., 646 Second Ave., Troy, N. Y.
  O'Connor & Co., John T., West Orange, N. J.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Sheffield Corp., The, Dayton 1, Ohio
  Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
  Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.
  Wilson & Co., G. C., 2 N. Passaic Ave., Chat-ham, N. J.

#### GAGES-Pirani

- Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y.
  EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128.
  Fredericks Co., Geo. E., Bethayres, Pa.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  RESEARCH ELECTRONICS LAB., 2459 Sus-quehanna Rd., Roslyn, Pa. SEE ADV. PG. 233. 233
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

## GAGES-Pressure

Airplane & Marine Instruments, Inc., Clearfield, Pa.

- Pa. American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif. Bristol Co., The, Waterbury 91, Conn.

- Sherman Way, N. Hollywood, Can. Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Dillon & Co., Inc., W. C., 5410 W. Harrison St., Chicago 44, Ill. Electric Auto-Lite Co., The, Toledo 1, Ohio Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill. Elenatic Equipment Corp., 6046 S. Wentworth Ave., Chicago 21, Ill. Engineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn. Foxboro Co., The, Foxboro, Mass. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209.

- 209. KOLLSMAN INSTRUMENT DIV. OF SQUARE
- D. CO., 80-08 45th Ave., Elmhurst, N. Y. SEE ADV. PG. 36.
- Massa Laboratories, 3868 Carnegie St., Cleve-Massa Laboratories, 3868 Carnegie St., Cleveland, Ohio
  Melpar, Inc., 452 Swann Ave., Alexandria, Va.
  Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif.
  Ruge-DE Forest, Inc., 76 Massachusetts Ave., Cambridge 39, Mass.
  Sheffield Corp., The, Dayton 1, Ohio
  Statham Laboratories, Inc., 9328 Santa Monica Blvd., Beverly Hills, Calif.
  TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.

TRANS-SONICS, INC., Bedford, Airport, Bedford, Mass. SEE ADV. PG. 132.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 Wallace & Tiernan Products Inc., Belleville 9,

Veksler Thermoineter Corp., 52 W. Houston St., New York, N. Y.

American Instrument Co., 8030 Georgia Ave.,

Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif. Foxboro Co., The, Foxboro. Mass. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

SEE ADV. PGS. 5-18. Giannini & Co., Inc., 285 W. Colorado St.,

Pasadena 1, Calif.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colorado.
Massa Laboratories, 3868 Carnegie St., Cleve-land, Ohio
National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
Ruge-DE Forest, Inc., 76 Massachusetts Ave., Cambridge 39, Mass.
Saxl Instrument Co., Harvard. Mass.
Sheffield Corp., The, Dayton 1, Ohio
Starrett Co., L. S., 165 Crescent St., Athol, Mass.

Statham Laboratories, Inc., 9328 Santa Monica Blvd., Beverly Hills, Calif. Televiso Products, Inc., 7466 W. Irving Pk. Rd., Chicae 24 JU

Branson Instruments, Inc., 436 Fairfield Ave.,

Engineering Lab., Inc., 602 E. 4th St., Tulsa 3,

ELECTRONICS,

Woodward Ave., Detroit 1, Mich. SEE ADV. PG. 226.

Sperry Products, Inc., Danbury, Conn. Triplett & Barton, Inc., 831 N. Lake St., Bur-bank, Calif.

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D-57

INC.

GAGES-Ultrasonic Thickness

N. J.

GAGES-Strain

Pasadena 1, Calif.

Mass.

**Okla** 

INDUSTRIAL

Chicago 34, Ill.

Stamford, Conn.

Weksler

# GAGES

# GAGES-Vacuum

- Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio

- Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio
  Bendix Aviation Corp., Pacific Div., 11600
  Sherman Way, N. Hollywood, Calif.
  Bristol Co., The, Waterbury 91, Conn.
  Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
  CONTINENTAL ELECTRIC CO., Geneva, Ill. SEE ADV. PG. 176.
  Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y.
  EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128.
  Eitel-McCullough, Inc., San Bruno, Calif.
  Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio
  Fredericks Co., Geo. E., Bethayres, Pa.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PG. 5-18.
  Hastings Instrument Co., Box 1275, Hampton, Va.
- Va.
- Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209. KOLLSMAN INSTRUMENT DIV. OF SQUARE D CO., 80-08 45th Ave., Elmhurst N. Y. SEE ADV. PG. 36. Melpar, Inc., 452 Swann Ave., Alexandria, Va. National Research Corp., 70 Memorial Drive, Cambridge 42, Mass. Practicing Resister Co. 334 Badger Ave. New.

- Precision Resistor Co., 334 Badger Ave., New-
- ark 8, N. J.
   Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back & Back Covers.

- ADV. PGS. 197, Inside Back & Back Covers.
  Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa.
  Sheffield Corp., The, Dayton 1, Ohio
  Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y.
  Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Phila. 20, Pa.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. 240-244.
- 240-244. U. S. Gauge Div., American Machines & Metals, Inc., Sellersville, Pa. Vacuum Electronic Engineering Co., 316 37th St., Brooklyn 2, N. Y. Wallace & Tiernan Products, Inc., Belleville 9,
- N. J.
- N. J. Weksler Thermometer Corp., 52 W. Houston St., New York, N. Y. Welch Scientific Co., W. M., 1515 Sedgwick St.,
- Chicago 10, Ill. Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

## GALVANOMETERS

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- GALVANUMETERS Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Assembly Products, Inc., Chagrin Falls 6, Ohio Berndt-Bach, Inc., 7377 Beverly Rd., Los Angeles 36, Calif. CENTURY GEOPHYSICAL CORP., Tulsa 3, Oklahoma. SEE ADV. PG. 164. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif. Edin Electronics Co., 207 Main St., Worcester, Mass.

- Mass. Electronic Development Co., 4420 N. 23rd St.,
- Omaha 11, Nebraska Electronic Supply Co., 207 Main St., Worcester, Mass.

- Mass. Engineering Lab., Inc., 602 E. 4th St., Tulsa 3, Okla. G-M Laboratories, Inc., 4313 No. Knox Ave., Chicago, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.

- Gordon Co., Claud S., 3000 S. Wallace St., Chi-cago 16, Ill. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. Heiland Research Corp., 130 E. 5th Ave., Denver 9, Colo.
- Hickok Electrical Instrument Co., 10514 Dupont
- Denver 9, Colo.
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
  J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.
  Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
  Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.
  Miller Corp., Wm., 362 W. Colorado St., Pasa-dena, Calif.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
  Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa. SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.
  Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
  Thwing-Albert Instrument Con, 5351 Pulaski Avenue, Philadelphia 44, Pa.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
  Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

- Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

## GASES-Nitrogen

- Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
  EISLER ENGINEERING CO., INC., 740 S. 13th
  St., Newark 3, N. J. SEE ADV. PG. 128.
  Linde Air Products Co., Unit of Union Carbide
  and Carbon Corp., 30 E. 42nd St., New York
  17 N. Y. 17, N. Y.

## GASES-Rare

- Aerolux Light Corp., 653 11th Ave., New York
- EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. HAYDU BROS., Plainfield, N. J. SEE ADV.
- PG. 209. Linde Air Products Co., Unit of Union Carbide and Carbon Corp., 30 E. 42nd St., New York
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66. 67.

#### GASKETS

- Armstrong Cork Co., Lancaster, Pa. Auburn Mfg. Co., Middletown, Conn. Board Products Co., 4206 W. Lake St., Chicago 24. Ill.
- Brandywine Fibre Co., 15th & Poplar Sts., Wilmington, Del. Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn.

- Conn. Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill. Garrett Co., Inc., George K., 1421 Chestnut St., Philadelphia 2, Pa. Gasket Engineering Co., 2440 Charlotte St., Kan-sas City 8, Mo.

- Gasket Engineering Co., 2440 Charlotte St., Kansas City 8, Mo.
  GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Insulating Fabricators, Inc., 12 E. 12th St., New York, N. Y.
  Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
  National Gasket & Washer Mfg. Co., Inc., 122 E. 25th St., New York 10, N. Y.
  Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.

Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Phila. 44, Pa.
Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
Precision Fabricators, Inc., Roosevelt Rd., E.
Bochester, N. Y.

1949-1950 DIRECTORY of

- Rochester, N. Y. U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y. Western Felt Works, 4029 Ogden Ave., Chicago, Illinois
- Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

#### **GEARS**—Precision

- Arch Gear Works, Inc., Quincy, Mass. ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220. Beaver Gear Works, Inc., Rockford, Ill. Boehme Inc., H. O., 915 Broadway, New York,
- N. Y. Foote Brothers Gear & Machine Corp., 4545 S.
- Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill.
  FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City, N. Y. SEE ADV. PG. 90.
  GEAR SPECIALTIES, 2635 W. Medill Ave., Chicago 47, Ill. SEE ADV. PG. 59.
  Gorrell & Gorrell, Haworth, N. J.
  Insulating Fabricators of New England, Inc., 69 Grove Street, Watertown 72, Mass.
  Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Perkins Machine & Gear Co., Box 1331, Spring-field, Mass.
  Powdered Metal Products Corp., Franklin Park,

- Powdered Metal Products Corp., Franklin Park,
- Ill. Quaker City Gear Works, 1908-32 N. Front St.,
- Brildelphia, Pa.
  Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
  Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.

Frequency
Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.
Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
Clarkstan Corp., 11927 W. Pico Blvd., Los An-geles 34, Calif.
Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif.
Collins Radio Co., Cedar Rapids, Iowa
Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y.
ELECTRIC INDICATOR CO., 21 Parker Ave., Stamford, Conn. SEE ADV. PG. 136.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
EL-TRONICS INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189.
Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill.
Flowmeter Corp. of America, High Falls, N. Y.

cago 14, Ill. Flowmeter Corp. of America, High Falls, N. Y. Furst Electronics, 10A S. Jefferson St., Chicago

6, III. Gates Radio Co., Quincy, III. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

Heath Co., Benton Harbor, Mich.

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Heath Co., Benton Harbor, Mich.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif.
KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
La Rose & Associates, W. T., 646 Second Ave., Troy, N. Y.

Measurement Engineering Ltd., Arnprior, Ontario,

**GENERATORS**—Electronic Variable

Frequency

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Canada

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.

- SEE ADV. PG. 53.
   Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
   PGS. 197, Inside Back & Back Covers.
- Radio Sonic Corp., 186 Union Ave., New Rochelle, NV
- Radio-Television Institute, Inc., 480 Lexington Ave., New York 17, N. Y. Scott Inc., Herman Hosmer, 385 Putnam Ave.,

- Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass. Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Thermionic Engineering Corp., Pompton Plains, N. J.
- Thermo Labs., Inc., 355 W. 26th St., New York
- Weston Laboratories, Weston 93, Mass.
  Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

#### **GENERATORS**—Electronic Wave

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
- Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.

- York 13, N. Y. Clarkstan Corp., 11927 W. Pico Blvd., Los An-geles 34, Calif. Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill
- cago 14, Ill. **GENERAL ELECTRIC CO.**, Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Lektra Labs., 30 E. 10th St., New York, N. Y. Manufacturers Engr. & Equip. Corp., Willow
- Grove, Pa.
- Peerless X-Ray Labs. & Mfg. Corp., 467 10th Ave., New York 18, N. Y. POLYTECHNIC RESEARCH & DEVELOPMENT
- POLYTECHNIC RESEARCH & DEVELOPMENT
   CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
   Scott Inc., Herman Hosmer, 385 Putnam Ave., Combridge 20. Marc
- Cambridge 39. Mass.
- Cambridge 39. Mass. Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y. SPERRY G¥ROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Thermo Labs., Inc., 355 W. 26th St., New York
- 1, N. Y Wappler, Inc., 27 W. 24th St., New York 10,

# **GENERATORS**—Gas-Engine Driven

Buda Co., Harvey, Ill.

- Carson Machine & Supply Co., Box 4547, Okla-homa City 9, Okla.
- Climax Industries, Inc., Climax Engineering Div., Clinton, Iowa
- Contineent ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Cyclohm Motor Corp., Racine, Wis. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
- Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio
- Electric Specialty Co., 211 South St., Stamford, Conn.
- Geophysical Instrument Co., 1820 N. Nash St.,
- Geophysical Instrument Co., 1920 A. Andrey Arlington, Va. Homelite Corp., Port Chester, N. Y. Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif. Leland Electric Co., The, 1501 Webster St., Day-
- ton 1, Ohio
- Marble-Card Electric Co., Gladstone, Mich. Midco Mfg. & Distributing Co., S. 13th & Ken-tucky Ave., Sheyboygan, Wis. Onan & Sons, Inc., D. W., 3264 Royalston Ave., Minnergelia 5. Minn.
- Minneapolis 5, Minn.

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- Pioneer Electric Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
- Pioneer Gen-E-Motor Corp., 5841 W. Dickens Ave., Chicago 39, Ill. Ready Power Co., The, Power Plant Div., 11231 Freud Ave., Detroit 14, Mich. Universal Motor Co., 456 Universal Dr., Oshkosh, Wie
- Wis.

## **GENERATORS**—Hand Driven

- Burke Electric Co., 12th & Cranberry Sts., Erie, Pa.
- Connecticut Telephone & Electric Div., Great American Industries, 70 Brittania St., Meriden, Conn
- CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Cyclohm Motor Corp., Racine, Wis. FEDERAL TELEPHONE AND RADIO CORP., 100 Kin LELEPHONE AND RADIO CORP.
- 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. S. Instrument Corp., 409 Broad St., Summit,
- U N.J.

# GENERATORS—Harmonic Frequency

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. ELECTRONIC MEASUREMENTS CO., Red Bank,
- N. J. SEE ADV. PG. 172. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- LAVOIE LABORATORIES, Morganville, N. J. SEE
- ADV. PG. 182. Lorain Products Corp., 1122 F St., Lorain, Ohio Manufacturers Engr. & Equip. Corp., Willow Grove, Pa.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Monitor Products Co., 815 Fremont St., So.
- Monitor Products Co., 810 Fremont St., So. Pasadena, Calif. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63. REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104. Scott Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39. Mass
- Cambridge 39, Mass. Televiso Products, Inc., 7466 W. Irving Pk. Rd.,
- Chicago 34, Ill.

#### **GENERATORS**—Induction and Dielectric Heatina

See Heating, Electronic

Televiso Products, Inc., 7466 W. Irving Pk. Rd., Chicago 34, Ill.

# GENERATORS-Motor

- Allis-Chalmers Mfg. Co., Milwaukee 1, Wis. Allis Co., Louis, 427 E. Stewart St., Milwaukee 7, Wis.
- BENDIX AVIATION CORP., Red Bank Div., Red Bank, N. J. SEE ADV. PGS. 22, 23. Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson,
- Ñ. J. Burke Electric Co., 12th & Cranberry Sts., Erie,
- Pa Pa. CARTER MOTOR CO., 2644 Maplewood Ave., Chicago 47, Ill. SEE ADV. PG. 218. Century Electric Co., 1806 Pine St., St. Louis 3,
- Mo.
- Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Crocker-Wheeler Electric Mfg. Co., Div. of Joshua
- Hendy Corp., Ampere, N. J. Eastern Air Devices, Inc., 585 Dean St., Brook-
- Eastern Air Devices, Inc., 665 Dean St., Dioxe lyn 17, N. Y. Eicor Inc., 1501 W. Congress St., Chicago 7, Ill. ELECTRIC INDICATOR CO., 21 Parker Ave., Stamford, Conn. SEE ADV. PG. 136. Electric Machinery Mfg. Co., 1331 NE Tyler St., Minnergalie 12, Minn
- Minneapolis 13, Minn. Electric Products Co., 1725 Clarkstone Road, Cleveland 12, Ohio
- Electric Specialty Co., 211 South St., Stamford, Conn.

Gaston Power Tools, 2659 W. 95th St., Chicago 42 111

- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Geophysical Instrument Co., 1820 N. Nash St.,
- Arlington, Va.
- Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
- Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill. Hertner Electric Co., 12690 Elmwood Ave., Co., 12690 Elmwood Ave.,

- Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. Homelite Corp., Port Chester, N. Y. Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif. KOLLSMAN INSTRUMENT DIV. OF SQUARE D CO., 80-08 45th Ave., Elmhurst, N. Y. SEE ADV. PG. 36.
- Leland Electric Co., The, 1501 Webster St., Dayton 1, Ohio Marble-Card Electric Co., Gladstone, Mich.
- Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.
- Onan & Sons Inc., D. W., 3264 Royalston Ave., Minneapolis 5, Minn. Small Motors, Inc., 2076 Elston Ave., Chicago

- Small Motors, Andr. 201
  14, Ill.
  Star Electric Motor Co., 200 Bloomfield Ave., Bloomfield, N. J.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.
- Wincharger Corp., E., 7th & Division Sts., Sioux City, Iowa

Alden Products Co., 117 No. Main St., Brockton

American Radio Co., 611 E. Garfield Ave., Glen-

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
ATOMIC INSTRUMENTS CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. Y. SEE ADV. PG. 28.
DeMornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.

York 51, N. Y. ELECTRODYNE COMPANY, 899 Boylston St.,

Boston D15, Mass. SEE ADV. PG. 188. EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 199

Leru Laboratories, Inc., 360 Bleecker St., New York 14, N. Y. Manufacturers Engr. & Equip. Corp., Willow

Measurement Engineering Ltd., Arnprior, Ontario.

MEASUREMENTS CORP., Boonton, N. J. SEE

MEASUREMENTS COMMENTS COMMENTS ADV. PG 110. POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.

Reeves Instrument Corp., 215 E. 91st St., New

York, N. Y. Reiner Electronics Co., 152 W. 25th St., New

York, N. Y. Rowe Engineering Corp., 2422 N. Pulaski Road,

Chicago 39, Ill. Sherron Electronics Co., 1201 Flushing Ave.,

Television Equipment Corp., 238 William St., New York 7, N. Y. Thermionic Engineering Corp., Pompton Plains,

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wilmotte Inc., Raymond M., 1469 Church St., N. W., Washington 5, D. C.

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#### GENERATORS-Pulse

SEE ADV. PG. 182.

Grove, Pa.

Canada

Wash.

Brooklyn 6, N. Y.

64. Mass.

# GENERATORS

## **GENERATORS**—Square Wave

American Radio Co., 611 E. Garfield Ave., Glendale, Calif. BARKER & WILLIAMSON, 235 Fairfield Ave.,

- BARKER & WILLIAMSON, 235 Fairneid Ave., Upper Darby, Pa. SEE ADV. PG. 39.BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179.Central Scientific Co., 1700 Irving Park Rd., Chi-
- cago 13, Ill. Clarkstan Corp. 11927 W. Pico Blvd., Los An-

- Clarkstan Corp., 11927 W. Pico Blvd., Los Angeles 34, Calif.
  Coastwise Electronic Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif.
  ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
  ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  GENERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Globe Products Corp., 870 Maplewood Ave., Bridgeport 5, Conn.
  Heath Co., Benton Harbor, Mich.
  HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
  Manufacturers Engr. & Equip. Corp., Willow Grove, Pa.

- Grove, Pa. Measurement Engineering Ltd., Arnprior, Ontario,
- Canada MEASUREMENTS CORP., Boonton, New Jersey.
- MEASUREMENTS CORP., Boonton, New Jersey. SEE ADV. PG. 110.
   Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
   PGS. 197, Inside Back & Back Covers.
   Reiner Electronics Co., 152 West 25th St., New York N. V.

- Nemer Electronics Co., 102 West 20th St., New York, N. Y. Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51 52 52
- TEKTRONIX, INC., 712 S. E. Hawthorne Blvd., Portland 14, Ore. SEE ADV. PG. 32. Thermionic Engineering Corp., Pompton Plains,
- N.J
- Thermo Labs., Inc., 355 W. 26th St., New York N
- Weston Laboratories, Weston 93, Mass.

## **GENERATORS**—Ultrasonic

- Central Scientific Co., 1700 Irving Park Rd.,
- Central Scientific Co., 1700 frving Faik Rd., Chicago 13, Ill. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175. Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Counted Becearch Lebs. Inc. 29 Allyn St. Hart.

- Kansas City 8, Mo. Crystal Research Labs., Inc., 29 Allyn St., Hart-ford, Conn. Edo Corp., College Point, Long Island, N. Y. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115
- 115. Manufacturers Engr. & Equip. Corp., Willow Grove, Pa.
- Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
- Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
- REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
- Televiso Products, Inc., 7466 West Irving Park Road, Chicago 34, Ill.
- Triplett & Barton, Inc., 831 N. Lake St., Bur-bank, Calif.
- Valpey Crystals, Highland St., Holliston, Mass.

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- Vendo Co., 7400 E. 12th St., Kansas City, Mo. Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.

#### **GENERATORS**—Winddriven Generating Equipment

Mission Electric Mfg. Co., 132 W. Colorado Blvd.,

Pasadena, Calif. Wincharger Corp., E., 7th & Division Sts., Sioux City, Iowa

## GENERATORS, SIGNAL-a-f

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
  American Electroneering Co., 2112 S. LaBrea Ave., Los Angeles, Calif.
  American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Boehme Inc., H. O., 915 Broadway, New York, N. Y.

- BOONTON RADIO CORP., Boonton, N. J. SEE
- ADV. PG. 61. Clarkstan Corp., 11927 W. Pico Blvd., Los An-geles 34, Calif.
- Clough Brengle Co., 6014 N. Broadway, Chicago, Ill
- Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif. Control Corp., 718 Central Ave., Minneapolis 14,
- Minn. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- N. 1.
   Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill.
   GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115
- 115
- Heath Co., Benton Harbor, Mich. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS 64, 65. Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio Jackson Electrical Instrument Co., 16 S. Patter-son Blvd., Dayton 1, Ohio M. P. Concert Installations, Fairfield 10, Conn. Manufacturers Engr. & Equip. Corp., Willow Convertion Grove, Pa.
- Measurement Engineering Ltd., Arnprior, Ontario,
- Canada MEASUREMENTS CORP., Boonton, N. J. SEE
- MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.
  Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
  Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
  Radio City Products Co., Inc., 152 W. 25th St., New York. N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Reiner Electronics Co., 152 W. 25th St., New York, N. Y.

- York, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Colling-dale, Pa.
- Supreme, Inc., Greenwood, Miss. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS, 240-244.
- Televiso Products Inc., 7466 West Irving Park
- Rd., Chicago 34, Ill. Tel-Instrument Co., Inc., 50 Paterson Ave., E. Rutherford, N. J. Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
- Western Electro-Acoustics Labs., 621 S. Spring St., Los Angeles 14, Calif. Weston Laboratories, Weston 93, Mass.

# GENERATORS, SIGNAL-f-m

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- b4, Mass.
  American Electroneering Co., 2112 S. LaBrea Ave., Los Angeles, Calif.
  BOONTON RADIO CORP., Boonton, N. J. SEE ADV. PG. 61.
  Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif.

Commercial Equipment Co., 112 W. 18th St.,

1949-1950 DIRECTORY of

- Commercial Equipment Co., 112 w. 18th St., Kansas City 8, Mo. Electronic Corp. of America, 353 W. 48th St., New York, N. Y. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 233. PG.
- ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. Feiler Engineering Co., 945 W. George St., Chi-
- cago 14. Ill. Ferris Instrument Co., 110 Cornelia St., Boonton,
- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Heath Co., Benton Harbor, Mich.
- Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio Jackson Electrical Instrument Co., 16 S. Pat-
- terson Blvd., Dayton 1, Ohio KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. Manufacturers Engr. & Equip. Corp., Willow
- Grove, Pa. McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- MEASUREMENTS CORP., Boonton, N. J. SEE

- MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.
  Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
  Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y.
  Radio City Products Co., Inc., 152 W. 25th St., New York N. Y.

Radio City Products Co., Inc., 102 H. Londer, New York, N. Y.
 RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
 Reiner Electronics Co., 152 W. 25th St., New Victor Victor

York, N. Y. Rollin Co., 2070 N. Fair Oaks Ave.. Pasadena 3,

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS.

Supreme, Inc., Greenwood, Miss. SVLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV.

Tel-Instrument Co., Inc., 50 Paterson Ave., E. Rutherford, N. J. Triplett Electrical Instrument Co., 286 Harmon Road, Bluffton, Ohio Weston Laboratories, Weston 93, Mass.

American Electroneering Co., 2112 S. La Brea

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
BOONTON RADIO CORP., Boonton, N. J. SEE ADV. PG. 61.
Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
Clough Brengle Co., 6014 N. Broadway, Chicago, III.

Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif. Commercial Equipment Co., 112 W. 18th St.,

Kansas City 8, Mo. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 233.

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. Espey Mfg. Co., Inc., 528 E. 72nd St., New York,

N. Y. Feiler Engineering Co., 945 W. George St., Chi-

Ferris Instrument Co., 110 Cornelia St., Boonton, N. J.

GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Heath Co., Benton Harbor, Mich.

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5th Ave., New PGS. 240-244.

- HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio Jackson Electrical Instrument Co., 16 S. Patter-
- son Blvd., Dayton 1, Ohio KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
- McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn.
- Manufacturers Engr. & Equip. Corp., Willow
- Grove, Pa. Measurement Engineering Ltd., Arnprior, Ontario, Canada
- MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif.

- Pasadena, Calif.
  Pasadena, Calif.
  Northeastern Engineering Inc., Manchester, N. H.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
  Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y.
  Radio City Products Co., Inc., 152 W. 25th St., New York, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Reiner Electronics Co., 152 W. 25th St., New York, N. Y.
- York, N. Y. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3,
- Calif.
- Simpson Electric Co., 5218 W. Kinzie St., Chi-
- Suppose Inc., Greenwood, Miss. Tel-Instrument Co., Inc., 50 Paterson Ave., E. Rutherford, N. J. Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
- Weston Laboratories, Weston 93, Mass. Wheeler Labs., Inc., 259-09 Northern Blvd., Great Neck, N. Y.

# GENERATORS, SIGNAL-shf

- BOONTON RADIO CORP., Boonton, N. J. SEE ADV. PG. 61.
- Coastwise Electronic Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif. Feiler Engineering Co., 945 W. George St., Chi-
- cago 14, 111. LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182. Manufacturers Engr. & Equip. Corp., Willow

- Manufacturers Engr. & Equip. Corp., Willow Grove, Pa. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. REEVES-HOFFMAN CORP., 321 Cherry St., Car-lisle, Pa. SEE ADV. PG. 104. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52
- Tel-Instrument Co., Inc., 50 Paterson Ave., E. Rutherford, N. J.
- Weston Laboratories, Weston 93, Mass. Wheeler Labs., Inc., 259-09 Northern Blvd., Great Neck, N. Y.

# GENERATORS, SIGNAL-Sweeping

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Clarkstan Corp., 11927 W. Pico Blvd., Los An-geles 34, Calif.
- Clough Brengle Co., 6014 N. Broadway, Chicago,
- TIL. Coastwise Electronics Co., Inc., 130 N. Beaudry
- Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  Electronic Corp. of America, 353 W. 48th St., New York, N. Y.
  ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG, 233.

- PG 933 ELECTRONIC MEASUREMENTS CO., Red Bank,
- N. J. SEE ADV. PG. 172. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.

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- Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass. Heath Co., Benton Harbor, Mich.
- Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio Jackson Electrical Instrument Co., 16 S. Pat-
- Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton I, Ohio
   KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
   LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182.
   Manufacturers Engr. & Equip. Corp., Willow Grave Res
- Grove. MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110. Measurement Engineering Ltd., Arnprior, Ont., Can.
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y. Radio City Prods. Co., Inc., 152 W. 25th St., New York 1 N. Y.
- York 1, N. Y.
- Reiner Electronic Co., 152 W. 25th St., New York 1, N. Y.
- Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. Simpson Electric Co., 5218 W. Kinzie St., Chi-
- Corp. Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Tel-Instrument Co., Inc., 50 Paterson Ave., E. Rutherford, N. J.
- Thermionic Engineering Corp., Pompton Plains,
- TRANSVISION INC., 460 North Ave., New Ro-chelle, N. Y. SEE ADV. PG. 172.

### **GENERATORS**, SIGNAL—Television Synchronizing

- DuMont Labs., Inc., Allen B., 2 Main Ave.,
- DuMont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
  Electronic Corp. of America, 353 W. 48th St., New York, N. Y.
  ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
  Federal Engineering Co., 37 Murray St., New York, 7 N. Y.
- York 7, N. Y. FEDERAL TELEPHONE & RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 121, 131, 133, 135.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   Hickok Electrical Instrument Co., 10514 Dupont Area Charakana Ohio.

- Hickok Electrical Instrument Co., 1001 Depose Ave., Cleveland, Ohio Jackson Electrical Instrument Co., 16 S. Patter-son Blvd., Dayton 1, Ohio MEASUREMENTS CORP., Boonton, N. J. SEE

- MÉASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197. Inside Back & Back Covers. REEVES-HOFFMAN CORP., 321 Cherry St., Car-lisle, Pa. SEE ADV. PG. 104. Reiner Electronics Co., 152 W. 25th St. New York, N. Y.
- York, N. Y. Sherron Electronics Co., 1201 Flushing Ave.,
- Brooklyn 6, N. Y. Telequip Radio Co., 1901 S. Washtenaw, Chicago,
- $\mathbf{Ill}$ Television Equipment Corp., 238 William St., New York 7, N. Y.
- Television Projects, Inc., 3660 Coral Way, Miami 35, Fla.
- Tel-Instrument Co., Inc., 50 Paterson Ave., E. Rutherford, N. J.
- U. S. Television Mfg. Corp., 3 W. 61st St., New York 23, N. Y.

# GENERATORS, SIGNAL-uhf

- Aircraft Radio Corp., Boonton, N. J.
  American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  BOONTON RADIO CORP., Boonton, N. J. SEE ADV. PG. 61.
  BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179.

Electronic Corp. of America, 353 W. 48th St., New York, N. Y. ELECTRONIC MEASUREMENTS CO., Red Bank,

- N. J. SEE ADV. PG. 172. Espey Mig. Co., Inc., 528 E. 72nd St., New York,
- Ŷ
- Feiler Engineering Co., 945 W. George St., Chicago 14, Ill.
- Ferris Instrument Co., 110 Cornelia St., Boon-
- HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio Jackson Electrical Instrument Co., 16 S. Patter-
- son Blvd., Dayton 1, Ohio KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
- McMurdo Silver Co., Inc., 1240 Main St., Hartford 3. Conn
- MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Canada Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. REEVES.HOFFMAN CORP., 321 Cherty St., Car-lisle, Pa. SEE ADV. PG. 104. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif.

Sherron Electronics Co., 1201 Flushing Ave.,

Brooklyn 6, N.Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51,

SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

Airborne Instruments Lab., Inc., 160 Old Country

American Electroneering Co., 2112 S. LaBrea Ave., Los Angeles, Calif.
 BOONTON RADIO CORP., Boonton, N. J. SEE

ADV. PG. 61. DeMornay-Budd, Inc., 475 Grand Concourse, New York 51, N. Y. Electronic Corp. of America, 353 W. 48th St., New York, N. Y. Espey Mig. Co., Inc., 528 E. 72nd St., New York, N. V.

Feiler Engineering Co., 945 W. George St., Chi-

cago 14, 111. Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. Heath Co., Benton Harbor, Mich. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio Madwirds Silver Co. Inc. 1240 Main St. Hart

McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn. MEASUREMENTS CORP., Boonton, N. J. SEE

MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.
Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
REEVES-HOFFMAN CORP., 321 Cherry St., Car-lisle, Pa. SEE ADV. PG. 104.
Reiner Electronic Co., 152 W. 25th St., New York, N. Y.
Roblin Co., 2070 N. Fair Oaks Ave., Pasadena 3.

Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3,

Sherron Electronics Co., 1201 Flushing Ave.,

American Radio Co., 611 E. Garfield Ave., Glen-

American Rano Co., 617 E. Garnerd Free, Grandale, Calif.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.

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GENERATORS, SIGNAL-vhf

Road, Mineola, N. Y.

ADV. PG. 61.

Y

Calif.

Brooklyn 6, N. Y.

**GEOPHYSICAL APPARATUS** 

cago 14, Ill.

Calif

52

# GETTERS

- CENTURY GEOPHYSICAL CORP., Tulsa 3, Ok-lahoma. SEE ADV. PG. 164. Development Engineering Co., Inc., The, 1818 Ashland St., Houston 8, Texas. Edin Electronics Co., 207 Main St., Worcester,
- EL-TRONICS INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
- Engineering Lab., Inc., 602 E. 4th St., Tulsa 3, Ökla.
- Geophysical Instrument Co., 1820 N. Nash St.,
- Arlington, Va. Globe Phone Mfg. Co., 2 Linden St., Reading, Mass
- KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. Lectronic Research Labs., 1021 Callowhill St.,
- Lectronic Research Labs., 1021 Callownill St., Phila. 23, Pa.
  Miller Corp., Wm., 362 W. Colorado St., Pasa-dena, Calif.
  Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
  Radio Inventions, Inc., 155 Perry St., New York 14, N. Y.
  Padiation Counter Labs Inc., 1844 W. 21 St.,

- Radiation Counter Labs., Inc., 1844 W. 21 St., Chicago 8, Ill. Research Electronics Lab., 2459 Susquehanna
- Rd., Roslyn, Pa. Southwestern Industrial Electronic Co., 2831
- Post Oak Rd., Houston 19, Texas

### 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 Corp., Port Huron, Mich. General Cement Mfg. Co., 919 Taylor Ave., Rock-

ford, Ill. Grafo Colloids Corp., Sharon, Pa. Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, Ill.

# GRIDS AND GRID SUPPORTS

See Tube Parts

#### **GRILLES**—Metal

D-62

Barber Colman Co., Rockford, Ill. Croname, Inc., 3701 Ravenswood Ave., Chicago,

- **I**11. Flock Process Co., Velvetone Div., 3 Quincy St.,
- Norwalk, Conn. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
  KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50.
  Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio
  REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Sperman Metal Specialties, 27 Columbia Place, Brooklyn 2, N. Y.
  WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
  WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.

#### **GRILLES**—Molded Plastic

- American Communications Corp., 306 Broadway, New York 7 N American Hard Rubber Co., 11 Mercer St., New
- American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
  American Insulator Corp., New Freedom, Pa.
  Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill.
  ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109.
  Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
  Insulation Mfg. Co., 11 New York Ave., Brooklyn.

- Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- N. Y.

- N. Y. Kuhn & Jacob Molding & Tool Co., 1200 South-ard St., Trenton, N. J. Norton Labs., Inc., Lockport, N. Y. Searle Aero Industries, Inc., Orange, Calif. Shaw Insulator Co., 160 Coit St., Irvington 11, N. J.
- Stokes Molded Products, Inc., Taylor St. at Web-ster, Trenton, N. J.
- Waterbury Companies, Inc., Waterbury 90, Conn. Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

#### **GRILLES**—Speaker

- American Communications Corp., 306 Broadway,
- American Communication of the American Communication of the Communication of CINAUDAGRAPH SPEAKERS INC., Div. of CINAUDAGRAPH SPEAKERS INC., Div. of Micro Communication of the C Aireon Mfg. Corp., 1401 Fairfax Trafficway, Kansas City, Kansas. SEE ADV. PG. 62. Croname, Inc., 3701 Ravenswood Ave., Chicago,
- III.
- Felsenthal & Sons., Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. Flock Process Co., Velvetone Div., 3 Quincy St.,
- Norwalk, Conn. General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
- Precision Fabricators, Inc., Roosevelt Rd. E., Rochester, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Searle Aero Industries, Inc., Orange, Calif.
  Shaw Insulator Co., 160 Coit St., Irvington 11, N. J.

## GROMMETS

- Aerolite Electronic Hardware Corp., 24 Cliff St., Autonite Liectronic Hardware Corp., 24 Cliff St., Jersey City, N. J. AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. Auburn Mfg. Co., Middleton, Conn. Buggie & Co., H. H., 2141 Madison Ave., Toledo 1 Obio.

- 1, Ohio
- 1, Onio Carby Mfg. Co., Inc., 62 Cottage Place, Water-bury 5, Conn. CENTRALAB DIV. of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.
- Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- Conn. Dzus Fastener Co., Inc., Box 785, Babylon, N. Y. Federal Screw Products, Inc., 224 W. Huron St., Chicago 10, Ill. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill.

- ford, Ill.
  Gordon Specialties Co., 542 S. Dearborn St., Chicago 5, Ill.
  HEYMAN MFG. CO., 300 Michigan Ave., Kenilworth, N. J. SEE ADV. PG. 222.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG, 112.
  Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.
  Mines Equipment Co., 4235 Clayton Ave., St. Louis, Mo.
- Mines Equipment Co., 4235 Clayton Ave., St. Louis, Mo. Mykroy Inc., Arlington Hts. Airport, Arlington Hts., Ill. NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 117.
- Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill. Precision Fabricators, Inc., Roosevelt Rd., East
- Rochester, N. Y. Radiocrafters, 1156 Commonwealth Ave., Boston
- 34, Mass.

Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif. Sheffco Mfg. Co., 116 W. Ruby Ave., Palisades

1949-1950 DIRECTORY of

- Park, N. J.
- Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
- Zo, N. 1.
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
  Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
  United Carr Fastener Corp., Cambridge 42, Mass.
- U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y. Waterbury Companies, Inc., Waterbury 90, Conn. Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

#### **GROMMETS**—Fibre

GUIDES-Coil Wind

64, Mass.

GUIDES, WAVE

HARNESSES-Wire

See Also Cable Assemblies

sories

NJ

Ind.

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Auburn Mfg. Co., Middletown, Conn. Brandywine Fibre Co., 15th & Poplar Sts., Wil-
- Del
- CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Delaware. SEE ADV. PGS. 119-122.
- General Cement Mfg. Co., 919 Taylor Ave., Rockford. Ill.
- NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. SEE ADV. PG. 117. Rogers Corp., Manchester, Conn. Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Alden Products Co., 117 N. Main St., Brockton

Askania Regulator Co., 240 E. Ontario St., Chi-cago 11, 111. CENTRALAB DIV. of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27. Catti Inc. Aurala M. 594 F. Westington Co.

Gatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J. Magnetic Products Corp., The, Norwalk, Conn.

See Microwave Transmission Lines and Acces-

Aircraft-Marine Products, Inc., 1523 N. Fourth St., Harrisburg, Pa. Alden Products Co., 117 No. Main St., Brockton

64, Mass. Alpha Wire Corp., 50 Howard St., New York, N. Y.

N. Y.
American Electric Cable Co., Holyoke, Mass.
American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
American Electronics Corp., 226 N. Fourth St., Columbus, Ohio
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
Belden Mfg. Co., 4649 W. Van Buren St., Chicago 44. Ill.

44, Ill. Boston Insulated Wire & Cable Co., 63 Bay St.,

Boston 25, Mass. Branston Electric Mfg. Co., 61-65 Gill Pl., Buffalo

Buggie & Co., H. H., 2141 Madison Ave., Toledo
 Ohio

Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
 Cords Ltd., 780 Frelinghuysen Ave., Newark 5,

N. J. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, 111. Eastern Specialty Co., Philadelphia 40, Pa. Electric Auto-Lite Co., The, Toledo 1, Ohio Espey Mig. Co., Inc., 528 E. 72nd St., New York, N.Y. Every Wing Corp. 1601 Well St. Et. Wanne for

Essex Wire Corp., 1601 Wall St., Ft. Wayne 6,

Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City 1, N. Y. General Insulated Wire Works, Inc., 69 Gordon

Ave., Providence 5, R. I.

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- Haft & Sons, Inc., 79 Third St., Brooklyn 31, N Y
- Industrial Products Co., Danbury, Conn. Interstate Mfg. Corp., 138 Sussex Ave., Newark
- Interstate Mfg. Corp., 138 Sussex Ave., Newark 4, N. J.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kraft & Kraft, Hicksville, N. Y.
  Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck. Conn.

- tuck, Conn. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Network Mfg. Corp., Bayonne, N. J. Phalo Plastics Corp., 25 Foster St., Worcester 8,
- Mass.
- Mass.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Rostan Corp., 202 E. 44th St., New York 17, N. Y.

- Scintilla-Magneto Div., Bendix Aviation Corp.,
- Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y. Searle Aero Industries, Inc., Orange, Calif. Sittler Corporation, 18 N. Ada St., Chicago 7, Ill. Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.

- Taybern Equipment Co., 120 Greenwich St., New York 6, N. Y. Transmitter Equipment Co., Inc., 345 Hudson St.,
- New York 14, N. Y. Whittaker Cable Corp., Kansas City 16, Mo.

## **HEADPHONES & HEADSETS**

- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. BRUSH DEVELOPMENT CO., 3405 Perkins Ave.,

- BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS 168, 169.
  Cannon Co., C. F., Springwater, N. Y.
  Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
  Flight Research Engineering Corp., P. O. Box 1-F, Richmond 1, Va.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
- Miles Reproducer Co., Inc., 812 Broadway, New

- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Murdock Mfg. Co., Wm. J., Chelsea, Mass.
  National Electronic Mfg. Corp., 35-05 36th St., Long Island City 5, N. Y.
  PERMOFLEX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Taybern Equipment Co., 120 Greenwich St., New York 6, N. Y.
- York 6, N.Y. TELEX INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170.
- Telephonics Corp., 350 West 31st St., New York, N. Y.
- Trium, Inc., 400 W. Lake St., Libertyville, Ill. U. S. Instrument Corp., 409 Broad St., Summit, N. J.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

#### **HEADS**—Recording

- Allied Recording Products Co., 21-09 43rd Ave., Long Island City, N. Y. Astatic Corp., The, Conneaut, Ohio AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169 Duotone Co., 799 Broadway, New York, N. Y. Fairchild Recording Equipment Corp., 154th St. & 7th Ave. Whitestone. N. Y.
- & 7th Ave., Whitestone, N. Y. INDIANA STEEL PRODUCTS CO., 6 N. Michigan Ave., Chicago 2, Ill. SEE ADV. PG. 198.

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- Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich
- Miles Reproducer Co., Inc., 812 Broadway, New
- York 3, N. Y. PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41. RADIO CORP. OF AMERICA, RCA Victor Div.
- Front & Cooper Sts., Camden, N. J. Ste ADV. PGS. 197, Inside Back & Back Covers. Webster Engineering Co., 105 Tenth St., N. E., Cedar Rapids, Iowa Zephyr Products Co., 160 E. 116th St., New
- York 29. N. Y.

### HEARING AID ANALYZERS

- International Instruments, Inc., 331 East St.,
- New Haven 11, Conn. Tech Laboratories, Inc., Bergen & Edsali Blvds., Palisades Park, N. J. Vacolite Co., 3001-3003 N. Henderson, Dallas,
- WESTON ELECTRICAL INSTRUMENT CORP. Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## HEARING AID BATTERIES

- BOND ELECTRIC CORP., Div. of Olin Industries, Inc., New Haven, Conn. SEE ADV. PG. 212. General Dry Batteries, Inc., 13000 Athens Ave., Cleveland, Ohio
- Globe Phone Mfg. Co., 2 Linden St., Reading, Mass
- Mass. MALLORY & CO., INC., P. R., 3029 E. Wash-ington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74. Marathon Battery Co., Wausau, Wis.
- Marathon Battery Co., Wausau, Wis. NATIONAL CARBON CO., INC., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. SEE ADV. PG. 57. Olin Industries, Inc., Electrical Div., New Haven
- 4, Conn. Winchester Repeating Arms Co., Div. Olin Indus-
- tries, Inc., New Haven, Conn.

### **HEARING AID CHOKES**

- BOND ELECTRIC CORP., Div. of Olin Industries, Sunmit, N. J. SEE ADV. PG. 212. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.
- W. 25th St., New York, N. Y. SEE ADV. PG. 200.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
  Magnetic Products Corp. The Norwalk Conp.

- York 57, N. Y. Magnetic Products Corp., The, Norwalk, Conn. Microtone Co., Ford Parkway on the Mississippi, St. Paul 5, Minn. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230. STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV. PG. 207. PG. 207
- SUPER ELECTRIC PRODUCTS CORP., 1057Summit Ave., Jersey City, N. J. SEE ADV. PG. 33.
- NITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. UNITED
- Vacolite Co., 3001-3003 N. Henderson, Dallas, Tex.
- Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

## HEARING AID CONNECTORS

- Alden Products Co., 117 No. Main St., Brockton
- Anden Products Co., 117 No. Main St., Brockton 64, Mass.
   AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG, 167.
   BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.

CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
Eby, Inc., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.
HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark, N. J. SEE ADV. PG. 223.
Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.

## HEARING AID MICROPHONES

- Astatic Corp., The, Conneaut, Ohio AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Globe Phone Mfg. Co., 2 Linden St., Reading,
- Mass
- Miles Reproducer Co., Inc., 812 Broadway, New
- York 3, N. Y. PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230. Tibbetts Industries, Inc., Camden, Maine

Tibbets Industries, Inc., Camden, Me.

Pa

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HEARING AID TRANSFORMERS

## HEARING AID RECEIVERS

- BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169, Commercial Equipment Co., 112 W. 18th St.,
- Kansas City 8, Mo. Globe Phone Mfg. Co., 2 Linden St., Reading, Mass. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Murdock Mfg. Co., Wm. J., Chelsea, Mass. TELEX INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170.

Airdesign, Inc., 241 Fairfield Ave., Upper Darby,

Pa. AUDIO DEVELOPMENT CO., 2833 13th Avenue, S., Minneapolis 7, Minn. SEE ADV. PG. 94. Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, III. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.

PG. 200.
Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
FEDERAL TELEPHONE & RADIO CORP., 100
Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
FREED TRANSFORMER CO., 1736 Weinfield St., Prostens 27 N. V. SEE ADV. C. 52

FREED TRANSFORMER CO., 1736 Weirfield St., Brooklyn 27, N. Y. SEE ADV. PG. 53.
GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39. Ill. SEE ADV. PG. 132.
K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
Magnetic Products Corp., The, Norwalk, Conn.
Microtone Co., Ford Parkway on the Mississippi, St. Paul 5, Minn.

Wiles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. NEW YORK TRANSFORMER CO., INC., Third

NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156.
Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230.
Standard Electrical Products Co., Dayton 3, Ohio
STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV. PG. 207.

PG. 207.
SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV.
PGS. 142, 143.
TELEX, INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170.
Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill.
Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif.

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# **HEARING AID TUBES**

- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
- Vacolite Co., 3001-3003 N. Henderson, Dallas. Texas Wheeler Insulated Wire Co., Inc., Waterbury 91,
- Conn Wilder Mfg. Corp., 3569 Fullerton Ave., Chicago
- 47, Ill.

# HEARING AID TUBES

See Tubes-Hearing Aid

## HEARING AIDS

Allen-Howe Electronics Corp., Peabody, Mass. Commercial Equipment Co., 112 W. 18th St.,

- Kansas City 8, Mo. Globe Phone Mfg. Corp., 2 Linden St., Reading, Mass.
- Hofmann Corp., C. L., 436 Blvd. of The Allies, Pittsburgh 19, Pa. Laurehk Radio Mfg. Co., 3931 Monroe Ave.,
- Wayne, Mich. Maico Co., Inc., 25 North 3rd St., Minneapolis,
- Minn
- Minn. Microtone Co., Ford Parkway on the Mississippi, St. Paul 5, Minn. Modern Hearing Aids Laboratory, The, 2076 Kingsway, Vancouver, Canada Myers & Sons, E. A., Radioear Bldg., Beverly Rd., Pittsburgh 16, Pa.
- Paravox, Inc., 2056 East 4th St., Cleveland 15,
- Ohio
- Schulmerich Electronics, Inc., Sellersville, Pa. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Sonotone Corp., P. O. Box 200, Saw Mill River Road, Elmsford, N. Y.
- Taybern Equipment Co., 120 Greenwich St., New
- York 6, N. Y. **TELEX**, INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170. Trinnm Inc., 400 W. Lake St., Libertyville, Ill. Vacolite Co., 3001-3003 N. Henderson, Dallas,
- Texas Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y. Zenith Radio Corp., 6001 Dickens Ave., Chicago 39, Ill.
- HEATING, ELECTRONIC-Accessories and Associated Equipment
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y.

- York 19, N. Y. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Girdler Corp., Thermex Div., 224 E. Broadway, Louisville 1, Ky. Induction Heating Corp., 181 Wythe Ave., Brook-lyn 11, N. Y. Lapp Insulator Co. Inc. 31 Gilbert St. Lo Boy
- Lapp Insulator Co., Inc., 31 Gilbert St., Le Roy, N. Y.
- La Rose & Associates, W. T., 646 Second Ave., Trov. N. Y.
- Lepel High Frequency Labs., Inc., 39 West 6th St., New York 23, N. Y. MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79. Minneapolis-Honeywell Regulator Co., 2753 4th Ave. S. Minneapolis Minn.

- Minneapolis-Honeywell Regulator Co., 2753 4th Ave., S. Minneapolis, Minn.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Searle Aero Industries, Inc., Orange, Calif.
  Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  SUPERIOR ELECTRIC CO., THE, 83 Laurel St., Bristol, Conn. SEE ADV. PGS. 142, 143.
  Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.
- TITEFLEX, INC., 500 Frelinghuyser Newark 5, N. J. SEE ADV. PG. 231. Frelinghuysen Ave.,

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- United Insulator Co., Ltd., Tolworth-Surbiton-
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- R. A., 630 N. Wisner Ave., Park Whiteman, Ridge, Ill.

# HEATING, ELECTRONIC-Dielectric

- Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 26, Calif. Allis-Chalmers Mfg. Co., Milwaukee 1, Wis. American Radio Co., 611 E. Garfield Ave., Glen-
- Calif.
- BARKER & WILLIAMSON, 235 Fairfield Ave.,
- Upper Darby, Pa. SEE ADV. PG. 39. CHATHAM ELECTRONICS CORP., 475 Washing-ton St., Nwark 2, N. J. SEE ADV. PG. 28. Electric Eye Equipment Co., 16 W. Fairchild St.,

- Electric Eye Equipment Co., 16 W. Fairchild St., Danville, III.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Girdler Corp., Thermex Div., 224 E. Broadway, Louisville 1, Ky.
  Induction Heating Corp., 181 Wythe Ave., Brook-lyn 11, N. Y.
  Inductive Equipment Co., Gettysburg, Pa.
  La Rose & Associates, W. T., 646 Second Ave., Ave., Troy, N. Y.
  Lepel High Frequency Labs., Inc., 39 West 6th St., New York 23, N. Y.
  Lyman Electronic Corp., 12 Cass St., Springfield, Mass. Mass
- Molded Insulation Co., Aircraft Control Div., 335

- Molded Insulation Co., Aircraft Control Div., 335 Price St., Phila., Pa.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  "S" CORRUGATED QUENCHED GAP CO., Sci-entific Electric Div., 107 Monroe St., Garfield, N. J. SEE ADV. PG. 161.
  Searle Aero Industries, Inc., Orange, Calif.
- Searle Aero Industries, Inc., Orange, Calif. Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J. Spectrum Mfg. Co., 540 N. 63rd St., Phila. 31,
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Thermionic Engineering Corp., Pompton Plains,
- NJ. Thermo Labs., Inc., 355 W. 26th St., New York 1. N. Y.
- Weltronic Co., 19500 West 8 Mile Rd., Detroit 19 Mich
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### HEATING, ELECTRONIC-Induction

- Ajax Electrothermic Corp., Ajax Park, Trenton, N. J.
- N. J.
  Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.
  CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
  Dormitzer Electric & Mfg. Corp., 782 Commonwealth Ave., Boston 15, Mass.
  Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y.
  Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
  Electric Furnace Co. Salem, Ohio
  GENERAL ELECTRIC CO., Schenectady 5, N. Y.
  SEE ADV. PGS. 5-18.
  Induction Heating Corp., 181 Wythe Ave., Brook-

- Induction Heating Corp., 181 Wythe Ave., Brook-
- lyn 11, N. Y. Inductive Equipment Co., Gettysburg, Pa. Lepel High Frequency Labs., Inc., 39 West 6th St., New York 23, N. Y.

  - Lyman Electronic Corp., 12 Cass St., Springfield, Mass
- Mass. Ohio Crankshaft Co., Tocco Div., 3800 Harvard Ave., Cleveland 1, Ohio RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.

"S" CORRUGATED QUENCHED GAP CO., Scientific Electric Div., 107 Monroe St., Garfield, N. J. SEE ADV. PG. 161.

1949-1950 DIRECTORY of

- N. J. SEE ADV. FG. 101. Searle Aero Industries, Inc., Orange, Calif. Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J. Sheboygan X.Ray Co., 1135 Indiana St., Sheboy-gan, Wis.
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Weltronic Co., 19500 West 8 Mile Rd., Detroit Mich 10
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

### HEMOGLOBINOMETER-Electronic

- Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y. Fisher Scientific Co., 717 Forbes St., Pittsburgh
- 19 Pa
- Ripley Co., Inc., P. O. Box 31, Middletown, Conn.

## HOLDERS, CRYSTAL

- Alden Products Co., 117 No. Main St., Brockton
- 64, Mass.
   BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91.
   Breon Labs., 1520 Evergreen Rd., Williamsport,
- Pa Buggie & Co., H. H., 2141 Madison Ave., Toledo
- 1, Ohio Burnett Radio Lab., Wm. W. L., 4814 Idaho St.,

- Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y. Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.

Island City, N. Y. Gasket Engineering Co., 2440 Charlotte St., Kan-sas City 8, Mo. General Ceramics & Steatite Corp., Keasbey, N. J. HERMETIC SEAL PRODUCTS CO., 29.37 So. 6th St., Newark, N. J. SEE ADV. PG. 223. Hollister Crystal Co., Boulder, Colo. Howard Mfg. Co., 1401 S. Main St., Council Bluffs, Iowa Industrial Products Co., Danbury, Conn. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.

Knights Co., James, 131 S. Wells St., Sandwich,

Miller, August E., 9226 Hudson Blvd., North Bergen, N. J. Multi-Products Tool Co., 123 Sussex Ave., New-

Ark 4, N. J. Mykroy Inc., Arlington Heights Airport, Arlington Heights, Ill.

Heights, 111. Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y. Petersen Radio Co., Inc., 2800 W. Broadway, Council Bluffs, Iowa

Precision Piezo Service, 427 Mayflower St., Baton

Precision Piezo Service, 427 Mayhover S., Baton Rouge, La.
Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y.
Radio Specialty Mfg. Co., 2023 S. E. 6 Ave., Portland 14, Oregon
Scientific Radio Prods. Co., 738 W. Broadway, Council Bluffs, Iowa
Scientific Redio Service, 4301 Sheridan St. Uni-

Scientific Radio Service, 4301 Sheridan St., Uni-versity Park, Md. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

Standard Crystal Co., 321 East Gregory, Kansas City 5, Mo.

Standard Piezo Co., 127 Cedar St., Carlisle, Pa.

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STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.

Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

# HOODS---Viewing

Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.

# HORNS-Speaker Projector

- Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y.
- Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y. Castlewood Mfg. Co., 12th & Burnett Sts., Louis-
- Castlewood wile, Co., 12th & Burnett Sts., Louisville, Ky.
  Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y.
  Dilks Co., Seymour, Conn.
  Hawley Products Co., St. Charles, Ill.
  Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38 Ill.

- Jensen Mig. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
  Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
  Klipsch & Associates, Hope, Arkansas
  Langevin Mig. Corp., 37 W. 65th St., New York 23, N. Y.

- 25, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
- Rauland-Borg Corp., 4245 N. Knox Ave., Chicago
- 41. Ill.
- 41, 111. SOS Cinema Supply Corp., 602 W. 52 St., New York 19, N. Y. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
- Stromberg-Carlson Co., Rochester, N. Y.

Teiner Engineering Corp., 115 Madison St., Mal-den 48, Mass.

- University Loudspeakers Inc., 80 S. Kensico Ave., White Plains, N. Y.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

# HOUSINGS-Antenna

- Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J.
- Carron M'g. Co., 415 S. Aberdeen St., Chicago, Ill. INSULINE CORP. OF AMERICA 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- Racon Electric Co., 52 E. 19th St., New York 3, N Y

Skydyne Inc., River Rd., Port Jervis, N. Y.

# HOUSINGS-Automobile Radio

- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
- Hawley Products Co., St. Charles, Ill. Insulation Mfg. Co., 11 New York Ave., Brooklyn,

#### **HOUSINGS**—Instrument

- ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- BOONTON MOLDING CO., Boonton, N. J. SEE ADV. PG. 61. Castlewood Mfg. Co., 12th & Burnett Sts., Louis-
- ville, Ky.
- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
- Eclipse Mfg. Co., Inc., 294 E. 137th St., New York 54. N. Y.
- Falstrom Co., 44 Falstrom Court, Passaic. N. J. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
- Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- INSULINE CORP. OF AMERICA, 86-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.

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- KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50.
   Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio
   MARION ELECTRICAL INSTRUMENT CO., Man-chester, N. H. SEE ADV. PG. 79.
   Sanders Bros. Mfg. Co., 409 W. Main St., Ottawa, III
- III.

- III.
  Stamford Metal Specialty Co., Inc., 429 W. Broadway, New York 12, N. Y.
  WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
  Waterbury Companies, Inc., Waterbury 90, Conn.
  WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.
  Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

# HOUSINGS-Public Address System

- American Communications Corp., 306 Broadway, New York 7, N. Y. Atlas Sound Corp., 1443 39th St., Brooklyn 18,
- N. Y.
- Bogen Co., David, 663 Broadway, New York 12, N. Y.
- Castlewood Mfg. Co., 12th & Burnett Sts., Louis-
- ville, Ky. Catalin Corp. of America, 1 Park Ave., New York 16, N. Y. Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Burbank, Calif.
- Hawley Products Co., St. Charles, Ill. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- 80.
  KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50.
  Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
  Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
  Measurement Engineering Ltd., Arnprior, On-tario Canada
- tario Canada
- Racon Electric Co., 52 E. 19th St., New York

- Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Simpson Mig. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
  Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
  Stephens Mig. Corp., 8538 Warner Drive Cul-ver City, Calif.
  WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
  WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.

## HOUSINGS-Speaker

- Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y. American Communications Corp., 306 Broadway, New York 7. W. W.
- American Communications Corp., 306 Broadway, New York 7, N. Y. ART-LLOYD METAL PRODS., CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- PG. 174. Atlas Sound Corp., 1443 39th St., Brooklyn 18,

- Aflas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
  BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
  Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
  Colgate Mfg. Corp., Lindenhurst, L. I., N. Y.
  Commercial Radio Sound Corp., 575 Lexing-ton Ave., New York 22, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Hawley Products Co., St. Charles, III.
  Heath Co., Benton Harbor, Mich.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.

- Jensen Mfg. Co., 6601 S. Laramie Ave., Chi-cago 38, Ill.
- cago 38, Ill. KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50.

Kling Metal Spinning Co., 174 Centre St., New

- Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
  Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
  NATIONAL CO., INC., 61 Sherman Street, Malden 48, Mass. SEE ADV. PGS. 105-108.
  Oxford Radio Corp., 3911 S. Michigan Ave., Chicago 15, Ill.
  Paul & Beekman Inc., 1801 Cortland St., Phila. 40, Pa.
- 40, Pa.
- Racon Electric Co., 52 E. 19th St., New York
- Racon Electric V. 3, N. Y. Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, Ill. Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, Ill. Searle Aero Industries, Inc., Orange, Calif. Simpson Mfg. Co., Inc., 32-28 49th St., Long Island City 3, N. Y. Stephens Mfg. Corp., 8538 Warner Drive, Cul-vert City, Calif. Teiner Engineering Corp., 115 Madison St., Maldon 48 Mase

- Teiner Engineering Corp., 115 Madison St., Malden 48, Mass.
  University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y.
  WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG, 173.
  WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.

# IGNITION SYSTEMS-Electronic

- Electric Auto-Lite Co., The, Toledo 1, Ohio Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
- Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y.

PRODUCTION ENGINEERING CO., 173 Sar-geant Ave., Clifton, N. J. SEE ADV. PG. 212.

Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV PGS 5.18

GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif. Johnson Co., E. F., Waseca, Minn. Melpar, Inc., 452 Swann Ave., Alexandria, Va. Servo-Tek Products Co., 4 Godwin Ave., Pater-son, N. J.

Wilson & Co., G. C., 2 N. Passaic Ave., Chatham,

O'Connor & Co., John T., West Orange, N. J.

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Conant Labs., 6500 O St., Lincoln 5, Neb. CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV. PG 87

Hamilton Bivo., S. Flainneau, A. O. Shi and PG. 87. Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio Heath Co., Benton Harbor, Mich. Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J. McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 2, Conn.

ford 3, Conn. National Technical Labs., 820 Mission St., South Pasadena, Calif.

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INDICATORS—Automatic Mixture

INDICATORS—Capacitor Leakage Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.

#### IGNITRON

See Tubes

See Machines

N. J.

Control

# IMPREGNATING COMPOUNDS

See Insulating Compounds

IMPREGNATING WAX

IMPREGNATING MACHINES

INDICATORS-Antenna Position

# INDICATORS

Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
Weston Laboratories, Weston 93, Mass.

## INDICATORS—Detonation Indicators & Meters

- Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill. Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52
- 52

## INDICATORS—Density

See Indicators, Specific Gravity

# INDICATORS-Dew Point

Foxboro Co., The, Foxboro, Mass.

# INDICATORS-Dielectric Constant

GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Leeds & Northrup Co., 4970 Stenton Ave.,

Phila, 44, Pa.

# INDICATORS-Film Thickness

- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa. Branson Instruments, Inc., 436 Fairfield Ave., Stamford, Conn. Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md. Rowe Engineering Corp., 2422 N. Pulaski Rd.

- Bethesda 14, Md. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. Therino Labs., Inc., 355 W. 26th St., New York 1, N. Y.
- Weston Laboratories, Weston 93, Mass.

# INDICATORS-Fluid Conductivity

- Brinnell Co., The, Granby, Conn. Brown Instrument Co., Wayne & Roberts Aves., Phila. 44, Pa. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Ripley Co., Inc., P. O. Box 31, Middletown, Conn

- Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.

# INDICATORS-Fluid Flow

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Autocal Co., The, Shelby, Ohio Bailey Meter Co., 1044 Ivanhoe Road, Cleve-land 10, Ohio Brinnell Co., The, Granby, Conn. Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Phila 44. Pa.

- Brown Instrument Co., Wayne & Roberts Aves., Phila. 44, Pa.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Flowmeter Corp. of America, High Falls, N. Y.
  Foxboro Co., The, Foxboro, Mass.
  Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
  Minneapolis-Honeywell Regulator Co., Fourth Ave., S. Minneapolis, Minn.
  Sheffield Corp., The, Dayton 1, Ohio

# INDICATORS-Frequency

D-66

Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

- Crystal Devices Co., Inc., 50 Mill Rd., Free-
- port, N. Y. Heath Co., Benton Harbor, Mich. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
- Phila. 17 Millen Mfg. Co Mass. Co., James, 150 Exchange St.,

Millen Mas. REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104. Sheffield Corp., The, Dayton 1, Ohio

# INDICATORS—Geiger Counter

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. Alpha Laboratories, Box 184, Belmar,
- Alpha Laboratories, Box 184, Beimar, N. J. Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Berkeley Scientific Co., 6th & Nevin, Rich-mond Calif
- Berkeley Scien mond, Calif.
- mond, Calif.
  Distillation Prods., Inc., Vacuum Equip. Div., 755 Ridge Rd. W., Rochester 13, N. Y.
  Dormitzer Electric & Mfg. Corp., 782 Com-monwealth Ave., Boston 15, Mass.
  Electronic Products Co., 111 E. 3rd St., Mt.
  Vernon, N. Y.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Geophysical Instrument Co., 1820 N. Nash St., Arlington, Va.

- Arlington, Va. National Technical Lab., 820 Mission St., South

- Arington, Va.
  National Technical Lab., 820 Mission St., South Pasadena, Calif.
  North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
  Nuclear Development Lab., Box 7601, Kansas City, Mo.
  Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
  Omaha Scientific Supply Co., 3623 Lake St., Omaha 4, Neb.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
  Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
  Radiation Counter Labs., Inc., 1844 W. 21 St., Chicago 8, Ill.
  Radioactive Products, Inc., 3201 E. Woodridge St., Detroit 7, Mich.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

- 5th Ave., New York 18, N. Y. SEE ADV. PGS.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 240-244

# INDICATORS—Hardness

67.

- Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
- Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Rubicon Co., 3751 Ridge Ave., Phila., Pa.

# INDICATORS-Humidity

- American Instrument Co., 8030 Georgia Ave., American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Bristol Co., The, Waterbury 91, Conn.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Foxboro Co., The, Foxboro, Mass.
  Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
  Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
  Minneapolis-Honeywell Regulator Co., 2753

- Phila. 44, Pa.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
  Serdex, Inc., 91 Cambridge St., Boston, Mass.
  Weksler Thermometer Co., 52 W. Houston St., New York 12, N. Y.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## INDICATORS-Illumination

Acme Telectronix Div. of NEA Service Inc., West Third & Lakeside, Cleveland 13, Ohio Kirkland Co., H. R., The, 8 King St., Morris-town, N. J.

1949-1950 DIRECTORY of

# INDICATORS-Liquid Level

- INDICATORS—Liquid Level
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Autocall Co., The, Shelby, Ohio
  Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa.
  Bristol Co., The, Waterbury 91, Conn.
  Brown Instrument Co., Wayne & Roberts Ave., Phila. 44, Pa.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Foxboro Co., The, Foxboro, Mass.
  Leupold & Stevens Instruments, 4445 N. E. Glisan St., Portland 13, Ore.
  Lumenite Electric Co., 407 S. Dearborn St.,

- Lumenite Electric Co., 407 S. Dearborn St.,
- Chicago, Ill. Mosher Electronic Controls, 130 W. 42nd St., New York, N. Y. Photoswitch, Inc., 77 Broadway, Cambridge 42,
- Mass. Ripley Co., Inc., P. O. Box 31, Middletown, Conn.

#### INDICATORS-Materials Thickness

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Branson Instruments, Inc., 436 Fairfield Ave.,

INDICATORS-Moisture

- Branson Instruments, Inc., 436 Fairfield Ave., Stamford, Conn.
  Brinnell Co., The, Granby, Conn.
  Foxboro Co., The, Foxboro, Mass.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif.
  Pratt-Whitney Div., Niles-Bement-Pond Co., West Hartford 1, Conn.
  Standard Electronics Research Corp. 2 Fast Full Hartiord 1, Conn. Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. Triplett & Barton, Inc., 831 N. Lake St., Bur-bank, Calif.

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
Barber Colman Co., Rockford, Ill.
Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y.
Fielden Electronics, Inc., 1171 New York Ave., Huntington Station, N. Y.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
Illinois Testing Labs., 420 N. LaSalle St., Chi-cago 10, Ill.
MEASUREMENTS CORP., Boonton, N. J. SEE

MEASUREMENTS CORP., Boonton, N. J. SEE

ADV. PG. 110. Moisture Register Co., P. O. Drawer No. 910,

Moisture Register Co., P. O. Drawer No. 910, Alhambra, Calif.
Network Mfg. Corp., Bayonne, N. J.
O'Connor & Co., John T., West Orange, N. J.
Paterson Co., C. J., 3947 Broadway, Kansas City, Mo.
Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
Serdex, Inc., 91 Cambridge St., Boston, Mass.
Tagňabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

INDICATORS—Nuclear Radiation

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Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y. ATOMIC INSTRUMENT CO., 160 Charles St., Boston 64, Mass. SEE ADV. PG. 200. Berkeley Scientific Co., 6th & Nevin, Rich-mond, Calif.

American Instrument Co., 8030 Georgia Ave.,

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Geophysical Instrument Co., 1820 N. Nash St.,

- Arlington, Va. National Technical Lab., 820 Mission St., S.
- Pasadena, Calif.
- North American Philips Co., 100 E. 42nd St., New York 17, N. Y. Nuclear Development Lab., Box 7601, Kansas
- Nuclear Development Lab., Box 7601, Kansas City, Mo.
  Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Radioactive Products, Inc., 3201 E. Woodbridge Ave., Detroit 7, Mich.
  Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  Television Equipment Corp., 238 William St.,

- Television Equipment Corp., 238 William St., New York 7, N. Y.

# INDICATORS—Ocean Depth

- Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass.
  Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, North Hollywood, Calif.
  Edo Corp., College Point, Long Island, N. Y.
  Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.
  National-Simplex-Bludworth, Inc., Bludworth Marine Div., 92 Gold St., New York 7, N. Y.
  Submarine Signal Div., Raytheon Mfg. Co., Waltham, Mass.

## INDICATORS—Oxygen

Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.

## INDICATORS-PH

ATOMIC INSTRUMENT CO., 160 Charles St.,

- Boston, Mass. SEE ADV. PG. 200. Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves.,
- Phila. 44, Pa. Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
- Elm Laboratories, 18 South Broadway, Dobbs
- Ferry, N. Y. Foxboro Co., The, Foxboro, Mass. La Motte Chemical Products Co., Towson 4,
- Baltimore, Md. Lee's & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Minnesota Electronics Corp., 97 E. Fifth St.,

- Ninnesota Liectronics Corp., 97 E. Fifth St., St. Paul 1, Minn. National Technical Lab., 820 Mission St., S. Pasadena, Calif. Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
- Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila. 44, Pa.

# INDICATORS-Photographic Exposure

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
- West Third & Lakeside, Cleveland 13, Ohio DeJur-Amsco Corp., Northern Blvd., at 45th St., Long Island City 1, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

## INDICATORS—Positioning

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterbore N. J.
- Eclipse-Pioneer Di Teterboro, N. J.

- GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. **ROBINETTE CO., W. C.,** 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204. Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

# INDICATORS—Power Level

- Brinnell Co., The, Granby, Conn. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Daven Co., 191 Central Ave., Newark 4, N. J. Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland, Ohio International Instruments, Inc., 331 East St., New Haven 11. Conn.
- New Haven 11, Conn. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.

- 20, Ind.
  Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, III.
  Shallcross Mfg. Co., 10 Jackson Ave., Coling-dale, Pa.
  Sound Apparatus Co., Sterling, N. J.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52 59
- Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio WESTON ELECTRICAL INSTRUMENT CORP.
- 618 Freinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67
- 67

# INDICATORS-Pressure

- Autocall Co., The, Shelby, Ohio Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila 44, Pa. Bendix Aviation Corp., Pacific Div., 11600
- Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif. Bristol Co., The, Waterbury 91, Conn. Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles 15, Calif. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
- Foxboro Co., The, Foxboro, Mass. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Gorrell & Gorrell, Haworth,
- Gorrell & Gorrell, Haworth, N. J. INDUSTRIAL ELECTRONICS, INC., 2457 Wood-
- ward Ave., Detroit 1, Mich. SEE ADV. PG. 226. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Manning, Maxwell & Moore, Inc., 11 Elias St.,
- Bridgeport 2, Conn. Minneapolis-Honeywell Regulator
  - INDICATORS—Strain INDICATORS—Strain
    Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass.
    Anderson, Arthur R., 110 Woodbury Ave., Springdale, Conn.
    Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
    Brinnell Co., The, Granby, Conn.
    Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
    Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J.
    Foxboro Co., The, Foxboro, Mass.
    Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
    Starrett Co., L. S., 165 Crescent St., Athol, Mass.
- Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn. Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif. Sheffield Corp., The, Dayton 1, Ohio Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey Pkway., Chicago 14, III. Technitrol Engineering Co., 3212 Market St., Phila., Pa.
- Phila., Pa.
   TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.
   Wallace & Tiernan Products, Inc., Belleville 9,

# INDICATORS—Recording Engine

- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. Commercial Research Labs. Inc., 20 Bartlett
- Ave., Detroit 3, Mich. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Electro Products Labs., Inc., 549 W. Randolph
- St., Chicago 6, Ill.

# INDICATORS-Shorted Turn

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Conant Labs., 6500 O St., Lincoln 5, Neb. Kartron Inc., Box 472, Huntington Beach,
- Rubicon Co., 8751 Ridge Ave., Phila., Pa.

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- INDICATORS—Smoke & Combustion
- Bailey Meter Co., 1044 Ivanhoe Road, Cleve-Bailey Meter Co., 1044 Ivannoe Roau, Creve-land 10, Ohio
  Bristol Co., The, Waterbury 91, Conn.
  Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  Combustion Control Corp., 77 Broadway, Cam-bridge 42, Mass.
  Electronic Control Corp., 1573 Forest St., De-troit Mich

- troit, Mich. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J.
- Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
- Photovolt Corp., 95 Madison Ave., New York 16, N. Y. Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn.

# INDICATORS-Solar Radiation

- Eppley Lab. Inc., Newport, R. I.
- Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn. VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227.

# INDICATORS-Sound Level

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Mass.

- Acme Telectronix Div. of NEA Service, Inc.,
- West Third & Lakeside, Cleveland 13, Ohio Cinema Engineering Co., 1510 W. Verdugo Ave., Chiema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Collins Audio Products Co., P. O. Box 368, Westfield, N. J. Daven Co., 191 Central Ave., Newark 4, N. J. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Meters, Inc., 915 Westfield Blvd., Indianapolis 20 Ind

RADIO CORP. OF AMERICA, RCA Victor Div.

Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. Sound Apparatus Co., Stirling, N. J. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

Brown Instrument Co., Wayne & Roberts Aves., Phila. 44, Pa. Engineering Lab., Inc., 602 E. 4th St., Tulsa 3,

Okia. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S. Minneapolis Minn

Mass. Statham Laboratories, Inc., 9328 Santa Monica Blvd., Beverly Hills, Calif. Televiso Products, Inc., 7466 W. Irving Pk. Rd., Chicago 34, Ill. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.

Airlectron, P. O. Box 151, Caldwell, N. J. Alfax Paper & Engineering Co., 40 River-side Ave., Brockton 27 E. B., Mass. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio

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INDICATORS—Telemetering

Fourth Ave., S., Minneapolis, Minn.

INDICATORS—Specific Gravity

# INDICATORS

1949-1950 DIRECTORY of

- Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
  Bristol Co., The, Waterbury 91, Conn.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.
  Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
  Leupold & Stevens Instruments, 4445 N. E. Glisan St., Portland 13, Ore.
  Melpar, Inc., 452 Swann Ave., Alexandria, Va.
  PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213. 213.
- 213. Serdex, Inc., 91 Cambridge St., Boston, Mass. Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N. Y. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Statham Laboratories, Inc., 9328 Santa Monica Blvd., Beverly Hills, Calif. Stevens-Arnold Co., 22 Elkins St., S. Boston, Mass

- Mass.
- Mass. TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.

# INDICATORS-Temperature

- INDICATORS—I emperature
  Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass.
  Assembly Products, Inc., Chagrin Falls 6, Ohio Autocall Co., The, Shelby, Ohio
  Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa.
  Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio
  Bristol Co., The, Waterbury 91, Conn.
  Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
  Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  Cooper Co., Clark 379 N. Market St., Palmyra, N. J.
  Dedur-Amsco Corp., Northern Blvd. at 45th

- N. J. DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y. Development Engineering Co., Inc., The, 1818 Ashland St., Houston 8, Texas Dillon & Co., W. C., 5410 W. Harrison St., Chicago 44, Ill. Eastern Specilaty Co., Philadelphia 40, Pa. Edison Inc., Thomas A., Instrument Div., West Orange, N. J. Electric AutoLite Co. The Toledo 1 Obio
- Orange, N. J. Electric Auto-Lite Co., The, Toledo 1, Ohio ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- 181.
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  Elematic Equipment Corp., 6046 S. Wentworth Ave., Chicago 21, Ill.
  Foxboro Co., The, Foxboro, Mass.
  Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
  General Controls Co., Glendale 1, Calif.
  Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.
  J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.
  Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich.

- Mich. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Lewis Engineering Co., 52 Rubber Ave., Nauga-
- tuck, Conn. Manning, Maxwell & Moore, Inc., 11 Elias St.,
- Bridgeport 2, Conn. Measurement Engineering Ltd., Arnprior, On-
- tario, Canada eters, Inc., 915 Westfield Blvd., Indianapolis
- Meters, In 20, Ind.
- 20, Ind.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
  Nurnberg Thermometer Co., Inc., 4 Corey St., Boston 32, Mass.
  Osgood Engineering Co., 110 Pleasant St., Malden, Mass.
  Philadelphia Thermometer Co., 100 Pleasant St., Malden,
- Philadelphia Thermometer Co., 4401 N. Sixth St.,

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Philadelphia, Pa. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Serdex, Inc., 91 Cambridge St., Boston, Mass. Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.

- Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
  TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.
  Weksler Thermometer Corp., 52 W. Houston St., New York, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- WESTON ELECTRICAL INSTRUMENT CORP.
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill. Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

## INDICATORS—Timing

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Bristol Co., The, Waterbury 91, Conn.
  CRAMER CO., INC., R. W., Centerbrook, Conn.
  SEE ADV. PG. 99.
  Crystal Devices Co., Inc., 50 Mill Rd., Freeport, N. Y.
  Gorrell & Gorrell, Haworth, N. J.

- N. Y. Gorrell & Gorrell, Haworth, N. J. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Ripley Co., Inc., P. O. Box 31, Middletown, Conp.

- Conn. Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y.

### INDICATORS—Torque

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Crystal Devices Co., Inc., 50 Mill Rd., Freeport, N. Y.
- N. 1.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  Sheffield Corp., The, Dayton 1, Ohio

#### INDICATORS—Turbidity

- Airlectron, P. O. Box 151, Caldwell, N. J. American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
- Silver Spring, Md. Baird Associates, Inc., 33 University Rd., Cam-bridge 38, Mass. Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. J. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. National Technical Lab., 820 Mission St., S.

- Pasadena, Calif. Photovolt Corp., 95 Madison Ave., New York 16, N. Y. Sheffield Corp., The, Dayton 1, Ohio

#### INDICATORS-Vocuum

- Bristol Co., The, Waterbury 91, Conn. Central Scientific Co., 1700 Irving Park Road, Chicago 13, Ill. CONTINENTAL ELECTRIC CO., Geneva, Ill.
- Chicago 13, 111. CONTINENTAL ELECTRIC CO., Geneva, Ill. SEE ADV. PG. 176. Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y. EISLER ENGINEERING CO., INC., 740 S. 13th
- EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. Fredericks Co., Geo. E., Bethayres, Pa. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hastings Instrument Co., Box 1275, Hampton, Va.

- HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209.
- 209. Minneapolis-Honeywell Regulator Co., 2753<sup>.</sup> Fourth Ave., S., Minneapolis, Minn. National Research Corp., 70 Memorial Drive, Cambridge 42, Mass. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Sheffield Corp., The, Dayton 1, Ohio

Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

240-244. Wallace & Tiernan Products Inc., Belleville 9, N. J.

Weksler Thermometer Co., 52 W. Houston St., New York 12, N. Y.

#### INDICATORS—Volume

- Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Collins Audio Products Co., P. O. Box 368, West-
- Comis Ada Products Co., 1. O. Dox obs, West-field, N. J.
   Daven Co., 191 Central Ave., Newark 4, N. J.
   Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
   Electronic Development Co., 4420 N. 23rd St., Omaba 11 Nabraska
- Omaha 11, Nebraska Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. J. Feiler Engrg. Co., 945 W. George St., Chicago 14 JU
- Feiler Engrg. Co., 945 W. George St., Unicago 14, III.
  Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland, Ohio
  Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Shallcross Mfg. Co., 10 Jackson Ave., Colling-dale, Pa.

Triplett Electrical Instrument Co., 286 Harmon St., Bluffton, Ohio WESTON ELECTRICAL INSTRUMENT CORP.,

618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

Chatillon & Sons, John, 93 Cliff St., New York

dale, Pa. Sheffield Corp., The, Dayton 1, Ohio

INDICATORS—Weight

INDUCTION HEATING

See Heating, Induction

ILLUMINATION CONTROLS See Controls, Illumination

See Chokes and Coils, Choke INFRA-RED DRYING OVENS

**INSPECTION EQUIPMENT**—Lighting Art Specialty Co., 3245 W. Lake St., Chicago,

**INSTRUMENT PARTS**—Precision

Larrimore Sales Corp., P. O. Box 1234, St. Larrinnore Sales Corp., P. O. Box 1234, St. Louis 1, Mo.
 Sheffield Corp., The, Dayton 1, Ohio
 SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232.
Boehme Inc., H. O., 915 Broadway, New York, New York,

N. Y. Development Engineering Co., Inc., The, 1818 Ashland St., Houston 8, Texas DoAll Co., 254 No. Laurel Ave., Des Plaines,

III.
Eastern Specialty Co., Philadelphia 40, Pa.
Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
Federal Tool & Mfg. Co., 3600 Alabama Ave., Co. Louis Book Mignetics 16 Min.

St. Louis Park, Minneapolis 16, Minn.

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7, N. Y.

INDUCTORS

See Ovens

III.

Felsenthal & Sons Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

ELECTRONIC and ALLIED PRODUCTS

- 209.
- Heller Co., Gerald K., 1540 Ridgely St., Balti-more 30, Md. Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio
- Instrument Development & Mfg. Corp., 3018 E. Foothill Blvd., Pasadena 8, Calif. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- 80. La Magna Mfg. Co., Inc., East Rutherford, N. J. MAKEPEACE CO., D. E., Attleboro, Mass. SEE ADV. PG. 84.
- Multi-Products Tool Co., 123 Sussex Ave., New-ark 4, N. J.
- New Hampshire Ball Bearings, 5 Main St., Peter-
- New York 13, N. H.
   Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
   Osgood Engineering Co., 110 Pleasant St., Malden, Marc.
- Mass.
- Mass. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63. Precision Tube Co., Inc., 3828 Terrace St., Philadelphia 28, Pa. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Sheffield Corp., The, Dayton 1, Ohio STAR EXPANSION PRODUCTS CO., 147-149 Cedar St., New York 6, N. Y. SEE ADV. PG. 96.

- 96
- 90. Technology Instrument Corp., 1058 Main St., Waltham, Mass. Volkert Metal Stampings, Inc., John, 141 Spencer St., Brooklyn 5, N. Y. WESTON ELECTRICAL INSTRUMENT CORP.,
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. Winslow Co., Inc., The, 9 Liberty St., Newark 5,

# INSTRUMENTS-Electronic Musical

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. Conn Ltd., C. G., Electronics Div., Elkhart, Ind.
- Conn Ltd., C. G., Electronics Div., Elkhart, Ind. PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130. Valco Mfg. Co., 4700 W. Walton St., Chicago 51, 111.
- Wurlitzer Co., Rudolph, The, N. Tonawanda,

## INSTRUMENTS—Graphic Recording

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Airborne Instruments Lab., Inc., 160 Old Coun-try Rd., Mineola, N. Y. Alden Products Co., 117 No. Main St., Brock-

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass.
  Associated Research, Inc., 3758 W. Belmont, Chicago 18, Ill.
  Bristol Co., The, Waterbury 91, Conn.
  BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
  Eclipse-Pioneer Div., Bendix Aviation Corp. Teclipse-Pioneer Div.

- Eclipse-Pioneer Div., Bendix Aviation Corp., Te-terboro, N. J.
- Edin Electronics Co., 207 Main St., Worcester, Mass.
- Mass. Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y. Electronic Associates, Inc., Long Branch, N. J. Esterline-Angus Co., Inc., P. O. Box 596, In-disconcilie. Incl.
- Esterine-Angus Co., Inc., P. O. Box 596, Indiaapolis, Ind.
  Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
  Foxboro Co., The, Foxboro, Mass.
  Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.
  Gorrell & Gorrell, Haworth, N. J.
  Louroid & Steiners. Instruments 4445 N. F.

- Glisan St., Portland 13, Ore. Minneapolis Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

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- RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222.
  SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.
  Servo-Tek Products Co., 4 Godwin Ave., Paterson, N. J.
- Sound Apparatus Co., Stirling, N. J.
- Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
- Technical Materiel Corp., The, 453 W. 47th St.,
- New York 19, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

### INSTRUMENTS—Nuclear

- Anton Electronic Laboratories, Inc., 1226-1238
- Flushing Ave., Brooklyn 6, N. Y. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
- Berkeley Scientific Co., 6th & Nevin, Richmond, Calif.
- Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. National Technical Lab., 820 Mission St., S. Pasadana, Calif
- Pasadena, Calif.

- Pasadena, Calif.
  Nuclear Development Lab., Box 7601, Kansas City, Mo.
  Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
  Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill.
  RADIO CORP. OF AMERICA, R C A Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Radioactive Products, Inc., 3201 E. Woodbridge
- Adv. PGS. 197, Inside Back as Back Covers. Radioactive Products, Inc., 3201 E. Woodbridge St., Detroit 7, Mich. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS, 240-244.
- Aracerlab, Inc., 55 Oliver St., Boston 10, Mass.
   VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227.

#### INSTRUMENTS-Panel

- ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- Assembly Products, Inc., Chagrin Falls 6, Ohio Associated Research Inc., 3758 W. Belmont, Chi-
- cago 18, Ill.
- Bristol Co., The, Waterbury 91, Conn. Burlington Instrument Co., Burlington, Iowa Cole Instrument Co., 1320 S. Grand Ave., Los

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y. Electric Design & Mfg. Corp., Burlington, Iowa ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- Falstrom Co., 44 Falstrom Court, Passaic, N. J. FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
- Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck, Conn.
- MARION ELECTRICAL INSTRUMENT CO., Man-chester, N. H. SEE ADV. PG. 79. Meters, Inc., 915 Westfield Blvd., Indianapolis 20,
- Ind
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SF ADV. PGS. 197, Inside Back & Back Covers. Roller-Smith, Bethlehem, Pa. SEE
- Roller-Smith, Bernlehem, Fa.
  Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
  SHURITE METERS, 61 Hamilton St., New Haven 8, Conn. SEE ADV. PG. 225.
  Simpson Electric Co., 5218 W. Kinzie St., Chi-core 44, III
- cago 44, Ill. Triplett Electrical Instrument Co., 286 Harmon
- Rd., Bluffton, Ohio

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

**INSULATING COMPOUNDS** 

WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

# INSTRUMENTS-Ultrasonic

Branson Instruments, Inc., 436 Fairfield Ave.,

- Stanford, Con. BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169. Central Scientific Co., 1700 Irving Park Rd., Chi-cago 13, 111.
- Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa. National-Simplex-Bludworth, Inc., Bludworth Ma-
- rine Div., 92 Gold St., New York 7, N. Y. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
- Radio Sonic Corp., 186 Union Ave., New Rochelle,
- Sperry Products, Inc., Danbury, Conn. Triplett & Barton, Inc., 831 N. Lake St., Bur-bank, Calif.

# INSULATING COMPOUNDS

Asphalts

N. Y.

**Coil Dopes** 

PG. 137.

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ark 4, N. J.

Mass

TΤ

- BIWAX CORP., 3445 Howard St., Skokie, Ill. SEE ADV. PG. 206. Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J. Dolph Co., John C., Monmouth Junction, N. J. Esso Standard Oil Co., 15 W. 51st St., New York

- 19, N. Y. Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y. Minerallac Electric Co., 25 N. Peoria St., Chicago,

Murray St., New York 7, N. Y. SEE ADV. PG. 54. Ruberoid Co., The, 500 5th Ave., New York 18,

Sherwin-Williams Co., 101 Prospect Ave., N.W.,

Cleveland 1, Ohio Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y. Trotter & Co., E. T., 594 Johnson Ave., Brook-lyn 6, N. Y.

U. S. Stoneware Co., The, Akron 9, Ohio ZOPHAR MILLS INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. SEE ADV. PG. 167. American Products Mfg. Corp., Oleander & Dublin Sts., New Orleans 18, La. Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J.

Centro Research Laboratories, Inc., Briarcliff Manor, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-

General Cement Mig. Co., 919 Taylor Ave., HOCK-ford, Ill.
GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
Haynes Labs. Inc., C. W., 61 Chandler St., Springfield, Mass.
INSL-X CO., INC., THE, Water St., Ossining, N. Y. SEE ADV. PG. 160.
INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV.

Washington Blvd., Chicago 6, Ill. SEE ADV.

Maas & Waldstein Co., 438 Riverside Ave., New-

Millen Mfg. Co., James, 150 Exchange St., Mal-

den, Mass. SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif. Sherwin-Williams Co., 101 Prospect Ave., N.W., Claudard I. Obia

Cleveland I, Ohio Trotter & Co., E. T., 594 Johnson Ave., Brook-lyn 6, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

ZOPHAR MILLS, INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

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MITCHELL RAND INSULATION CO., INC.,

# INSULATING COMPOUNDS

# 1949-1950 DIRECTORY of

#### Enamel

- Borthig Co., Inc., George Co., P. O. Box 115, East Rutherford, N. J. Centro Research Laboratories, Inc., Briarcliff
- Centro Research Laboratories, Inc., Briarcliff Manor, N. Y.
   GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
   Heresite and Chemical Co., Manitowoc, Wis.
   Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
   INSULATION MANUFACTURERS CORP., 565 W.
   With the Duble Chinese 6. III SEE ADV.
- Washington Blvd., Chicago 6, Ill. SEE ADV.
- PG. 137 Maas & Waldstein Co., 438 Riverside Ave., New-
- Maas & Waldstein Co., 438 Riverside Ave., New-ark 4, N. J. Reilly Tar and Chemical Corp., Merchants Bank Bildg., Indianapolis, Ind. SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111. Sherwin-Williams Co., 101 Prospect Ave., N.W., Clauserd, Obic
- Cleveland, Ohio Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y.

#### Impregnating Compounds

- Acheson Colloids Corp., Port Huron, Mich. Acme Wire Co., New Haven 14, Conn. AMERICAN PHENOLIC CORP., 1830 S. 5th Ave., Chicago 50, 111. SEE ADV. PG. 167. American Products Mig. Corp., Oleander & Dublin Sts., New Orleans 18, La. Bakelite Corp., 30 E. 42nd St., New York 17,

- N. Y. BIWAX CORP., 3445 Howard St., Skokie, Ill. SEE ADV. PG. 206. 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. Cantol Wax Products Co., Bloomington, Ind. Centro Research Laboratories, Inc., Briarcliff Manor N. Y.
- Manor, N. Y. Dolph Co., John C., Monmouth Junction, N. J. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., N. Tonawanda, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. George Co., P. D., 5200 N. 2nd Street, St. Louis,
- Mo. Goodyear Tire & Rubber Co., Inc., Chemical Div.,

- Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio Halowax Prods. Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y. Hamilton Kent Mfg. Co., Kent, Ohio Heresite and Chemical Co., Manitowoc, Wis. INSL-X CO., INC., THE, Water St., Ossining, N. Y. SEE ADV. PG. 160.
  INSULATION MANUFACTURERS CORP., 565 W. Wuchington Blud Chicago 6, III. SEE ADV.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Irvington Varnish & Insulator Co., 10 Argyle
- Terrace, Irvington 11, N. J. Maas & Waldstein Co., 438 Riverside Ave., New-

- Maas & Waltstein Co., 438 Riverside Ave., Reverside Ave., Reversi
- SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111. Sherwin-Williams Co., 101 Prospect Ave., N.W.,
- Cleveland I, Ohio Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y. Stevenson Bros. & Co., 110 Race Street, Phila.
- 6. Pa.
- Sun Oil Co., 1608 Walnut St., Philadelphia 3, Pa. Trotter & Co., E. T., 594 Johnson Ave., Brook-lyn 6, N. Y.
- U. S. Stoneware Co., The, Akron 9, Ohio WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,
- ZOPHAR MILLS INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

# Insulating Varnish

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Acme Wire Co., New Haven 14, Conn. American Products Mfg. Corp., Oleander & Dublin Sts., New Orleans 18, La.

- American Resinous Chemical Co., 103 Foster St.,
- Peabody, Mass. Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
- Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J. Centro Research Laboratories, Inc., Briarcliff
- Manor, N. Y. Communication Products Co., Inc., Broadway &
- Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J. Dolph, John C., Monmouth Junction, N. J. Dow Corning Corp., Midland, Mich. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., N. Tonawanda, N. Y.

- General Cement Mfg. Co., 919 Taylor Ave., Rock-
- General Center Mig. Co., 010 Might Mich. 1004 ford, 111. GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18. George Co., P. D., 5200 N. Second St., St. Louis, Mo.
- Louis, Mo. Heresite & Chemical Co., Manitowoc, Wis. Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y. INSL-X CO., INC., THE, Water St., Ossining, N. Y. SEE ADV. PG. 160. INSULATION MANUFACTURERS CORP., 565 W. We histor Physical Chicage 6 III SEE ADV.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J. Maas & Waldstein Co., 438 Riverside Ave., New-ack 4 N. J.

- Mats & Wandsell Co., 100 Interster Inc., Iten ark 4, N. J. Marblette Corp., 37-21 30th St., Long Island City, N. Y. Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio Wise Jewelator Co. Schengeriddy 1, N. Y.
- Mica Insulator Co., Schenectady 1, N. Y. Millen Mfg. Co., James, 150 Exchange St., Mal-den, Mass.
- den, Mass. MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV.
- PG. 54
- PG. 54.
  SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Sherwin-Williams Co., 101 Prospect Ave., N.W., Claveled 1. Ohio.
- Cleveland 1, Ohio

- Cleveland 1, Onlo
  Standard Varnish Works, 2600 Richmond Terrace, Staten Island 3, N. Y.
  U. S. Stoneware Co., The, Akron 9, Ohio
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### Lacquer

- Lacquer
  Acme Wire Co., New Haven 14, Conn.
  Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio American Products Mig. Corp., Oleander & Dublin Sts., New Orleans 18, La.
  Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J.
  Centro Research Laboratories, Inc., Briarcliff Manor, N. Y.
  Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.
  Dolph Co., John C., Monmouth Junction, N. J.
  Franklin Paint & Varnish Co., Benjamin, 4820 Langdon St., Phila. 24, Pa.
  General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

- General Cement Mig. Co., 919 Taylor Ave., Rockford, Ill.
   GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
   George Co., P. D., 5200 N. 2nd St., St. Louis,
- Mo.

- Mo. Haynes Labs., Inc., C. W., 61 Chandler St., Springfield, Mass. Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y. INSL-X CO., INC., THE, Water St., Ossining, N. Y. SEE ADV. PG. 160. INSULATION MANUFACTURERS CORP., 565 W. Workington Phyloc Chicage 6, UK SEE ADV.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Maas & Waldstein Co., 438 Riverside Ave., New-

- Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J.
  Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio
  Sherwin-Williams Co., 101 Prospect Ave., N.W., Cleveland 1, Ohio
  Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y.
  U. S. Stoneware Co., The, Akron 9, Ohio

# Phenolic Molding Compounds

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

- Borden Co., The, Chemical Div., Durite Plastics, 5000 Summerdale Ave., Phila. 24, Pa. Durez Plastics & Chemicals, Inc., 1921 Walck
- Rd., N. Tonawanda, N. Y. GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
- Heresite & Chemical Co., Manitowoc, Wis. Reilly Tar & Chemical Corp., Merchants Bank
- Bldg., Indianapolis, Ind. Taylor Mfg. Co., 3056 W. Meinecke Ave., Mil-waukee 10, Wisc.
- U. S. Stoneware Co., The, Akron 9, Ohio

#### Pitch

**Protective Sealers** 

- General Cement Mfg. Co., 919 Taylor Ave., Rockford,
- MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV.
- Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind. Ruberoid Co., The, 500 5th Ave., New York 18, N. Y.
- N. Y.
  Sherwin-Williams Co., 101 Prospect Ave., N.W., Cleveland 1, Ohio
  Trotter & Co., E. T., 594 Johnson Ave., Brook-lyn 6, N. Y.
  ZOPHAR MILLS INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

AMERICAN PHENOLIC CORP., 1830 S. 5th Ave., Chicago 50, Ill. SEE ADV. PG. 167. BIWAX CORP., 3445 Howard St., Skokie, Ill. SEE ADV. PG. 206. Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J. Control. Bacagardh Laboratorias. Inc. Briarcliff

Centro Research Laboratories, Inc., Briarcliff

Manor, N. Y. Dow Corning Corp., Midland, Mich. Esso Standard Oil Co., 15 W. 51st St., New York

Esso Standard Oli Co., 15 W. 51st St., New Yolk 19, N. Y.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
George Co., P. D., 5200 N. 2nd Street, St. Louis, Ma.

Mo. Halowax Prods. Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y. Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y. INSL-X CO., INC., THE, Water St., Ossining, N. Y. SEE ADV. PG. 160. INSULATION MANUFACTURERS CORP., 565 W. Washington Blud Chicago 6, III SEE ADV.

Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
 Irvington Varnish & Insulator Co., 10 Argyle Terr., Irvington 11, N. J.
 Maas & Waldstein Co., 438 Riverside Ave., New-ark 4, N. J.
 SCHENECTADY, VARMONICATION

ark 4, N. J. SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111. Sherwin-Williams Co., 101 Prospect Ave., N.W.,

Cleveland 1, Ohio Sun Oil Co., 1608 Walnut St., Philadelphia 3, Pa. Wilbur & Williams Co., 43 Leon St., Boston 15,

ZOPHAR MILLS INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

American Marietta Co., Adhesive, Resin & Chemi-cal Div., 3400 13th Ave. SW, Seattle 4, Wash. Bakelite Corp., 30 E. 42nd St., New York 17,

N. Y. BIWAX CORP., 3445 Howard St., Skokie, Ill. SEE ADV. PG. 206. Borden Co., The, Chemical Div., Durite Plastics, 5000 Summerdale Ave., Phila. 24, Pa. Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.

Centro Research Laboratories, Inc., Briarcliff

Manor, N. Y. Dow Chemical Co., Midland, Mich. Dow Corning Corp., Midland, Mich.

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du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del. Durez Plastics & Chemicals, Inc., 1921 Walck

ELECTRONIC and ALLIED PRODUCTS

- Rd., N. Tonawanda, N. Y. Esso Standard Oil Co., 15 W. 51st St., New York
- 19. N. Y. GENERAL ANILINE & FILM CORP., Antara
- GENERAL ANILINE & FILM CORP., Antara Products, 444 Madison Ave., New York 22, N. Y. SEE ADV. PG. 185.
   GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
   Goodrich Chemical Co., B. F., Cleveland 15, Ohio Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio Heresite & Chemical Co., Manitowoc, Wis.
   INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, III, SEE ADV.

- Washington Blvd., Chicago 6, Ill. SEE ADV.
- Washington Divan, Canada PG. 137. Irvington Varnish & Insulator Co., 10 Argyle Terr., Irvington 11, N. J. Maas & Waldstein Co., 438 Riverside Ave., New-
- ark 4, N, J.
- Marblette Corp., 37-20 30th St., Long Island City, N. Y
- Minerallac Electric Co., 25 N. Peoria St., Chicago, TIL
- SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111. Shawinigan Products Corp., 350 Fifth Ave., New
- York 1, N. Y. Sherwin-Williams Co., 101 Prospect Ave., N.W., Cleveland 1, Ohio
- Stevenson Bros. & Co., 110 Race St., Phila. 6,
- Pa. U. S. Stoneware Co., The, Akron 9, Ohio Wilbur & Williams Co., 43 Leon St., Boston 15,
- ZOPHAR MILLS INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

## Silicone Compounds

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Centro Research Laboratories, Inc., Briarcliff
- Manor, N. Y. Connecticut Hard Rubber Co., 407 E St., New Haven 9, Conn. Dow Corning Corp., Midland, Mich. General Cement Mfg. Co., 919 Taylor Ave., Rock-

- General Cement Mig. Co., D.C. Asylan H.L., ford, Ill. GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18. INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. DC 127
- PG. 137. ZOPHAR MILLS INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

# Varnish Cambric Coatings

- Acme Wire Co., New Haven 14, Conn. Bakelite Corp., 30 E. 42nd St., New York 17, N. Y. Centro Research Laboratories, Inc., Briarcliff
- Manor, N. Y. Electro-Technical Products Div., Sun Chemical
- Corp., Nutley 10, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. George Co., P. D., 5200 N. 2nd St., St. Louis,
- Mo. INSULATION MANUFACTURERS CORP., 565 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.

- PG. 137.
  Irvington Varnish & Insulator Co., 10 Argyle Terr., Irving 11, N. J.
  NATIONAL VARNISHED PRODUCTS CORP., THE, 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117.
  SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### Waxes

- American Products Mfg. Corp., Oleander & Dublin Sts., New Orleans 18, La. Bakelite Corp., 30 E. 42nd St., New York 17,
- N. Y. BIWAX CORP., 3445 Howard St., Skokie, Ill. SEE ADV. PG. 206.

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- Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J. Cantol Wax Products Co., Bloomington, Ind.
- Centro Research Laboratories, Inc., Briarcliff
- Manor, N. Y. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., N. Tonawanda, N. Y. Esso Standard Oil Co., 15 W. 51st St., New York
- 19, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. Glyco Products Co., Inc., 26 Court St., Brooklyn,
- N. Y.
- N. Y. Halowax Prods. Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y. Horn Co. Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y. Insulatine Co., 1 Broadway, New York, N. Y. Maas & Waldstein Co., 438 Riverside Ave., New-
- ark 4, N. J. MITCHELL RAND INSULATION CO., INC., 51 MUTTAY Street, New York 7, N. Y. SEE ADV. PG. 54.
- Standard Varnish Works, 2600 Richmond Terr.,
- Staten Island 3, N. Y. Stevenson Bros. & Co., 110 Race St., Phila. 6, Pa.
- Sun Oil Co., 1608 Walnut St., Philadelphia 3, Pa. Trotter & Co., E. T., 594 Johnson Ave., Brooklyn 6, N. Y.
- O, N. I. ZOPHAR MILLS INC., 112-130 26th St., Brook-lyn 32, N. Y. SEE ADV. PG. 164.

#### INSULATING VARNISH

See Insulating Compounds

#### INSULATION MATERIALS

## Aluminum Oxide

- Aluminum Co. of America, Gulf Bldg., Pittsburgh,
- du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del. Merck & Co., Inc., Rahway, N. J. Norton Co., 1 New Bond St., Worcester 6, Mass. Permanente Products Co., Inc., 1924 Broadway,

- Oakland 12, Calif. Reynolds Metals Co., Technical Serv. Dept., 2500 So. Third St., Louisville 1, Ky. Southwestern Industrial Electronic Co., 2831 Post
- Southwestern industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
   STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.
   SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240.244 240-244.
- Asbestos
- Auburn Mfg. Co., Middletown, Conn. Dobeckmun Co., The, Industrial Cleveland 1, Ohio The, Industrial Prods. Div.,
- Cleveland 1, Uhio Electro-Technical Products Div., Sun Chemical Corp., Nutley 10, N. J. INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Johns-Manville, 22 E. 40th St., New York 16, N Y
- N. Y.
- N. 1. Powhatan Mining Co., Baltimore 7, Md. Richards Co., Inc., Arkley S., 78 Winchester St., Newton Highlands 61, Mass. Ruberoid Co., The, 500 5th Ave., New York 18,
- N. Y. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.

#### Bead

- AMERICAN LAVA CORP., Chattanooga 5, Tenn.
- AMERICAN LAVA CURP., Chattanooga 5, Tenn. SEE ADV. PG. 97. Corning Glass Works, Corning, N. Y. General Ceramics & Steatite Corp., Keasbey, N. J. HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark, N. J. SEE ADV. PG. 223. Kopp Glass Inc., 1 East 42nd St., New York 17, N. Y. Martindele, Electric Co., Par. 617. Edgewater
- N. Y. Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass. Steward Mfg. Co., D. M., Chattanooga, Tenn. STUPAKOFF CERAMIC & MFG. Co., Latrobe, Pa. SEE ADV. PG. 78.

# Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. CENTRALAB, DIV. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS.

INSULATING MATERIALS

- 26, 27,
- Clowes Ceramic Corp., 3711 Calhoun Ave., P. O. Box 1802 East Lake, Chattanooga 7, Tenn. Cook Ceramic Mfg. Co., 501 Prospect St., Trenton
- 1, N. J. Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J. General Ceramics & Steatite Corp., Keasbey,
- N. J.
- Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y. Lapp Insulator Co., Inc., 31 Gilbert St., Le Roy
- Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md. Mica Fabricating Co., 53 Central Ave., Rochelle
- Park, N. J. MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124,
- National Ceramic Co., 400 Southard St., Trenton 2, N. J.
  Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
  Star Porcelain Co., 61 Muirhead Ave., Trenton, Notestar St., Newton Kighlands, St., St., Star Porcelain Co., 61 Muirhead Ave., Trenton, Notestar St., Newton St., Newton, Notestar St., St., Newton, Newton,

- Star Porcelain Co., 61 Muirnead Ave., Irenton, N. J.
   Steward Mfg. Co., D. M., Chattanooga, Tenn.
   STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.
   SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
   Titanium Alley, Mfg. Co. 111 Propulsion, New York
- Titanium Alloy Mfg. Co., 111 Broadway, New York 6, N. Y.
- United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England U. S. Stoneware Co., The, Akron 9, Ohio

Duplan Corp., 512 Seventh Ave., New York, N. Y.
Electro-Technical Products Div., Sun Chemical Corp., Nutley 10, N. J.
Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, III.
GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
Hope Webbing Co., Providence 1, R. I.
Huse Liberty Mica Co., 171 Cannden St., Boston, Mass.

INSULATION MANUFACTURERS CORP., 565 W.

INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J.
NATIONAL VARNISHED PRODUCTS CORP., THE, 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117.
Pacific Mills, Industrial Fabrics Dept., 214 Church St., New York 13, N. Y.
Respro, Inc., Wellington Ave., Cranston, R. I.
Varflex Corp., N. Jay St., Rome, N. Y.

Auburn Mfg. Co., Middletown, Conn. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Brandywine Fibre Co., 15th & Poplar Sts., Wil-

Dranuywine Flore Co., 15th & Poplar Sts., Wil-mington, Del.
 CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122.

Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del. General Cement Mfg. Co., 919 Taylor Ave., Rock-

Huse Liberty Mica Co., 171 Camden St., Boston,

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# Fabric Acme Wire Co., New Haven 14, Conn. Auburn Mfg. Co., Middletown, Conn. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y. Duplan Corp., 512 Seventh Ave., New York, N. Y. Elestro Tachapiael Bacduate Din. Son. Chemise.

Mass.

Fibre

ford, Ill.

Mass.

# INSULATING MATERIALS

1949-1950 DIRECTORY of

- Insulating Fabricators, Inc., 12 E. 12th St., New York, N. Y.
- Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. INSULATION MANUFACTURERS CORP., 565 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.

Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y. Lamicoid Fabricators, Inc., 4545 Cortland St.,

- Chicago 39, Ill. Masonite Corp., 111 W. Washington St., Chicago

- Masonite Corp., 111 W. Washington St., Chicago 2, 111.
  NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. SEE ADV. PG. 31.
  Owens-Corning Fiberglas Corp., 1860 Nicholas Bldg., Toledo 1, Ohio
  Penn Fibre & Specialty Co., 2030 E. Westmoreland St, Philadelphia 44, Pa.
  Rogers Corp., Manchester, Conn.
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
  Stevens Paper Mills, Inc., Windsor, Conn.
  Taylor Fibre Co., Norristown, Pa.
  West Virginia Pulp & Paper Co., Pulp Products Dept., 230 Park Ave., New York 17, N. Y.
  Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

#### Glass

- BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Corning Glass Works, Corning, N. Y. Fusite Corp., Carthage at Hannaford, Cincinnati 12, Ohio Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del. HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark, N. J. SEE ADV. PG. 223. INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
- PG. 137. Kopp Glass, Inc., 1 East 42nd St., New York 17, N. Y.
- N. Y. NATIONAL VARNISHED PRODUCTS CORP., THE, 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117. Polan Industries, 220 Eighth St., Huntington, Word Virginia
- Virginia
- West Virginia SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Wheaton Co., T. C., Industrial Div., 220 G. St., Millville, N. J.

## **Glass Bonded Mica**

- CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122.
- Electronic Mechanics, Inc., 70 Clifton Blvd., Clif-
- ton, N. J. GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18. General Electronics Inc., 101 Hazel St., Paterson,
- N INSULATION MANUFACTURERS CORP., 565 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV.
- PG. 137. MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124,

#### **Glass Fibre**

- Acme Wire Co., New Haven 14, Conn. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 110,192
- 119-122.
- Electro-Technical Products Div., Sun Chemical
- Corp., Nutley 10, N. J. Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Delaware General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford. Ill.
- Hope Webbing Co., Providence 1, R. I. Huse Liberty Mica Co., 171 Camden St., Boston, Mass.

- INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV.
- PG. 137. Laminated Plastics, Inc., 14838 Euclid Ave.,
- Cleveland 12, Ohio MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV. PG. 54
- 54. National Electric Coil Co., Columbus 16, Ohio Owens-Corning Fiberglas Corp., 1860 Nicholas Bldg., Toledo 1, Ohio Spaulding Fibre Co., Inc., 310 Wheeler St., Tona-
- wanda, N. Y. Varflex Corp., N. Jay St., Rome, N. Y.

# Laminates, Woven Glass

- Baer Co., N. S., 9 Montgomery St., Hillside, N. J. CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Delaware. SEE ADV. PGS. 119-122.
- PGS. 119-122. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, 1ll. GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18. Hope Webbing Co., Providence 1, R. 1. INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PC. 127
- PG. 137 Lamicoid Fabricators, Inc., 4545 Cortland St.,

- Lamineoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill.
  Laminated Plastics, Inc., 14838 Euclid Ave., Cleveland 12, Ohio
  Mica Insulator Co., Schenectady 1, N. Y.
  NATIONAL VULCANIZED FIBRE CO., Wil-mington, Del. SEE ADV. PG. 31.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
  Precision Fabricators, Inc., Roosevelt Rd., E.
- Precision Fabricators, Inc., Roosevelt Rd., E.
- Precision Fabricators, Inc., Roosevelt Rd., E. Rochester, N. Y.
  Synthane Corp., Oaks, Pa.
  Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

# Mica

- Asheville Mica Co., 900 Jefferson Ave., Newport
- News, Va. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122.
- Ford Radio & Mica Corp., 536 63rd St., Brook-lyn, N. Y. Huse Liberty Mica Co., 171 Camden St., Boston,
- Mass. INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG, 137. Laminated Plastics, Inc., 14838 Euclid Ave., Cleveland 12, Ohio Macallen Co., The, 16 Macallen St., Boston 27, Masc
- Mass.
- Mica Fabricating Co., 53 Central Ave.. Rochelle
- Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J. Mica Insulator Co., Schenectady 1, N. Y. Micacraft Products Inc., 701 McCarter Highway, Newark 5, N. J. MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV. PG. 54.
- National Electric Coil Co., Columbus 16, Ohio New England Mica Co., Waltham, Mass. Radiation Counter Labs., Inc., 1844 W. 21 St.,
- Chicago 8, Ill. SYLVANIA ELECTRIC PRODUCTS, INC., 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Tar Heel Mica Co., Plumtree, N. C.

## Paper

- Acme Wire Co., New Haven 14, Conn. Aldine Paper Co., Inc., 535 5th Ave., New York 17, N. Y.

- Aldine Paper Co., Inc., 030 ptn Ave., New York 17, N. Y. Auburn Mfg. Co., Middletown, Conn. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Brown-Bridge Mills, Inc., Troy, Ohio Central Paper Co., Inc., 2400 Lakeshore Drive, Muskegon, Mich. Cottrel Paper Co., 88 Purchase St., Fall River, Mass.

- Dobeckmun Co., Industrial Products Div., Cleveland 1, Ohio
- Electro-Technical Products Div., Sun Chemical Corp., Nutley 10, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill.
- Hollingsworth & Vose Co., East Walpole, Mass. Hunter Photo Copyist Co., 566 Spencer St., Syracuse, N. Y.
- Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
- Insulating Fabricators, Inc., 12 E. 12th St., New York, N. Y.
- Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. INSULATION MANUFACTURERS CORP., 565 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J. Johns-Manville, 22 E. 40th St., New York 16,
- N.Y.
- Lamicoid Fabricators, Inc., 4545 Cortland St.,
- Chicago 39, 111. Mica Insulator Co., Schenectady 1, N. Y. MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV. PG. 54
- 54.
  Mosinee Paper Mills Co., Mosinee, Wis.
  NATIONAL VARNISHED PRODUCTS CORP., THE, 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117.
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Precision Fabricators Inc., Roosevelt Rd., E. Bachester N. Y.
- Rochester, N. Y. Rogers Corp., Manchester, Conn. Ruberoid Co., The, 500 5th Ave., New York 18,
- N. Y. Schweitzer, Inc., Peter J., 405 Lexington Ave., New York 17, N. Y. SMITH PAPER, INC., Lee, Mass. SEE ADV. PG.

46. Stevens Paper Mills, Inc., Windsor, Conn. Willard's, Hampden, Mass. Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Auburn Mfg. Co., Middletown, Conn. Buggie & Co., H. H., 2141 Madison Ave., Toledo

Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.

Dow Corning Corp., Midland, Mich. du Pont de Nemours & Co., Inc., E. I., Wilming-

Esso Standard Oil Co., 15 W. 51st St., New York

19, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-

ford, Ill. General Tire & Rubber Co., The, Silentbloc Div.,

Goodrich Chemical Co., B. F., Cleveland, 15, Ohio

Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio Heresite & Chemical Co., Manitowoc, Wis. Luzerne Rubber Co., Muirhead Ave., Trenton,

Mayfair Molded Products Corp., 4440 N. Elston

Maytair Molded Products Corp., 4440 N. Elson Ave., Chicago 30, Ill. Stokes Molded Products, Inc., Taylor St. at Webster, Trenton, N. J. U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.

Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio

AMERICAN LAVA CORP., Chattanooga 5, Tenn. CURTRALAB DIV., of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.

Clowes Ceramic Corp., 3711 Calhoun Ave., P. O.

46.

Plastic

Rubber

1, Ohio

ton 98, Del.

Wabash, Ind.

**Rubber**—Conductive

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Steatite

See Plastic Materials

CENTRALAB DIV., of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill. Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.

General Cement Mfg. Co., 919 Taylor Ave., Rock-

ford, Ill. General Ceramics & Steatite Corp., Keasbey,

GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Huse Liberty Mica Co., 171 Camden St., Boston,

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.

INSULATION MANUFACTURERS CORP., 565 W.

Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
Irvington Varnish & Insulator Co., 10 Arrgyle Terr., Irvington 11, N. J.
Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
NATIONAL VARNISHED PRODUCTS CORP., THE, 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117.
Penn Fibre & Snecialty Co., 2030 E. Westmore-

Washington Blvd., Chicago 6, Ill. SEE ADV.

- Cook Ceramic Mfg. Co., 501 Prospect St., Trenton
- General Ceramics & Steatite Corp., Keasbey, N. J.
   Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
   Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.
- Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md. National Ceramic Co., 400 Southard St., Tren-
- ton 2, N. J. Steward Mfg. Co., D. M., Chattanooga, Tenn. STUPAKOFF CERAMIC & MFG. CO., Latrobe,
- Pa. SEE ADV. PG. 78.

# INSULATION PARTS

## **Bead Insulation Parts**

- AMERICAN LAVA CORP., Chattanooga 5, Tenn.
- AMERICAN LAVA CURP., Chattanooga 5, Tenn. SEE ADV. PG. 97. AMERICAN PHENOLIC CORP., 1830 S. 54th St., Chicago 50, Ill. SEE ADV. PG. 167. CENTRALAB DIV., of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26 27
- 26, 27. Cook Ceramic Mfg. Co., 501 Prospect St., Tren-
- ton 1, N. J. Corning Glass Works, Corning, N. Y. Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
- Electrical Refractories Co., 50 Clark St., East
- Palestine, Ohio
- General Ceramics & Steatite Corp., Keasbey, N. J. HERMETIC SEAL PRODUCTS CO., 29-27 South 6th St., Newark, N. J. SEE ADV. PG. 223. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City 10, N. Y. SEE ADV. PG. 80.

- Kilburn Glass Co., Inc., J. R., 22 S. Worcester St., Chartley, Mass.
  Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
  Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio
  Millen Mig. Co., James, 150 Exchange St., Malden Mass
- den, Mass.
- den, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass. Sperti, Inc., Norwood Station, Cincinnati 12, Ohio. Star Porcelain Co., 61 Muirhead Ave., Trenton, N J
- N. J. Steward Mfg. Co., D. M., Chattanooga, Tenn. STUPAKOFF CERAMIC & MFG. CO., Latrobe,
- Pa. SEE ADV. PG. 78. Waterbury Companies, Inc., Waterbury 90, Conn. Wheaton Co., T. C., Industrial Div., 220 G. St., Millville, N. J.

## **Capacitor Boxes**

- Moore Co., Howard J., 108 Park Row, New York 7, N. Y. Molded Insulation Co., Aircraft Control Div., 335
- Molded Insulation Co., Aircraft Control Div., 300 E. Price St., Philadelphia, Pa. National Gasket Mfg. Co., 122 E. 25th St., New York 10, N. Y. STUPAKOFF CERAMIC & MFG. CO., Latrobe,
- Pa. SEE ADV. PG. 78.

## **Capacitor Films**

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Asheville Mica Co., 900 Jefferson Ave., Newport

- Park, N. J.
- Park, N. J.
  Mica Insulator Co., Schenectady 1, N. Y.
  Micacraft Products, Inc., 701 McCarter Highway, Newark 5, N. J.
  Plax Corp., P. O. Box 1019, Hartford, Conn.

## **Ceramic Insulation Parts**

- AMERICAN LAVA CORP., Chattanooga 5, Tenn.
- SEE ADV. PG. 97. CENTRALAB DIV., of Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.

- Cook Ceramic Mfg. Co., 501 Prospect St., Tren-
- ton 1, N. J. Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J. General Ceramics & Steatite Corp., Keasbey,
- N. J. INSULINE CORP. OF AMERICA, 36-02 35th St., Long Island City, N. Y. SEE ADV. PG. 80. Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y. Lapp Insulator Co., Inc., 31 Gilbert St., Le Roy,
- N. Y. Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md. Mica Fabricating Co., 53 Central Ave., Rochelle
- Park, N. J. Mykroy Inc., Arlington Hts. Airport, Arlington Hts., Ill.
- ATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108, RADIO CORP. OF AMERICA, RCA Victor Div.,
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Cainden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
   Scinitila-Magneto Div. Bendix Aviation Corp., Sidney, N. Y.
   Star Porcelain Co., 61 Muirhead Ave., Trenton 9 N J

- 9, N. J. Steward Mfg. Co., D. M., Chattanooga, Tenn. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78. United Insulator Co., Ltd., Tolworth-Surbiton-Surray England Surrey, England

#### **Cut Insulation Parts**

- Acme Folding Box Co., Inc., 141 E. 25th St., New York, N. Y. Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
- Alden Products Co., 117 N. Main St., Brockton 64, Mass.
- American Hard Rubber Co., 11 Mercer St., New
- York 13 N. Y. Auburn Mfg. Co., Middletown, Conn. Brandywine Fibre Co., 15th & Poplar Sts., Wil-
- mington, Del.
- Felt Products Mfg. Co., 1504 W. Carroll Ave.,
- Chicago 7, III. Franklin Mfg. Corp., A. W., 43-20 34th St., L. I. City, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. Huse Liberty Mica Co., 171 Camden St., Boston,
- Mass.
- Mass. Industrial Products Co., Danbury, Conn. Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. INSULATION MANUFACTURERS CORP., 565 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137
- Macallen Co., The, 16 Macallen St., Boston 27, Mass.
- Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa. Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
- Ational Electrical Coil Co., Columbus 16, Ohio National Gasket & Mfg. Co., 122 E. 25th St., New York 10, N. Y.
- New York 10, N. Y. NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31. Plax Corp., P. O. Box 1019, Hartford, Conn. Precision Fabricators, Inc., Roosevelt Rd., E.
- Rochester, N. Y. Printloid Inc., 95 Mercer St., New York, N. Y. Rogers Corp., Manchester, Conn. Varflex Corp., N. Jay St., Rome, N. Y.

#### **Extruded Insulation Parts**

- Alden Products Co., 117 N. Main St., Brockton 64. Mass
- American Hard Rubber Co., 11 Mercer St., New

- American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
  AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. SEE ADV. PG. 167.
  ANCHOR PLASTICS CO., INC., 533-541 Canal St., New York 13, N. Y. SEE ADV. PG. 200.
  Auburn Button Works Inc., 48 Canoga St., Auburn, N. Y.
- Auburn Mfg. Co., Middletown, Conn.

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General Cement Mig. Co., 919 Taylor Ave., Rock-ford, Ill.
General Ceramics & Steatite Corp., Keasbey, N. J.
GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Greenhut Insulation Co., 31 W. 21st St., New

General Cement Mfg. Co., 919 Taylor Ave., Rock-

- Greenhut Insulation Co., 31 W. 21st St., New York 10, N. Y. Industrial Products Co., Danbury, Conn. Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y. Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

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SEE ADV. PG. 111.
Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Phila. 44, Pa.
Plax Corp., P. O. Box 1019, Hartford, Conn. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
PGS. 197, Inside Back and Back Covers.
Smith Loc. Horman, H. 405 44th, Covers.

J

- Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
- Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
- Steward Mfg. Co., D. M., Chattanooga, Tenn. Surprenant Mfg. Co., 199 Washington St., Boston 10. Mass.
- Varflex Corp., N. Jay St., Rome, N. Y.

# Fabricated Insulation Parts

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alden Products Co., 117 N. Main St., Brockton 64, Mass.
- American Communications Corp., 306 Broadway, New York 7, N. Y. American Hard Rubber Co., 11 Mercer St., New

American Hard Rubber Co., 11 Mercer St., New York 13, N.Y.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
Auburn Mfg. Co., Middletown, Conn.
Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
Beach Precision Parts Co., Boonton, N. J.
Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington, Del.
Buggie & Co., H. H., 2141 Madison Ave. Toledo.

Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio

CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG.

Electrical Insulation Co., Inc., 12 Vestry St., New

Electrical Insulation Co., Inc., 12 Vestry St., New York, N. Y.
Electronic Mechanics Inc., 70 Clifton Blvd., Clif-ton, N. J.
Felsenthal & Sons, Inc., G., 4100 W. Grand St., Chicago 51, Ill.
Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
Franklin Mig. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
Fusite Corp., Carthage at Hannaford, Cincinnati 12, Ohio
General Cement Mfg. Co., 919 Taylor Ave., Rock-

# INSULATION PARTS

# INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV.

- PG. 137. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y. Lamicoid Fabricators, Inc., 4545 Cortland St.,
- Chicago 39, Ill. Macallen Co., The, 16 Macallen St., Boston 27,
- Mass. Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
- Mica Insulator Co., Schenectady 1, N. Y. Micarta Fabricators, Inc., 5324 Ravenswood Ave.,
- Micarta radricators, Inc., 3324 Ravenswood Ave., Chicago 40, Ill. Molded Insulation Co., Aircraft Control Div., 335 E. Price, Philadelphia, Pa. Moore Co., Howard J., 108 Park Row, New York
- N
- MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124, 125

Mykroy Inc., Arlington Hts. Airport, Arlington

- Mykroy Inc., Arlington Hts. Airport, Arlington Hts., Ill.
  National Electric Coil Co., Columbus 16, Ohio
  National Gasket & Washer Mfg. Co., 122 E. 25th St., New York 10, N. Y.
  NATIONAL VARNISHED PRODUCTS CORP., THE, 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117.
  NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. SEE ADV. PG. 31.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
  Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.

- York 13, N. Y. Plasticraft Products Co., 20 Hudson St., New
- Plasticraft Products Co., 20 Hudson St., New York 13, N. Y.
  Plax Corp., P. O. Box 1019, Hartford, Conn.
  Precision Fabricators Inc., Roosevelt Rd., E.
  Rochester, N. Y.
  Printloid Inc., 95 Mercer St., New York, N. Y.
  Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.
  Borg 2500 W. Leving Pk. Chicago 18, III.
- Rogan Bros., 2500 W. Irving Pk., Chicago 18, Ill.

- Rogan Bros., 2500 W. Irving Pk., Chicago 18, Ill.
  Rogers Corp., Manchester, Conn.
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
  Steward Mfg. Co., D. M., Chattanooga, Tenn.
  Synthane Corp., Oaks, Pa.
  Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  Willard's, Hampden, Mass.

# Insulating Cord

- Alden Products Co., 117 N. Main St., Brockton 64, Mass. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, TH
- GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18.
   MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV.
- PG. 54.
- Owens-Corning Fiberglas Corp., 1860 Nicholas Bldg., Toledo 1, Ohio

## **Insulating** Foil

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y. Plax Corp., P. O. Box 1019, Hartford, Conn.

# **Insulating** Sleeves

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- American Hard Rubber Co., 11 Mercer St., New
- American Hard Rubber Co., 11 Mercel Ou, 1105
   York 13, N. Y.
   AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. SEE ADV. PG. 167.
   ANCHOR PLASTICS CO., INC., 533-541 Canal St., New York 13, N. Y. SEE ADV. PG. 200.
   Anchor Webbing Co., P. O. Box 1624, Provi-
- dence, R. I. BENTLEY HARRIS MFG. CO., Conshohocken, Pa. SEE ADV. PG. 127.
- Brandt Co., Wm., 276 Fourth Ave., New York 10, N. Y.
- Brandywine Fibre Co., 15th & Poplar Sts., Wilmington, Del.

- Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
  Electrical Insulation Co., Inc., 12 Vestry St., New York, N. Y.
  Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
  General Cement Mfg. Co., 919 Taylor Ave., Bookford 10

- Rockford, Ill. General Ceramics & Steatite Corp., Keasbey,
- K. J. GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Hope Webbing Co., Providence 1, R. I. Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
- INSULATION MANUFACTURERS CORP., 565 W
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J. Macallen Co., The, 16 Macallen St., Boston 27, Mass
- Mass.
- Mica Insulator Co., Schenectady 1, N. Y. MITCHELL-RAND INSULATION CO., INC., 51 Murray Street, New York 7, N. Y. SEE ADV.
- PG. 54.
  NATIONAL VARNISHED PRODUCTS CORP., THE, 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117.
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Panelyte Div., 5t. Regis Paper Co., 230 Park Ave., New York, N. Y.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa.
  Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
  Precision Fabricators, Inc., Roosevelt Rd., E. Rochester, N. Y.

- Precision Fabricators, Inc., Roosevelt Ru., E. Rochester, N. Y.
  Printloid Inc., 95 Mercer St., New York, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Varflex Corp., N. Jay St., Rome, N. Y.

# Laminated Insulation Parts

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alden Products Co., 117 N. Main St., Brock-
- ton 64, Mass. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Brandywine Fibre Co., 15th & Poplar Sts., Wil-
- mington, Del. CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG.
- cord Ave., Cambridge, Mass. SEE ADV. PG. 178.
  CINCH MFG. CORP., 2335 Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
  CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119, 120, 121, 122.
  Eby, Inc., Hugh H., 4700 Stenton Ave., Philadelphia 44, Pa.
  Electrical Insulation Co., Inc., 12 Vestry St., New York 13, N. Y.
  Farley & Loetscher Mfg. Co., Dubuque, Iowa Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati 32, Ohio
  Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
  Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
  Insulations, Enc., 12, F., 12th, St.

- Huse Liberty Mica Co., 1(1) Camden St., Boston, Mass.
  Insulating Fabricators, Inc., 12 E. 12th St., New York, N. Y.
  Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
  INSULATION MANUFACTURERS CORP., 565 W.
  Wachington Blue Chicaga 6, III SEF ADV
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
- Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill. Laminated Plastics, Inc., 14838 Euclid Ave.,
- Cleveland 12, Ohio Mica Fabricating Co., 53 Central Ave., Rochelle
- Park, N. J.
- Mica Insulator Co., Schenectady 1, N. Y.

1949-1950 DIRECTORY of

- Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
  National Electric Coil Co., Columbus 16, Ohio
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York 17, N. Y.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa.
  Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
  Plasticraft Products Co., 20 Hudson St., New York 13, N. Y.

- York 13, N. Y. Precision Fabricators, Inc., Roosevelt Rd., E.

- Precision Fabricators, Inc., Roosevelt Rd., E. Rochester, N. Y.
  Rogers Corp., Manchester, Conn.
  Synthane Corp., Oaks, Pa.
  Taylor Fibre Co., Norristown, Pa.
  Ucinite Co., The, Div., United-Carr Fastener
  Corp., 459 Watertown St., Newtonville, Mass.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67
- 67.
  Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.
  Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

# Molded Insulation Parts

119-122.

Ohio

Mass.

Wis.

- Alden Products Co., 117 No. Main St., Brock-
- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  American Insulator Corp., New Freedom, Pa.
  American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
  AMERICAN PHENOLIC CORP., 1830 S. 5th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  BIWAX CORP., 3445 Howard St.; Skokie, Ill. SEE ADV. PG. 206.
  Boonton Molding Co., Boonton, N. J.
  Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio
  Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill.
  CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
  Cincinnati Molding Co., 2037 Florence Ave., Cincinnati 6, Ohio
  Consolidated Molded Products Corp., Scranton 2, Pa.

CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS.

Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee

Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wis.
Diemolding Corp., Rasbach St., Canastota, N. Y.
Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio Eby, Inc., Hugh H., 4700 Stenton Ave., Philadelphia 44, Pa.
Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
Emeloid Co., Inc., The, 1239 Central Ave., Hillside 5, N. J.
Farley & Loetscher Mfg. Co., Dubuque, Iowa Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
Fornica Insulation Co., 4662 Spring Grove Ave., Cincinati 32, Ohio
Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
GENERAL ELECTRIC CO., Taylor & Olive Sts., Elyria, Ohio

Elyria, Ohio Heresite & Chemical Co., Maintowoc, Wis. Howard Mfg. Corp., 1401 S. Main St., Council

Bluffs, Iowa Insulation Mfg. Co., 11 New York Ave., Brooklyn,

N. Y. Keasbey & Mattison, Ambler, Pa. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1,

Unio La Magna Mfg. Co., Inc., East Rutherford, N. J. Laminated Plastics, Inc., 14838 Euclid Ave., Cleveland 12, Ohio Luzerne Rubber Co., Muirhead Ave., Trenton,

N. J. Macallen Co., The, 16 Macallen St., Boston 27,

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- Mack Molding Co., Wayne, N. J. Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill. Ave., Chicago 30, Ill. Millen Mfg. Co., James, 150 Exchange St., Mal-

- Millen Mig. Co., James, 150 Exchange St., Malden, Mass.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
  MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS, 124, 125.
  Mykroy Inc., Arlington Hts. Airport, Arlington Hts., III.
  MATIONAL, CO. INC. 61 Sharman St. Millian
- Hts., Ill. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. National Electric Coil Co., Columbus 16, Ohio Northern Industrial Chemical Co., 7-11 Elk-ins St., South Boston 27, Mass. Norton Labs., Inc., Lockport, N. Y. Oris Mfg. Co., Inc., Thomaston, Conn. Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y. Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.

- 34. Mass.
- Richardson Co., The, Melrose Park, Ill. Rogan Bros., 2500 W. Irving Pk., Chicago 18, Ť1
- Scintilla-Magneto Div., Bendix Aviation Corp.,
- Sidney, N. Y. Shaw Insulator Co., 160 Coit St., Irvington 11,

- Shaw Insulator Co., 100 Cont. St., M. M. S. N. J.
  Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
  Stokes Molded Products, Inc., Taylor St. at Webster, Trenton, N. J.
  Taylor Fibre Co., Norristown, Pa.
  Taylor Mfg. Co., 3056 W. Meinecke Ave., Milwaukee, 10, Wisc.
  U. S. Plastics Corp., 2835-53 Irving Park Rd., Chicago, Ill.
- Chicago, Ill.
- Waterbury Companies, Inc., Waterbury 90, Conn. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# **Plastic Insulation Parts**

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alden Products Co., 117 No. Main St., Brock-

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
  American Insulator Corp., New Freedom, Pa.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  ANCHOR PLASTICS CO., INC., 533-541 Canal St., New York 13, N. Y. SEE ADV. PG. 200.
  Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
  BIWAX CORP., 3445 Howard St., Skokie, Ill.
- Baer Co., N. S., o Monegoniery St., Musice, N. J.
  BIWAX CORP., 3445 Howard St., Skokie, Ill. SEE ADV. PG. 206.
  Boonton Molding Co., Boonton, N. J.
  Brandywine Fibre Co., 15th & Poplar Sts., Wilmington, Del.
  Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio
  Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
  Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill.
  Cincinnati 6, Ohio
  Consolidated Molded Prods. Corp., Scranton 2, Pa.

- CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Delaware. SEE ADV. PGS. 119-122.
- St., Newark 16, Delaware. SEE ADV. FGS. 119-122.
  Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
  Diemolding Corp., Rasbach St., Canastota, N. Y.
  Electrical Insulation Co., Inc., 12 Vestry St., New York, N. Y.
  Emeloid Co., Inc., The, 1239 Central Ave., Hillside 5, N. J.
  Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
  Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati 32, Ohio
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  Gemloid Corp., 79-10 Albion Ave., Elmhurst, N. Y.

- GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.

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- General Industries Co., Taylor & Olive Sts.,
- Elyria, Ohio Greenhut Insulation Co., 31 W. 21st St., New York 10, N. Y. Howard Mfg. Corp., 1401 S. Main St., Council
- Bluffs, Iowa Huse Liberty Mica Co., 171 Camden St., Boston,
- Mass.
- Mass. Industrial Products Co., Danbury, Conn. Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
- Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1, Ohio
- Lamicoid Fabricators, Inc., 4545 Cortland St.,
- Laminoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill. Laminated Plastics, Inc., 14838 Euclid Ave., Cleveland 12, Ohio Mayfair Molded Products Corp., 4440 N. Els-ton Ave., Chicago 30, Ill. Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
- Micacraft Products Inc., 701 McCarter Highway, Newark 5, N. J. Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. Molded Insulation Co.,
- den, Mass.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
  MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124, 125.
  Mykroy, Inc., Arlington Hts. Airport, Arlington, Hts., Ill.
  NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. SEE ADV. PG. 31.
  Northern Industrial Chemical Co., 7-11 Elkins St., So. Boston 27, Mass.
  Norton Labs., Inc., Lockport, N. Y.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York 17, N. Y.
  Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.
  Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
  Plasticraft Products Co., 20 Hudson St., New York 13, N. Y.
  Plax Corp., P. O. Box 1019, Hartford, Conn.
  Precision Fabricators Inc., Roosevelt Rd., E. Rochester, N. Y.
  Printloid Inc., 95 Mercer St., New York, N. Y.
  Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.
  Remler Co., Ltd., 2101 Bryant St., San Fran-

- Kathoraters, 1156 Commonwearth Ave., 165-ton 34, Mass.
   Remler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calif.
   Richardson Co., The, Melrose Park, Ill.
   Rogan Bros., 2500 W. Irving Pk., Chicago 18, 10
- III.
- Rogers Corp., Manchester, Conn.
- Scintila-Magneto Div., Bendix Aviation Corp., Sidney, N. Y. Shaw Insulator Co., 160 Coit St., Irvington 11, N. J.
- Sillcocks-Miller Co., 10 Parker Ave. W., So.

- Silicocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
  Stokes Molded Products, Inc., Taylor St. at Webster, Trenton, N. J.
  Synthane Corp., Oaks, Pa.
  Taylor Fibre Co., Norristown, Pa.
  Taylor Fibre Co., Norristown, Pa.
  Taylor Mfg. Co., 3056 W. Meinecke Ave., Milwaukee, 10, Wisc.
  Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  U. S. Plastics Corp., 2835-53 Irving Park Rd., Chicago, Ill.
- U. S. Flastica Corp., Chicago, Ill. Varflex Corp., N. Jay St., Rome, N. Y. Waterbury Companies, Inc., Waterbury 90,

- Conn.
  Willison Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.
  Willmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

### Rods

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. American Hard Rubber Co., 11 Mercer St., New
- York 13, N. Y.

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. ANCHOR PLASTICS CO., INC., 533-541 Canal St.. New York 13, N. Y. SEE ADV. PG. 200. Blum & Co., Julius, 532 W. 22nd St., New York 11, N. Y. Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington Del

- mington, Del. CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122. du Pont de Nemours & Co., Inc., E. I., Wilming-
- ton 98, Del. Electrical Insulation Co., 12 Vestry St., New
- York, N. Y. Formica Insulation Co., 4662 Spring Grove Ave.,
- Cincinnati 32, Ohio Franklin Fibre-Lamitex Corp., 12th & French Sts., Wilmington, Del. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- General Ceramics & Steatite Corp., Keasbey,
- N. J. GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Industrial Synthetics Corp., 225 North Ave., Garwood, N. J. Insulating Fabricators of New England Inc., 69 Grove St., Watertown 72, Mass. INSULATION MANUFACTURERS CORP., 565 W. Washington Blue Chicage 6. III SEE ADV
- Washington Blvd., Chicago 6, Ill. SEE ADV.

PG. 137. Lamicoid Fabricators Inc., 4545 Cortland St., Chicago 39, Ill. Luzerne Rubber Co., Muirhead Ave., Trenton,

Minoy Jan, Minigon Mis, Amport, Amport, Amigon Hts, 111.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Delaware. SEE ADV. PG. 31.
Penn Fibre & Specialty Co., 2030 E. Westmoreland St., Phila. 44, Pa.
Plax Corp., P. O. Box 1019, Hartford, Conn.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Synthane Corp., Oaks, Pa.
Taylor Fibre Co., Norristown, Pa.
United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Ace Mfg. Corp., 1255 E. Erie Ave., Philadelphia 24, Pa.

Aerolite Electronic Hardware Corp., 24 Cliff St.,

Jersey City, N. J. ALLMETAL SCREW PRODUCTS CO., INC., 33

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.

Brandywine Fibre Co., 15th & Poplar Sts., Wil-

Breeze Corpns., Inc., 41 S. Sixth St., Newark 7, N. J. Buchmann Spark-Wheel Corp., 4-20 47th Ave., Long Island City 1, N. Y. **CAMBRIDGE THERMIONIC CORP.**, 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178. Chase Brass & Copper Co., Inc., Waterbury 91,

CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS.

Eby, Inc., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.
Federal Screw Products Co., 224 W. Huron St.,

Chicago 10, Ill. Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del. General Cement Mfg. Co., 919 Taylor Ave., Packford III

HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

Industrial Products Co., Danbury, Conn. Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

SEE ADV.

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Greene St., New York 13, N. Y. PG. 32.

Mica Insulator Co., Schenectady 1, N. Y. Mykroy Inc., Arlington Hts. Airport, Arlington Hts., Ill.

N. J.

Screw Machine Parts

mington, Del.

119-122.

Rockford,

209.

III.

# INSULATION PARTS

1949-1950 DIRECTORY of

- Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
   La Magna Mfg. Co., Inc., East Rutherford, N. J.
   Lamicoid Fabricators, Inc., 4545 Cortland St., Chicae, 29 W. Chicago 39, Ill.

- Lamicoid Fabricators, Inc., 4945 Cortland St., Chicago 39, Ill.
  Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York 17, N. Y.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa.
  Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
  Reister Mfg. Co., Hagerstown, Md.
  Remler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calif.
  Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y.
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tona-wanda, N. Y.

- Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
  Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
  Synthane Corp., Oaks, Pa.
  Taylor Fibre Co., Norristown, Pa.
  United Carr Fastener Corp., Cambridge 42, Mass.
  United Screw & Bolt Corp., 2513 W. Cullerton St. Chicago. 11 ton St., Chicago, Ill.

#### Sheets

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. American Hard Rubber Co., 11 Mercer St., New York 13 N. Y.
- American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. SEE ADV. PG. 167.
  Auburn Míg. Co., Middletown, Conn.
  Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
  Blum & Co., Julius, 532 W. 22nd St., New York 11, N. Y.
  Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
  du Pont de Nemours & Co., Inc., E. I., Wil-mington 98, Del.
  Electrical Insulation Co., Inc., 12 Vestry St., New York, N. Y.

- New York, N. Y. Electro-Technical Products Div., Sun Chemical Electro-Technical Products Div., Sun Chemical Corp., Nutley 10, N. J.
  Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
  Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati 32, Ohio
  Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
  General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
  GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18.
  Huse Liberty Mica Co., 171 Camden St., Boston, Mass.

- Mass.
- Industrial Synthetics Corp., 225 North Ave., Garwood, N. J. INSULATION MANUFACTURERS CORP., 565 W.
- INSULATION MANUFACTURENC CORF., 303 W., Washington Bivd., Chicago 6, Ill. SEE ADV. PG. 137.
  Laminoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill.
  Laminated Plastics, Inc., 14838 Euclid Ave., Cleveland 12, Ohio
  Mica Insulator Co., Schenectady 1, N. Y.
  Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
  Mykroy Inc., Arlington Hts. Airport, Arlington Hts., Ill.
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
  Penn Fibre & Specialty Co., 2039 E. Westmore-land St., Philadelphia 44, Pa.
  Plax Corp., P. O. Box 1019, Hartford, Conn.
  Spaulding Fibre Co., Inc., 130 Wheeler St., Tonawanda, N. Y.
  Surprenant Mfg. Co., 199 Washington St., Bos-ton 10, Mass. Washington Blvd., Chicago 6, Ill. SEE ADV.

- ton 10, Mass. Synthane Corp., Oaks, Pa. Taylor Fibre Co., Norristown, Pa. United Radio Mfg. Co., 191 Greenwich St., New

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- York, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

- Stampings & Punchings-Ceramic
- AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. ART-LLOYD METAL PRODS. CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG
- PG. 1(4. CENTRALAB, DIV. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27. Cook Ceramic Mfg. Co., 501 Prospect St., Tren-
- Cook Ceramic Mig. Co., Soil Prospect Sta, Andreton I, N. J.
   Federal Tool & Mfg. Co., 3600 Alabana Ave., St. Louis Park, Minneapolis 16, Minn.
   General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- General Ceramics & Steatite Corp., Keasbey,
- N HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209.
- Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y. Mykroy Inc., Arlington Hts. Airport, Arlington Hts., Ill.
- Hydroy Mc, Arington Teta, Tarper, Jong Teta, His, Ill.
   Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa.
   Reister Mfg. Co., Hagerstown, Md.
   Star Porcelain Co., 61 Muirhead Ave., Trenton
- 9. N. J.
- Steward Mfg. Co., D. M., Chattanooga, Tenn. Wisconsin Porcelain Co., Sun Prairie, Wisconsin

# Stampings & Punchings—Fibre

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. ART-LLOYD METAL PRODS.
- Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- Auburn Mfg. Co., Middletown, Conn. Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
- Brandywine Fibre Co., 15th & Poplar Sts., Wilmington, Del.
- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122.
- Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.
- 44, Pa. Electrical Insulation Co., Inc., 12 Vestry St., New York 13, N. Y. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. Federal Tool & Mfg. Co., 3600 Alabama Ave., Co. Luis Perk Miraconclis 16 Minn
- Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Louis Park, Minneapolis 16, Minn.
  Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
  Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  Gasket Engineering Co., 2440 Charlotte St., Kan-sas City 8, Mo.

- sas City 8, Mo. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209. Huse Liberty Mica Co., 171 Camden St., Bos-
- ton. Mass.
- Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. Insulating Fabricators, Inc., 12 E. 12th St., New
- York 3, N. Y. INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. 137.
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- La Magna Mfg. Co., Inc., East Rutherford, N. J. Lamicoid Fabricators, Inc., 4545 Cortland St.,
- Lamicoid Fabricators, Inc., 4045 Cortiand St., Chicago 39, II.
  Lansky Die Cutting Co., 192½ Greene St., New York 12, N. Y.
  Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, III.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
  Moore Co., Howard J., 108 Park Row, New York 7, N. Y.

- National Gasket & Washer Mfg. Co., 122 E. 25th St., New York 10, N. Y.
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa.
  Precision Fabricators Inc., Roosevelt Rd., E.

- Initia St., Finderprik Fr., Fa., Rossevelt Rd., E. Rochester, N. Y.
  Reister Mfg. Co., Hagerstown, Md.
  Rogers Corp., Manchester, Conn.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
  Sperman Metal Specialties, 27 Columbia Place, Brooklyn 2, N. Y.
  STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.
  Synthane Corp., Oaks, Pa.
  Taylor Fibre Co., Norristown, Pa.
  Willard's, Hampden, Mass.
  Willmington Fibre Specialty Co., P. O. Drawer 1028, Willmington 99, Del.

Stampings & Punchings—Paper—Mica

Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Aldine Paper Co., Inc., 535 5th Ave., New York

Asheville Mica Co., 900 Jefferson Ave., Newport

News, Va. Auburn Mfg. Co., Middletown, Conn. Brandywine Fibre Co., 15th & Poplar Sts., Wil-

Cole Instrument Co., 1320 S. Grand Ave., Los

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Electrical Insulation Co., Inc., 12 Vestry St., New York 13, N. Y.
Electro-Technical Products Div., Sun Chemical Corp., Nutley 10, N. J.
Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Louis Park, Minneapolis 16, Minn.
Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
INSULATION MANUFACTURERS CORP., 565 W.
Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.

Ave., Long Island City, N. T. SEE ADV. PG. 80.
Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J.
Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill.
Lansky Die Cutting Co., 192½ Greene St., New York 12, N. Y.
Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
National Gasket & Washer Mfg. Co., 122 E. 25th St., New York 10, N. Y.
NATIONAL VARNISHED PRODUCTS CORP., THE, 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117.
Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa.
Precision Fabricators, Inc., Roosevelt Rd., E. Rochester, N. Y.

Precision Fabricators, and Rochester, N. Y. Rogers Corp., Manchester, Conn. Volkert Metal Stampings, Inc., John, 141 Spencer C. Brooklyn 5, N. Y.

St., Brooklyn 5, N. Y. Willard's, Hampden, Mass. Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Acme Wire Co., New Haven 14, Conn. Aldine Paper Co., 535 5th Ave., New York 17, N. Y.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Anchor Webbing Co., P. O. Box 1624, Provi-

Tapes, Insulating

dence, R. I.

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Huse Liberty Mica Co., 171 Camden St., Bos-

17, N.

mington, Del.

Rockford, Ill.

80.

- BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
  Brown-Bridge Mills Inc., Troy, Ohio
  Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
  CONTINENTAL DIAMOND FIBRE CO., 16
  Chapel St., Newark 16, Del. SEE ADV. PGS. 119,122 119-122.
- Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill. Dobeckmun Co., The, Industrial Products Div., Cleveland 1, Ohio du Pont de Nemours & Co., Inc., E. I., Wilming-ton 98, Del
- ton 98, Del. Electro-Technical Products Div., Sun Chemical
- Corp., Nutley 10, N. J. General Cement Mfg. Co., 919 Taylor Ave.,

- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Hope Webbing Co., Providence 1, R. I. Industrial Synthetics Corp., 225 North Ave., Garwood, N. J. Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y. INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.

- Washington Blvd., Chicago o, III. SEE ADV. PG. 137. Interstate Mfg. Corp., 138 Sussex Ave., New-ark 4, N. J. Irvington Varnish & Insulator Co., 10 Argyle Terr., Irvington 11, N. J. Linton & Bros. Inc., Horace, 3081 Ruth St., Philadelphia 34, Pa. Macallen Co., The, 16 Macallen St., Boston 27, Mass.
- Miass. 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. SEE ADV. PG.
- 54.
- National Electric Coil Co., Columbus 16, Ohio NATIONAL VARNISHED PRODUCTS CORP., 211 Randolph Ave., Woodbridge, N. J. SEE ADV.
- Randon Ave., Woodoridge, N. J. SEE ADV. PG. 117.
  Okonite Co., Canal St., Passaic, N. J.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa.
  Plax Corp., P. O. Box 1019, Hartford, Conn.
  Ruberoid Co., The, 500 Fifth Ave., New York 18 N V.
- 18, N. Y.
- 13, N. 1.
  Surprenant Mfg. Co., 199 Washington St., Boston 10, Mass.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  Wright & Sons Co., Wm. E., West Warren, Mass Mass.

# INSULATORS—Antenna Insulators & Spring Assemblies

- Aeronautical Radio Mfg. Co., 155 First Street,
- Mineola, N. Y. **AMERICAN LAVA CORP.**, Chattanooga 5, Tenn. SEE ADV. PG. 97. General Ceramics & Steatite Corp., Keasbey,
- Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- INSULINE CORP. OF AMERICA, 36.02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy,
- N. Y Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md.
- Md. Mykroy Inc., Arlington Hts. Airport, Arling-ton Hts., Ill. National Electronic Mfg. Corp., 35-05 36th St., Long Island City, N. Y. PREMAX PRODS. DIV., Chisholm-Ryder Co. Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44. Technical Appliance Corp., Sherburne, N. Y. Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio

## **INSULATORS**----Can Liner

- Acme Folding Box Co. Inc., 141 E. 25th St., New York, N. Y.
   Auburn Mfg. Co., Middletown, Conn.
   Lamicoid Fabricators, Inc., 4545 Cortland St.,
- Chicago 39, Ill.

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Mica Insulator Co., Schenectady 1, N. Y. Moore Co., Howard J., 108 Park Row, New York 7, N. Y. PRECISION PAPER TUBE CO., 2033 W. Charles-ton St., Chicago 47, Ill. SEE ADV. PG. 112. Rogers Corporation, Manchester, Conn. Willard's, Hampden, Mass.

# INSULATORS—Ceramic

- CINCRILAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE. ADV. PGS. 26, 27.
- Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Cook Ceramic Mfg. Co., 501 Prospect St., Tren-
- ton 1, N. J. Crowley & Co. Inc., Henry L., 1 Central Ave., West Orange, N. J.
- Electrical Refractories Co., 50 Clark St., E. Pa-
- lestine, Ohio General Ceramics & Steatite Corp., Keasbey,
- N. J. INSULINE CORP. OF AMERICA, 36.02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Johnson Co., E. F., Waseca, Minn. Kirchberger & Co. Inc., M., 1425 37th St., Brooklyn 18, N. Y. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y. Locke Incorporated, P. O. Box 57, Baltimore 3, Md.

- Md.
- Mica Fabricating Co., 53 Central Ave., Rochelle
- Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
  Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
  MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124, 125.
  Mykroy Inc., Arlington Hts. Airport, Arlington Hts., Ill.
  National Electronic Mfg. Corp., 35-05 36th St., Long Island City 5, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
  Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y.

- Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y.
  Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
  Steward Mfg. Co., D. M., Chattanooga, Tenm.
  STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.
  Technical Appliance Corp., Sherburne, N. Y.
  United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# INSULATORS—Feeder Spreader

- AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE. ADV. PGS. 26, 27. Consolidated With Advisory Consol
- Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. General Ceramics & Steatite Corp., Keasbey,
- NJ
- N. J. Johnson Co., E. F., Waseca, Minn. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y. Locke Incorporated, P. O. Box 57, Baltimore 3, Md.
- Millen Mfg. Co., James, 150 Exchange St., Mal-
- Millen Mrg. Co., James, 190 Exchange St., Mar-den, Mass.
   Mykroy Inc., Arlington Hts. Airport, Arling-ton Hts, Ill.
   NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS, 105-108.
   Printloid, Inc., 95 Mercer St., New York, N. Y.
   STUPAKOFF CERAMIC & MFG. CO., Latrobe, De SEF ADV. PG, 78
- Pa. SEE ADV. PG. 78.

# INSULATORS-Fused Quartz

- Amersil Co., Inc., Hillside, N. J. Hanovia Chemical & Míg. Co., 233 N. J. RR Ave., Newark, N. J. Mica Fabricating Co., 53 Central Ave., Rochelle Pack. V. J.
- Park, N. J.

Syncor Products Co., Malden, Mass.

# INSULATORS-High Dielectric Poper

- Auburn Mfg. Co., Middletown, Conn. Brandywine Fibre Co., 15th & Poplar Sts., Wilmington, Del. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill. Huse Liberty Mica Co., 171 Camden St., Bos-
- ton. Mass INSULATION MANUFACTURERS CORP., 565 W Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137,
- Mica Fabricating Co., 53 Central Ave., Rochelle
- Park, N. J. Moore Co., Howard J., 108 Park Row, New York 7, N. Y. Precision Fabricators, Inc., Roosevelt Rd. E.
- Rochester, N. Y. Rogers Corp., Manchester, Conn.

Willard's, Hampden, Mass.

# INSULATORS-Mast Guy

CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE. ADV. PGS. 26, 27.

General Ceramics & Steatite Corp., Keasbey,

N. J. INSULATION MFG. CO., 11 New York Ave., Brooklyn, N: Y. SEE ADV. PG. 137. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Johnson Co., E. F., Waseca, Minn. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.

Technical Appliance Corp., Sherburne, N. Y.

INSULATORS-Passthrough & Bushing AMERICAN LAVA CORP., Chattanooga 5, Tenn.

AMERICAN LAVA CORF., Chattanooga 5, Tenn. SEE ADV. PG. 97. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington, Del.

mington, Del. BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG. 178. CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.

Consolidated Wire & Associated Companies, 1635

S. Clinton St., Chicago 16, Ill. Cook Ceramic Mfg. Co., 501 Prospect St., Tren-

ton 1, N. J. Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J. General Ceramies & Steatite Corp., Keasbey,

N. J. HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark, N. J. SEE ADV. PG. 223. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Interstate Mfg. Corp., 138 Sussex Ave., New-ark 4, N. J. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Johnson Co., E. F., Waseca, Minn. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.

Locke Incorporated, P. O. Box 57, Baltimore 3,

Md. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124, 125.

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N. Y

Locke Incorporated, P. O. Box 57, Baltimore 3, Md.

National Electronic Mfg. Corp., 35-05 36th St., Long Island City, N. Y. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.

# INSULATORS

# 1949-1950 DIRECTORY of

- Mykroy Inc., Arlington Hts. Airport, Arlington Hts., 111.
- NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Printloid, Inc., 95 Mercer St., New York, N. Y. Radiocrafters, 1156 Commonwealth Ave., Bos-
- Radiocrafters, 1156 Commonwealth Ave., Bos-ton 34, Mass. Technical Appliance Corp., Sherburne, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## INSULATORS—Standoff & Cone

- AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. SEE ADV. PG. 167.
  BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
  CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178.
  CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE. ADV. PGS. 26, 27.
- 27 Cook Ceramic Mfg. Co., 501 Prospect St., Tren-
- ton I, N. J. Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- General Ceramics & Steatite Corp., Keasbey, N
- HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark, N. J. SEE ADV. PG. 223. Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- N
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Interstate Mfg. Corp., 138 Sussex Ave., Newark
- Interstate Mig. Corp., 136 Sussex Ave., Remain 4, N. J.
   J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
   Johnson Co., E. F., Waseca, Minn.
   La Magna Mig. Co., Inc., East Rutherford, N. J. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N V
- N
- Locke Incorporated, P. O. Box 57, Baltimore 3, Md.
- Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. Mueller Electric Co., 1583 E. 31st St., Cleveland 14, Ohio
- Mykroy Inc., Arlington Hts. Airport, Arlington Hts, Ill.

- Hts, Ill. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44. Printloid, Inc., 95 Mercer St., New York, N. Y. Steward Mig. Co., D. M., Chattanooga, Tenn. STUPAKOFF CERAMIC & MFG. CO., Latrobe, De SEE ADV. PG. 78

- SIUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78. Technical Appliance Corp., Sherburne, N. Y. Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio Winchester Electronics Co., The, 6 East 46th St., New York 17, N. Y.

# INSULATORS-Strain

D-78

- Aeronautical Radio Mfg. Co., 155 First St., Mineola, N. Y. Alden Products Co., 117 No. Main St., Brockton
- Alden Fronters Co., 2019 64, Mass. AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington, Del. 2019 BIV., Globe Union, Inc., 900 Keefe
- CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26,
- Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Cook Ceramic Mfg. Co., 501 Prospect St., Tren-ton 1, N. J. Correiro Cher. Wirkson, Co.

- ton 1, N. J. Corning Glass Works, Corning, N. Y. Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- Ceramics & Steatite Corp., Keasbey, General N. J.

- Insulation Mfg. Co., 11 New York Ave., Brooklyn, N
- N. Y. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Interstate Mfg. Corp., 138 Sussex Ave., New-ark 4, N. J. J. F. D. MFG. CO., 6101-23 Sixteenth Ave.. Brooklyn, N. Y. SEE ADV. PG. 112. Johnson Co., E. F., Waseca, Minn. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y. Lacke Learnersted P. O. Box 57. Baltimore 3

- Locke Incorporated, P. O. Box 57, Baltimore 3, Md.
- Macallen Co., The, 16 Macallen St., Boston 27, Mass.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- den, Mass. Mykroy Inc., Arlington Hts. Airport, Arlington Hts., Ill. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y. Steward Mfg. Co., D. M., Chattanooga, Tenn. STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa SFF ADV PG 78
- Pa. SEE ADV. PG. 78. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## INSULATORS-Test Clip

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- Industrial Devices Inc., 22 State Road, Edge-N. water
- water, N. J. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Mueller Electric Co., 1583 E. 31st Street, Cleveland 14, Ohio

#### **INSULATORS**—Thermocouple

- AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
- Ceramics & Steatite Corp., Keasbey, General
- N. J. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Lewis Engineering Co., 52 Rubber Ave., Nauga-
- Lewis Engineering Co., 52 Rubber Ave., Radge-tuck, Conn. Minneapolis Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn. Mykroy, Inc., Arlington Hts. Airport, Arlington Hts., Ill.
- Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass. Steward Mfg. Co., D. M., Chattanooga, Tenn. STUPAKOFF CERAMIC & MFG. CO., Latrobe,
- Pa. SEE ADV. PG. 78.
- Pa. SEE ADV. PG. (8.
  Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
  Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.

## INSULATORS—Tower

- Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md.

## **INSULATORS**—Transmitting Antenna

- AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. CENTRALAB DIV., Globe
- ENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
- 26, 27. Corning Glass Works, Corning, N. Y. General Ceramics & Steatite Corp., Keasbey, N. J. Johnson Co., E. F., Waseca, Minn. Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

- Mykroy, Inc., Arlington Hts. Airport, Arlington
- Mykroy, Inc., Arlington Hts. Airport, Arington Hts., Ill. PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. STUPAKOFF CERAMIC & MFG. CO., Latrobe, D. C. ADV. DC. 70.
- Pa. SEE ADV. PG. 78. Ward Products Corp., Div. of the Gabriel Corp., 1523 E. 45th St., Cleveland 3, Ohio

# INTEGRATORS—Electronic

- American Electroneering Co., 2112 S. La Brea
- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  ATOMIC INSTRUMENT CO., 160 Charles St., Bos-ton, Mass. SEE ADV. PG. 200.
  Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
  Eckert-Mauchly Computer Corp., 3747 Ridge Ave., Philadelphia 32, Pa.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterbore, N. J.

- Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  O'Connor & Co., John T., West Orange, N. J.
  Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
  Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
  Standard Electronics Research Corp. 2 East End

- Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.

Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.

# INTERCOMMUNICATION SYSTEMS

- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
  AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  Bell Sound Systems, Inc., 555 Marion Rd., Col-umbus 7, Ohio
  Bendix Radio Div., Bendix Aviation Corp., Balti-more 4. Md.
- Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  Bogen Co., David, 663 Broadway, New York 12, N. Y.
  Boom Electric & Amplifier Co., 1227 W. Washington Blvd., Chicago 7, Ill.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y.
  Communicating Systems Inc., 203 E. 18th St.,

Ave., New York 22, N. I. Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y. Connecticut Telephone & Electric Div., Great American Industries, 70 Brittania St., Meriden,

American Industries, 70 Brittania St., Meriden, Cooper Electronic Products Co., 5106 Frankford Ave., Phila. 24, Pa. Dalmo Victor Co., San Carlos, California Electronic Engineers, 1039 B Pacific St., Santa Monica, Calif. Electronic Labs. Inc., 24 W. 24th St., Indianapolis 4 Indiana

Electronic Systems Co., 201 N. Wells Ave., Chi-cago 1, Ill.

Executione Inc., 415 Lexington Ave., New York 17, N. Y.

Godfrey Mfg. Co., 171 S. 2nd St., Milwaukee 4,

Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.

Lake Mfg. Co., 2323 Chestnut St., Oakland 7, Calif.

Loge Sound Engineers, J. M., 2171 W. Washing-ton Blvd., Los Angeles 7, Calif. Lyman Electronic Corp., 12 Cass St., Springfield,

Mass. Miles Reproducer Co. Inc., 812 Broadway, New York 3, N. Y. National Intercommunicating Systems, 1531 Devon Ave., Chicago 26, Ill. Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.

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4, Indiana

Wis.

RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rauland-Borg Corp., 4245 N. Knox Ave., Chicago

**ELECTRONIC and ALLIED PRODUCTS** 

41, Ill.

41, Ill.
Ripley Co., Inc., P. O. Box 31, Middletown, Conn. St. Louis Microphone Co., 2726-28 Brentwood Blvd., St. Louis 17, Mo.
SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., L. I. City 3, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
Stark Sound Engineering Co., 2131 Fairfield, Ft. Wayne 7, Ind.
Talk-A-Phone Mfg. Co., 1512 S. Pulaski Rd., Chi-

- Talk-A-Phone Mfg. Co., 1512 S. Pulaski Rd., Chi-
- cago 23, Ill. Cago 23, 10. Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y. Telephonics Corp., 350 W. 31st St., New York 1,
- N. Y.
- U. S. Instrument Corp., 409 Broad St., Summit, N. J.
- Webster Electric Co., 1900 Clark St., Racine, Wis.
- Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis. Weston Laboratories, Weston 93, Mass.
- INVERTERS
- Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md. AMERICAN TELEVISION & RADIO CO., 300 E.
- Fourth St., St. Paul 1, Minn. SEE ADV. PG.
- CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Cook Electric Co., 2700 Southport Ave., Chicago,
- HI
- Eclipse-Pioneer Div., Bendix Aviation Corp.,
- Teterboro, N. J. Ecicor, Inc., 1501 W. Congress St., Chicago 7, Ill. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
- Electronic Control Corp., 1573 E. Forest St., Detroit, Mich. Electronic Laboratories, Inc., 24 W. 24th St.,
- Electronic Laboratories, Inc., 24 w. 24th St., Indianapolis 4, Ind.
   Electronic Specialty Co., 3456 Glendale Blvd., Los Angeles, Calif.
   GENERAL ELECTRIC CO., Schenectady 5, N. Y.
   SEE ADV. PGS. 5-18.
   1015 G. Chelson St.
- Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
- Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Leland Electric Co., The, 1501 Webster St., Day-
- ton 1, Ohio Lynch Co., F. W., 151 2nd St., San Francisco,
- Calif. Miles Reproducer Co., Inc., 812 Broadway, New
- York 3, N. Y. Mission Electric Mfg. Co., 132 W. Colorado Blvd.,
- Mission Electric Mig. Co., 152 W. Cobrado Bivd., Pasadena, Calif. Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y. Norrman Labs., Ernst, Williams Bay, Wis. Radiart Corp., The, 3571 W. 62nd St., Cleveland 2 Okt.

- Radiart Corp., The, 3571 W. 62nd St., Cleveland 2, Ohio
  Radio Mfg. Engineers Inc., 300-06 First Ave., Peoria 6, Ill.
  Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio
  SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211.
  Varo Mfg. Co., Inc., Box 638, Garland, Texas
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66
- 868, P 66, 67.

#### **IRONS**—Electric Soldering

- Acme Electric Heating Co., 1217 Washington St., Boston, Mass. American Electrical Heater Co., 6110 Cass Ave.,
- Detroit 2, Mich. Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.
- ELECTRONICS BUYERS' GUIDE June, 1949 MID-MONTH

- Dual Remote Control Co., Garden City, Mich. Eagle Electric Co., Inc., 23-10 Bridge Plaza S., L. I. City, N. Y.
- EISLER ENGINEERING CO., INC., 740 S. 13th

- EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 192.
  ELECTRIC SOLDERING' IRON CO., W. Elm St., Deep River, Conn. SEE ADV. PG. 30.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Hexacon Electric Company, 130 W. Clay Ave., Roselle Park, N. J.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  Jackson Electro Corp., 124 Bleeker St., New York, N. Y.
- York, N. Y. Kelnor Mfg. Co., 215 Kearny St., San Francisco 8, Calif
- Kemode Mfg. Co., 161 W. 18th St., New York 11, N. Y.
- Kwikheat Mfg. Co., 3722 San Fernando Road, Glendale 4, Calif. Lenk Mfg. Co., 30 Cummington St., Boston 15,
- Mass. Luma Electric Equipment Co., P. O. Box 132,
- Toledo 1, Ohio Multi-Products Tool Co., 123 Sussex Ave., New-
- Multi-Products Tool Co., 123 Sussex Ave., Newark 4, N. J.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Stanley Works, The, New Britain, Conn.
  TRANSVISION, INC., 460 North Ave., New Rochelle, N. Y. SEE ADV. PG. 172.
  Ungar Electric Tools, Inc., 615 Ducommun St., Los Angeles 54, Calif.
  Vasco Electrical Mfg. Co., 4116 Avalon Blvd., Los Angeles, Calif.
  VULCAN ELECTRIC CO., 88 Holten St., Dan-

- VULCAN ELECTRIC CO., 88 Holten St., Dan-vers, Mass. SEE ADV. PG. 88. Waage Electric Inc., 54 Park Pl., New York 7,
- ν N
- Weller Mfg. Co., 806 Packer St., Easton, Pa.

#### **ISOLATION COUPLER-f-m Antenna**

- Johnson Co., E. F., Waseca, Minn. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
- PGS. 197, Inside Back and Back Covers. Ward Products Corp., Div. of the Gabriel Co., 1523 E. 45th St., Cleveland 3, Ohio

## ISOTOPES—Radioactive

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Isotopes Div., Atomic Energy Commission, Oak
- Ridge, Tenn

### JACKS

See Plugs and Jacks

### JEWELS—Glass

- Bird Co., Richard H., 1 Spruce St., Waltham, Mass.
- DIAL LIGHT CO. OF AMERICA, INC., 900 Broadway, New York 3, N. Y. SEE ADV. PG. 220
- GENERAL ELECTRIC CO., Chemical Dept., Pittsfeld, Mass. SEE ADV. PGS. 5-18. Johnson Co., E. F., Waseca, Minn. Kilburn Glass Co., Inc., J. R., 22 S. Worcester
- St., Chartley, Mass. Kopp Glass Inc., 1 E. 42nd St., New York 17, Y
- Smith, Inc., Herman H., 405-44th St., Brooklyn 20, N. Y. Walco Sales Co., 60 Franklin St., East Orange,
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.
- 66, 67.

## JUMPERS—Bonding

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
  Aeronautical Radio Mfg. Co., 155 First St., Mineola, L. I., N. Y.
  American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Columbus Electronics Corp., 229 S. Waverly St., Yonkers, N. Y.

Rattan Mfg. Co., The, 10 Wall St., New Haven 7, Conn Whitaker Cable Corp., Kansas City 16, Mo.

KLYSTRON

## **KEYERS & COUPLERS**

- Boehme Inc., H. O., 915 Broadway, New York, N.Y
- Erco Radio Labs., Inc., E. Stewart Ave., Garden
- Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
  Gates Radio Co., Quincy, Ill.
  McElroy Mfg. Corp., Littleton, Mass.
  NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Schuttig & Co., Jnc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

## **KEYS & CODING EQUIPMENT**

- Alden Products Co., 117 No. Main St., Brockton 64. Mass.
- Boehme Inc., H. O., 915 Broadway, New York,
- CHATHAM ELECTRONICS CORP., 475 Washing-ton St., Newark 2, N. J. SEE ADV. PG. 28. Corona Engineering Service, 94-52 Corona Ave.,
- Einhurst, N. Y. Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- N. Y. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Johnson Co., E. F., Waseca, Minn. Telephonics Corp., 350 West 31st St., New York
- N. Y.
- Vibroplex Co., Inc., 833 Broadway, New York,
- Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

Assembly Products, Inc., Chagrin Falls 6, Ohio BALLANTINE LABS. INC., Boonton, N. J. SEE

**BETA ELECTRONICS CO.**, 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126. Bradshaw Instruments Co., 348 Livingston St.,

Brooklyn 17, N. Y. Cole Instrument Co., 1320 S. Grand Ave., Los

Angeles 15, Calif. De Jur-Amsco Corp., Northern Blvd. at 45th St., L. I. C. 1, N. Y.

Douglas Radio Labs., 40 Wayland St., Boston 25,

Electric Design & Mfg. Corp., Burlington, Iowa Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska ELECTRONIC MEASUREMENTS CO., Red Bank,

ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
Heath Co., Benton Harbor, Mich.
Hickok Electrical Instrument Co. 10514 Dupont

Hickok Electrical Instrument Co., 10514 Dupont

Incook Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
 Johnson Co., E. F., Waseca, Minn.
 MARION ELECTRICAL INSTRUMENTS CO., Manchester, N. H. SEE ADV. PG. 79.
 Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Indianapolis 20,

Ind.
 Rawson Electrical Instrument Co., 110 Potter
 St., Cambridge 42, Mass.
 Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.

Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

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### **KILOVOLTMETERS**

ADV PG 134

Mass.

Ind.

KLYSTRON

See Tubes

# **KNOBS**

# KNOBS-Plastic Molded

- Alden Products Co., 117 No. Main St., Brockton 64, Mass. American Hard Rubber Co., 11 Mercer St., New
- York 13, N. Y
- American Insulator Corp., New Freedom, Pa. Birnbach Radio Co. Inc., 145 Hudson St., New Birnbach, Ratio Co. And, T.C. The Strength of Strength of

- 1, Ohio Catalin Corp. of America, 1 Park Ave., New York
- Catain Corp. of America, 1 Park Ave., New York 16, N. Y. Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill. Consolidated Molded Products Corp., Scranton 2,
- Pa. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Davies Molding Co., Harry, 1428 N. Wells St.,
- S. Clinton St., Chicago 16, Ill. Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill. Diemolding Corp., Rasbach St., Canastota, N. Y. Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. General Cement Mfg. Co., 919 Taylor Ave., Rock-ford. Ill.

- ford, Ill. GENERAL ELECTRIC CO., Chemical Dept., Pitts-
- GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  Gordon Specialties Co., 542 S. Dearborn St., Chicago 5, Ill.
  Hollymade Hardware & Mfg. Co., 4865 Exquisition Blvd., Los Angeles, Calif.
  Hopp Press Inc., 460 W. 34th St., New York, N. Y.
- Y Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- N. Y.
   J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
   Johnson Co., E. F., Waseca, Minn.
   Kurz-Kasch, Inc., 1415 S. Broadway, Dayton 1,
- Ohio
- Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Midwest Molding & Mfg. Co., 319 N. Whipple St., Chicago 12, Ill.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass
- den, Mass. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Norton Labs., Inc., Lockport, N. Y. Owens-Illinois Glass Co., Toledo 1, Ohio Radiocrafters, 1156 Commonwealth Ave., Boston 24 Mass.

- 34, Mass.
- Reiner Electronics Co., 152 W. 25th St., New
- York, N. Y. Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
- Richardson Co., The, Melrose Park, Ill. Rogan Bros., 2500 W. Irving Pk., Chicago 18,
- Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. Stokes Molded Products, Inc., Taylor St. at Web-
- ster, Trenton, N. J. Taylor Mfg. Co., 3056 W. Meinecke Ave., Mil-waukee 10, Wisc.
- U. S. Instrument Corp., 409 Broad St., Summit, N. J.
- Waterbury Companies, Inc., Waterbury 90, Conn. Watertown Mfg. Co., The, Watertown, Conn.

#### KNOBS-Wooden

- Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.

Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. Syracuse Ornamental Co., Inc., 581 S. Clinton

St., Syracuse, N. Y.

#### LACQUER

See Insulating Compounds

#### LAMINATIONS—Transformer

- Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa. Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind.
- Brandywine Fibre Co., 15th & Poplar Sts., Wilmington, Del.

- Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y. Eastern Specialty Co., Philadelphia 40, Pa. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209
- KOBZY TOOL CO., 1535 N. Dayton Ave., Chi-cago 22, Ill. SEE ADV. PG. 205. Loral Electronics Corp., 794 E. 140th St., New
- York 54, N. Y. Magnetic Metals Co., Hayes Ave. at 21st St.,
- Camden, N. J. Magnetic Products Corp., The, Norwalk, Conn. Masonite Corp., 111 W. Washington St., Chicago TIL

- 2, 11.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Phila. 44, Pa.
  PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230.
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tona-wanda, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33. PG. 33.
- Thomas & Skinner Steel Products Co., 1122 E. 23rd St., Indianapolis, Ind. Webster-Chicago Corp., 5622 Bloomingdale Ave.,
- Chicago 39, III. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

# LANDING SYSTEMS-Microwave

- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

#### LEADS—Test

- Aerolite Electronic Hardware Corp., 24 Cliff St .. Jersey City, N. J. Alden Products Co., 117 No. Main St., Brockton
- 64, Mass. Alpha Wire Corp., 50 Howard St., New York,
- Y. Booth Co., Arthur E., 307 E. 3rd St., Los An-
- geles, Calif. BUD RADIO INC., 2118 E. 55th St., Cleveland 3,
- Ohio. SEE ADV. PG. 19. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
- Douglas Radio Labs., 40 Wayland St., Boston 25,
- Mass. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill
- Industrial Devices Inc., 22 State Rd., Edgewater,
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- Ave., Long total 80. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.

1949-1950 DIRECTORY of

- Pacific Electricord Company, 9304 Santa Monica Blvd., Beverly Hills, Calif.
  Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
  Reiner Electronics Co., 152 W. 25th St., New York N. Y.
- York, N. Y Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
- Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

#### LEATHERETTE

Auburn Mfg. Co., Middletown, Conn. General Cement Mfg. Co., 919 Taylor Ave.,

- Rockford, Ill.
- . S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y. U.

#### LENSES—Television Magnifying

- Aim Industries, 41 Union Square, New York 3, N. Y.
- Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
- N. 1. 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. Celomat Corp., 521 W. 23rd St., New York, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill.
- Iord, III.
  House of Television, 601 W. 26th St., New York, N. Y.
  Hunton Plastics Co., 178 S. Van Brunt St., Englewood, N. J.
  Inland Plastic of America, Inc., 20 W. 30th St., New York, N. Y.
  Polan Industries, 220 Fighth, St., Huntington
- Polan Industries, 220 Eighth St., Huntington,

W. Va. Precision Plastic Products Inc., 628-30 W. Lake

Freetsion Flashe Flourers Inc., 626'50' W. Lake St., Chicago 6, Ill. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back and Back Covers. The W. Devision of Control Control Statements of Neuroperiod Neuroperiod Statements (Neuroperiod) (N

Thall Engineering Co., 155 Chambers St., New

York Ň Y

York, N. Y. TRANSVISION INC., 460 North Ave., New Ro-chelle, N. Y. SEE ADV. PG. 172. Urison Brothers, 2077 Coney Island Ave., Brook-lyn 23, N. Y. Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa. Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

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.

12, Fa.
Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
Kilburn Glass Co., Inc., J. R., 22 S. Worcester St. Chartley Mass

St., Chartley, Mass. Polan Industries, 220 Eighth St., Huntington, W. Va.

RADIO CORP. OF AMERICA, RCA Victor Div.

RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
SPELLMAN TELEVISION CO., INC., 2898 Jerome Ave., New York, N. Y. SEE ADV. PG. 58.
Viewlex Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 34, Pa.
Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

Associated Research, Inc., 3758 W. Belmont, Chicago 18, Ill. Inductograph Laboratory, Box 76, Brookfield,

LIE DETECTORS-Electronic

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Conn.

**LENSES**—Television Projection

## LIGHTNING ARRESTORS

See Arrestors

## LIGHTS-Dial and Panel

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alden Products Co., 117 No. Main St., Brockton
- 64. Mass
- American Electronics Corp., 226 N. Fourth St.,

- American Electronics Corp., 226 N. Fourth St., Columbus, Ohio
  BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
  Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
  DIAL LIGHT CO. OF AMERICA, INC., 900 Broadway, New York 3, N. Y. SEE ADV. PG. 220.
  DRAKE MEG. CO., 1712 Unthead St. Cont
- DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. SEE ADV. PG. 58. Federal Screw Products Inc., 224 W. Huron St.,
- Chicago 10, 111, Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
- GENERAL ELECTRIC CO., Nela Park, Cleveland 12, Ohio. SEE ADV. PGS. 5-18. Hart Mfg. Co., 110 Bartholomew Ave., Hartford
- Hart Mig. Co., 110 Bartholomew Ave., Hartford 1, Conn.
  Johnson Co., E. F., Waseca, Minn.
  Kirkland Co., H. R., The, 8 King St., Morris-town, N. J.
  Littelfuse, Inc., 4757 Ravenswood Ave., Chicago 40, Ill.
- Marco Industries, 210 S. Clementine, Anaheim, Calif.
- Maritime Quality Hardware Co., Inc., Belfast, Me. Micarta Fabricators Inc., 5324 Ravenswood Ave.,
- Chicago 40, Ill. National Union Radio Corp., 350 Scotland Rd., Orange, N. J. RADIO CORP. OF AMERICA, RCA Victor Div
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Searle Aero Industries, Inc., Orange, Calif. Smith, Inc., Herman H., 405 44th St., Brooklyn
- 20. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- TUNG-SOL LAMP WORKS, INC., 95 Eighth Ave.,
- Newark 4, N. J. SEE ADV. PG. 75. Ucinite Co., The, Div. United-Carr Fastener Corp.,
- 459 Watertown St., Newtonville, Mass. United Carr Fastener Corp., Cambridge 42, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.

## LIGHTS-Photoelectric Source

66, 67.

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y.
- Alden Products Co., 117 No. Main St., Brockton Alden Floduces Co., 117 No. main Sc., Dioexon 64, Mass.
   Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
   Ess Instrument Co., 96 So. Washington Ave.,
- Bergenfield, N. J. Fisher-Pierce Co., Inc., The, 70 Ceylon Street, Boston 21, Mass.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Lumenite Electric Co., 407 So. Dearborn St.,
- Chicago, Ill. O'Connor & Co., John T., West Orange, N. J. Photoswitch, Inc., 77 Broadway, Cambridge 42,
- Mass.
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
   Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67
- 67

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Worner Electronic Devices, Rankin, Ill.

## LIGHTS-Pilot

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Aerolux Light Corp., 653 11th Ave., New York
- 19, N. Y. Alden Products Co., 117 No. Main St., Brockton
- 64, Mass. American Electronics Corp., 226 No. Fourth St.,

- American Electronics Corp., 220 No. Fourth St., Columbus, Ohio
  Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
  D. & M. Mfg. Co., 2 Delford Ave., Bergenfield, N. J.
  DIAL LIGHT CO. OF AMERICA, INC., 900 Broadway, New York 3, N. Y. SEE ADV. PG. 290
- DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. SEE ADV. PG. 58.
- Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  General Cement Mfg. Co., 919 Taylor Ave., Rock-ford Ill
- Ill. ford.
- GENERAL ELECTRIC CO., Nela Park, Cleveland 12, Ohio. SEE ADV. PGS. 5-18. Hart Mfg. Co., 110 Bartholomew Ave., Hartford
- 1, Conn. Industrial Devices Inc., 22 State Rd., Edgewater, N. J.
- Johnson Co., E. F., Waseca, Minn.
- Kilburn Glass Co., Inc., J. R., 22 S. Worcester St., Chartley, Mass. Kirkland Co., H. R., The, 8 King St., Morris-town, N. J.
- Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y. Littelfuse Inc., 4757 Ravenswood Ave., Chicago
- 40. Ill. Lumenite Electric Co., 407 S. Dearborn St., Chi-
- cago, Ill. Marco Industries Co., 210 So. Clementine, Ana-
- heim, Calif. Maritime Quality Hardware Co., Inc., Belfast, Me. Micarta Fabricators, Inc., 5324 Ravenswood Ave.,
- Chicago 40, Ill.
- North American Electric Lamp Co., 1014 Tyler
- North American Electric Lamp Co., 1014 Tyler St., St. Louis 6, Mo. Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y. SYLVANIA ELECTRIC PRODS., INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. United Carr Fastener Corp., Cambridge 42, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box
- ESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66. 67.

## LIGHTS-Signal

- Aerolite Electronic Hardware Corp., 24 Cliff St., Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
  Autocall Co., The, Shelby, Ohio
  Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
  Cannon Electric Development Co., 3209 Hum-boldt St., Los Angeles 31, Calif.
  DIAL LIGHT CO. OF AMERICA, INC., 900 Broad-way, New York 3, N. Y. SEE ADV. PG. 220.
  DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, III. SEE ADV. PG. 58.
  Ewart & Koch, 15 Brattle St., Cambridge 38, Mass.

- Mass
- General Cement Mfg. Co., 919 Taylor Ave., Rock-
- GENERAL ELECTRIC CO., Nela Park, Cleveland 12, Ohio. SEE ADV. PGS. 5-18. Johnson Co., E. F., Waseca, Minn. Kemlite Labs., 1819 W. Grand Ave., Chicago 22, 10
- III.
- Kilburn Glass Co., Inc., J. R., 22 S. Worcester Kindin Glass Co., H., J. R., 22 S. Worcester St., Chartley, Mass. Kirkland Co., H. R., The, 8 King St., Morris-town, N. J.
- Marco Industries Co., 210 So. Clementine, Ana-heim, Calif.
- Maritime Quality Hardware Co., Inc., Belfast, Me. North American Lamp Co., 1014 Tyler St., St. Louis 6, Mo.

Searle Aero Industries, Inc., Orange, Calif. United Carr Fastener Corp., Cambridge 42, Mass. Western Union Telegraph Co., 60 Hudson St., New York 13, N.Y.

LOCATORS

Western Union Leicstern New York 13, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box Dittsburgh 30, Pa. SEE ADV. PGS.

## LIGHTS-Stroboscopic Source

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y.
- Amglo Corp., 4234 Lincoln Ave., Chicago 18, Ill. Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y. Edin Electronics Co., 207 Main St., Worcester,
- Mass. Electronic Enterprises Inc., 65 7th Ave., Newark
- 4, N. J. Electronic Products Co., 111 E. 3rd St., Mt.

- Electronic Products Co., 111 E. 514 St., 144 Vernon, N. Y. GENERAL ELECTRIC CO., Nela Park, Cleveland 12, Ohio. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Kemlite Labs., 1819 W. Grand Ave., Chicago 22, 111.
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.
- 240-244 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### LINKS—Antenna

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
- Press

## LITHIUM COMPOUNDS

#### See Metals

Chicago 39, Ill.

Pa.

N. J.

ton, N. J.

ADV. PG. 110.

LOCATORS-Electronic Metal Locators & Detectors Engineering Lab., Inc., 602 E. 4th St., Tulsa 3,

Okla. Fisher Research Lab., 1961 University Ave., Palo Alto, Calif. Globe Phone Mfg. Co., 2 Linden St., Reading,

Globe Frome Mrs. Co., Mass. Mass. Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y. Radiation Counter Labs., Inc., 1844 W. 21st St.,

Radio Frequency Labs., Inc., Boonton, N. J. Rowe Engineering Corp., 2422 N. Pulaski Rd.,

Deutschmann Corp., Tobe, Norwood, Mass. Eltron Inc., 407 N. Jackson St., Jackson, Mich. Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicare 20, JU

Chicago 39, Ill. La Magna Mfg. Co., Inc., East Rutherford, N. J. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,

Thermionic Engineering Corp., Pompton Plains,

Deutschmann Corp., Tobe, Norwood, Mass. Eltron, Inc., 407 N. Jackson St., Jackson, Mich. Ferris Instrument Co., 110 Cornelia St., Boon-

La Magna Mfg. Co., Inc., East Rutherford, N. J. MEASUREMENTS CORP., Boonton, N. J. SEE

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LOCATORS-Power Line Failure

LOCATORS—Radio Interference

# 1949-1950 DIRECTORY of

#### LOCKS—Dial

- BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. GENERAL RADIO CO., 275 Massachusetts Ave.,
- Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Millen Mfg. Co., James, 150 Exchange St., Mal-Mass.
- WATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.

## LOCKS-Shaft

Millen Mfg. Co., James, 150 Exchange St., Mal-

den, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.

## LORAN NAVIGATIONAL DEVICES

- Bendix Radio Div., Bendix Aviation Corp., Balti-
- more 4, Md. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada FEDERAL TELEPHONE & RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Harvey Radio Labs., Inc., 447 Concord Ave.,

- Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y.
  Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
  SPERBY GYBOSCOPE CO., Div. of The Sperry

- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Televiso Products Inc., 7466 W. Irving Park Rd., Chicago 34, Ill.

## LOUDSPEAKER DRIVER UNITS

- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
- Audio Equipment Co., 80-20 405th Ave., Elm-
- hurst, N. Y. Dilks Co., Seymour, Conn. Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago
- 38, III. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
- Racon Electric Co., 52 E. 19th St., New York 3,
- RADIO CORP. OF AMERICA, RCA Victor Div

Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio-Music Corp., Portchester, N. Y. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Stronberg-Carlson Co., Rochester, N. Y. University Loudspeakers Inc., 80 S. Kensico Ave., White Plains, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7 N. Y.

York 7, N. Y.

#### LOUDSPEAKERS

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- Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y. Atlas Sound Corp., 1443 39th St., Brooklyn 18,
- Audio Equipment Co., 80-20 45th Ave., Elmhurst,
- Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
- 11, N. J. Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y. Carbonneau Industries, Inc., Grand Rapids, Mich. CINAUDAGRAPH SPEAKERS, INC., Division of Aireon Mfg. Corp., 1401 Fairfax Trafficway, Kansas City, Kansas. SEE ADV. PG. 62. Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland Electronics, Inc., 6611 Euclid Ave.,
- Cleveland Electronics, Inc., 0011 Euclid Ave., Cleveland, Ohio Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y. Crescent Industries, Inc., 4140 Belmont Ave., Chicage 41. W
- Chicago 41, Ill. DX Radio Products Co. Inc., 12000 N. Claremont

Ave., Chicago 22, Ill.

- Delco Radio Div., General Motors Corp., Kokomo, Ind.

- Ind. Dilks Co., Seymour, Conn. Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24 JU
- 24, Ill Horton Machine Products Co., Horton & Rocka-way Aves., Valley Stream, N. Y. Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago
- 38. Ill.
- 38, 111. Lansing Sound Inc., James B., 4221 S. Lincoln Blvd., Venice, Calif. Magnavox Co., The, Components Div., Fort Wayne 4, Ind.
- McGrade Mfg. Co., Inc., E. W., 406 W. 34th St., Kansas City 2, Mo. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
- Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa. Murdock Mfg. Co., Wm. J., Chelsea, Mass. Oxford Radio Corp., 3911 S. Michigan Ave., Chi-

- cago 15, Ill. Perfection Electric Co., Chicago, Ill. PERMOFLUX CORP., 4900 W. Grand Avenue, Chicago, Ill. SEE ADV. PG. 230. Quam Nichols Co., 526 E. 33rd Pl., Chicago 16, Ŧ11
- Racon Electric Co., 52 E. 19th St., New York 3,
- RADIO CORP. OF AMERICA, RCA Victor Div Front & Cooper Sts., Camden, N. J. SEE A PGS. 197, Inside Back and Back Covers. Radio-Music Corp., Port Chester, N. Y. SEE ADV.
- Radio Speakers, Inc., 221 E. Cullerton St., Chi-
- cago, Ill. Rola Co., Inc., The, 2530 Superior Ave., Cleve-land, Ohio
- Rowe Industries, 1702 Wayne St. Toledo 9, Ohio SOS Cinema Supply Corp., 602 W. 52 St., New York 19, N. Y.

- York 19, N. Y. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif. Topping Mfg. Co., 3597 Mission St., San Fran-cisco 10, Calif. University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y. Webster Electric Co., 1900 Clark St., Racine, Wie
- Wis. Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y. Wheeler Insulated Wire Co., Inc., Waterbury 91,
- Conn. Wilder Mfg. Corp., 3569 Fullerton Ave., Chicago 47, Ill.

#### LOUDSPEAKERS—Marine Speaker Systems

- American Communications Corp., 306 Broadway, New York 7, N. Y.
- Atlas Sound Corp., 1443 39th St., Brooklyn 18, NV Audio Equipment Co., 80-20 45th Ave., Elmhurst,
- CINAUDAGRAPH SPEAKERS, INC., Division of
- Aireon Mfg. Corp., 1401 Fairfax Trafficway, Kansas City, Kansas. SEE ADV. PG. 62. Langevin Mfg. Corp., 37 W. 65th St., New York
- N. Y 23 Oxford Radio Corp., 3911 S. Michigan Ave., Chi-
- cago 15, Ill.

- cago 15, Ill. Racon Electric Co., 52 E. 19th St., New York 3, N. Y. Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif. Rosen Engineering Products, Inc., Raymond, 32nd & Walnut St., Phila. 4, Pa. Stephens Mfg. Corp., 8538 Warner Drive, Culver City. Calif.
- City, Calif. Taybern Equipment Co., 120 Greenwich St., New
- York 6, N. Y. University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y. Webster Electric Co., 1900 Clark St., Racine,
- Wis.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

## LOUDSPEAKERS—Tweeters & Woofers

- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
  Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
- Brociner Electronics Lab., 1546 Second Ave., New York 28, N. Y. CINAUDAGRAPH SPEAKERS, INC., Division of
- Aireon Mfg. Corp., 1401 Fairfax Trafficv Kansas City, Kansas. SEE ADV. PG. 62. Trafficway, Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38. Ill.
- Klipsch & Associates, Hope, Arkansas Magnavox Co., The, Components Div., Ft. Wayne 4. Ind.
- 4, Ind. Mellaphone Corp., Rochester 2, N. Y. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. PERMOFLUX CORP., 4900 W. Grand Avenue, Chicago, Ill. SEE ADV. PG. 230. Racon Electric Co., 52 E. 19th St., New York 3, N. V.
- Ν
- N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Stephens Mig. Corp., 8538 Warner Drive, Culver
- City, Calif. University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- Wilder Mfg. Corp., 3569 Fullerton St., Chicago 47, Ill.

## LUBRICANT-Dry Film

Acheson Colloids Corp., Port Huron, Mich. Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.

## LUGS AND TERMINALS

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Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
Aircraft-Marine Products, Inc., 1523 N. Fourth St., Harrisburg, Pa.
Alden Products Co., 117 No. Main St., Brockton

Belden Mfg. Co., 4647 W. Van Buren St., Chi-

cago 44, Ill. Buchanan Electrical Products Corp., 1290 Cen-tral Ave., Hillside, N. J. CAMBRIDGE THERMIONIC CORP., 445 Concord

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178.
CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Dante Electric Mfg. Co., Bantam, Conn.
Eby, Inc., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.
ELECTRICAL INDUSTRIES, INC., 42 Summit Ave., Newark 4, N. J. SEE ADV. PG. 132.
Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
Fryling Mfg. Co., 639 W. 12th St., Erie, Pa.
General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.

General Cement Mig. Co., 519 Taylor Ave., Rockford, Ill.
GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
Grammes & Sons, L. F., 389 Union St., Allentown 2, Pa.
Greene Mig. Corp., G. G., Warren, Pa.
Gregory Mfg. Co., Inc., The, 67 Franklin St., New Haven 11, Conn.
Ilsco Copper & Tube Products Inc., Mariemont Ave., Mariemont-Cincinnati 27, Ohio
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
Johnson Co., E. F., Waseca, Minn.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Keystone Electronics, Co., 50-52 Franklin St.,

Ave., Chicago 53, 11.
Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J.
Kulka Electric Mfg. Co., Inc., 30 South St., Mt.

Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
O. Z. Electrical Mfg. Co., Inc., 262 Bond St., Brooking 2. N. Y.

Brooklyn 2, N. Y. PATTON-MacGUYER CO., 17 Virginia Providence 5, R. I. SEE ADV. PG. 184. 215 State Street Virginia Ave., Penn-Union Electric Corp., 315 State Street, Erie,

Pa. Precision Metal Products Co., 342 Eastern Ave.,

Frecision Metal Products Co., 342 Eastern Ave., Malden 48, Mass.
Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
Shefico Mfg. Co., 116 W. Ruby Ave., Pallisades Park, N. J.
Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.
Smith Loc. Herman H. 405 1441 St. P. 144

Creek, Mich. Smith, Inc., Herman H., 405-44th St., Brooklyn 20, N. Y. States Co., 19 New Park Ave., Hartford 6, Conn. STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188. Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y. Stronghold Screw Products Inc., 216-222 West Hubbard St., Chicago 10, Ill. Thomas & Betts Co. Inc., 36 Butler St., Elizabeth 1, N. J.

1, N. J. Thompson-Bremer & Co., 1640 W. Hubbard St.,

Thompson-Bremer & Co., 1640 W. Hubbard St., Chicago, Ill.
Trumbull Electric Mfg. Co., Plainville, Conn.
United Carr Fastener Corp., Cambridge 42, Mass.
Waterbury Companies, Inc., Waterbury 90, Conn.
West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

## MACHINES—Blueprint

CONTINENTAL ELECTRIC CO., Geneva, Ill. SEE ADV. PG. 176.

Dietzgen Co., Eugene, 2425 Sheffield Ave., Chi-cago 14, Ill. Paragon-Revolute Corp., 71 South Ave., Roches-

ter 4. N. Y.

Pease Co., C. F., 2601 W. Irving Park Rd., Chi-cago, Ill. Peck & Harvey, 5736-38 N. Western Ave., Chicago 45, Ill. Post & Co., Frederick, Chicago, Ill.

#### MACHINES-Carbon Filling for Micros phones

Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

## MACHINES-Coil Winding

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Associated Production Co., 2655 W. 19th St.,

Chicago 8, Ill. BARKER & WILLIAMSON, 235 Fairfield Ave.,

Upper Darby, Pa. SEE ADV. PG. 39. Boesch Mfg. Co., Danbury, Conn. Callite Tungsten Corp., 540 39th St., Union City,

N. J.

- Connecticut Specialties Co., Box 501, Stamford, Conn
- EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Ideal Industries, Inc., Park & Borden Aves.,

Ideal Industries, Inc., Park & Borden Aves., Sycamore, Ill.
KAHLE ENGINEERING CO., 1307 7th St., North Bergen, N. J. SEE ADV. PG. 152.
Magnetic Products Corp., The, Norwalk, Conn.
MICO INSTRUMENT CO., 80 Trowbridge St., Cambridge 38, Mass. SEE ADV. PG. 170.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.

York 3, N. Y. PAPER MACHINERY & RESEARCH, INC., 1014 Oak St., Roselle, N. J. SEE ADV. PG. 130. Production Equipment Co., 37 W. Main St., Oyster Bay, New York STEVENS MFG. CO., INC., GEO., 1850 W. Hen-derson St., Chicago, III. SEE ADV. PG. 232. UNIVERSAL WINDING CO., 1655 Elmwood Ave., Cranston 3, R. I. SEE ADV. PG. 98. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89. Mass.

East Weymouth 89, Mass.

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## MACHINES—Crystal Disc Lapping & Manufacturing

Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.

#### MACHINES—Crystal Manufacturing & Finishing

Commercial Equipment Co., 112 W. 18th St.,

Kansas City 8, Mo.
 Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd. W., Rochester 13, N. Y.

## MACHINES—Electric Soldering

- Cole Radio Works, 86 Westville Ave., Caldwell, N J
- Eastern Metals Industries, 250 W. 54th St., New Eastern Metais Industries, 201 York 19, N. Y. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. ELECTRIC SOLDERING IRON CO., W. Elm St., Deep River, Conn. SEE ADV. PG. 30. Ideal Industries, Inc., Park & Borden Aves., Successor III.

Sycamore, Ill. Multi-Products Tool Co., 123 Sussex Ave., New-

Multi-Products 1001 Co., 123 Sussex Ave., New-ark 4, N. J. PATTON-MacGUYER CO., 17 Virginia Ave., Providence 5, R. I. SEE ADV. PG. 184. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2 Min. 2, Minn.

#### MACHINES—Electronic Balancing

Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind. BRUSH DEVELOPMENT CO., 3405 Perkins Ave

Cleveland 14, Ohio. SEE ADV. PGS. 168, 169. Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

240-244

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### MACHINES—Electronic Beverage Inspector

Airlectron, P. O. Box 151, Caldwell, N. J. Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.

Ripley Co., Inc., P. O. Box 31, Middletown, Conn.

## MACHINES-Electronic Computing

Alfax Paper & Engineering Co., 40 Riverside Ave .. Brockton 27, E. B., Mass. ARMA CORP., 254 36th St., Brooklyn 32, N. Y.

SEE ADV. PG. 220.

SEE ADV. PG. 220.
Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif.
Eckert-Mauchly Computer Corp., 3747 Ridge Ave., Philadelphia 32, Pa.
FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. C., N. Y. SEE ADV. PG. 90.
Potter Instrument Corp., 136-56 Roosevelt Ave., Flushing, N. Y.
Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.

York, N. Y.

N. H.,
 Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
 Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
 Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.

## MACHINES—Electronic Dictation

Gray Mfg. Co., 16 Arbor St., Hartford, Conn. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Patrick's Industries, 1507 W. Saratoga Ave.,

Ferndale 20, Mich.

## MACHINES—Engraving and Profiling

Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Auto Engraver Co., Inc., 1776 Broadway, New

LOTK, N. Y.
 EISLER ENGINEERING CO., INC., 740 S. 13th
 St., Newark 3, N. J. SEE ADV. PG. 128.
 MICO INSTRUMENT CO., 86 Trowbridge St., Cambridge 38, Mass. SEE ADV. PG. 170.
 Preis Engraving Machine Co., H., 649 Highway No. 29. Hillside N.J.

No. 29, Hillside, N. J.

## MACHINES—Flexible Shaft Equipment

Dumore Co., The, 1225 14th St., Racine, Wis. Elliot Mfg. Co., 218 Prospect Ave., Binghamton, N. Y.

Foredom Electric Co., 27 Park Place, New York

Foredom Electric Co., 27 Fark Flace, New Yolk 7, N. Y. Haskins Co., R. G., 2651 W. Harrison St., Chi-cago 12, III, Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio Stow Mfg. Co., 445 State St., Binghamton, N. Y. Walker-Turner Co., Inc., 639 South Ave., Plain-fold N. I.

Walker January, J.
WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. SEE ADV. PG. 191.

## MACHINES—Glass Blowing

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209

KAHLE ENGINEERING CO., 1307 7th St., North Bergen, N. J. SEE ADV. PG. 152.
 Litton Industries, San Carlos, Calif.

## MACHINES—Glass Working

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Elm Laboratories, 18 South Broadway, Dobbs

Ferry, N. Y. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

International Machine Works, 2027 46th St., North Bergen, N. J.

North Bergen, N. J. KAHLE ENGINEERING CO., 1307 7th St., North Bergen, N. J. SEE ADV. PG. 152. Litton Industries, San Carlos, Calif. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

Aeroil Products Co., Inc., Wesley St., South Hackensack, N. J. Barrett Co., Leon J., P. O. Box 378, Worcester

I, Mass. Distillation Products, Inc., Vacuum Equip. Div., 755 Ridge Rd. W., Rochester, N. Y. **PRODUCTION ENGINEERING CO.**, 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG, 212. Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Phila. 20, Pa.

MACHINES—Instrument Cleaning

Eastern Specialty Co., Phila. 40, Pa. L & R Mfg. Co., 577 Elm St., Arlington, N. J.

MACHINES—Instrument Shock Testing

Gadgets, Inc., 3629 N. Dixie Drive, Dayton 5,

MACHINES—Metal and Glass Marking Acromark Co., 9-13 Morrell St., Elizabeth 4, N. J. Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.

Auto Engraver Co., Inc., 1776 Broadway, New Auto Engraver Co., INC., 740 S. 13th York, N. Y. EISLER ENGINEERING CO., INC., 740 S. 13th St. Newark 3, N. J. SEE ADV. PG. 128. Ideal Industries, Inc., Park & Borden Aves.,

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MACHINES—Impregnating

Mass.

Ohio

Sycamore, Ill.

## MACHINES

- KAHLE ENGINEERING CO., 1307 7th St., North Bergen, N. J. SEE ADV. PG. 152.
  Markem Machine Co., Keene, N. H.
  MICO INSTRUMENT CO., 80 Trowbridge St., Cambridge 38, Mass. SEE ADV. PG. 170.
  Noble & Westbrook Mfg. Co., 27 Westbrook St., E. Hartford & Conn.
- E. Hartford 8, Conn.
- Numberall Stamp & Tool Co., Huguenot Park, Staten Island 12, N. Y. Preis Engraving Machine Co., H., 649 Highway No. 29, Hillside, N. J.

## MACHINES-Photocopy

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- 64, Mass. American Photocopy Equipment Co., 2849 N. Clark St., Chicago, Ill. Dietzgen Co., Eugene, 2425 Sheffield Ave., Chi-cago 14, Ill. General Photo Products Co., Inc., 15 Summit Ave., Chatham, N. J. Haloid Co., The, 6 Haloid St., Rochester, N. Y. Hunter Photo Copyist Co., 566 Spencer St., Syra-cuse. N. Y.

- cuse, N. Y. Paragon-Revolute Corp., 71 South Ave., Rochester
- 4, N. Y. Peck & Harvey, 5736-38 N. Western Ave., Chi-
- cago 45, Ill. Peerless Photo Products, Shoreham, L. I., N. Y.
- MACHINES—Record Manufacturing

Poinsettia Co., Inc., 95 Cedar Ave., Pitman, N. J. Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Phila. 20, Pa.

#### MACHINES—Tube Manufacturing

- BUCK ENGINEERING CO., INC., 37.41 Marcy St., Freehold, N. J. SEE ADV. PG. 224. Callite Tungsten Corp., 540 39th St., Union City,
- N J
- N. J. Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Elm Laboratories, 18 South Broadway, Dobbs
- Eim Laboratories, 10 Statu Ferry, N. Y. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS, 5-18, HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209. International Machine Works 2027 46th St.,

- International Machine Works 2027 46th St., North Bergen, N. J.
  KAHLE ENGINEERING CO., 1307 7th St., North Bergen, N. J. SEE ADV. PG. 152.
  Litton Industries, San Carlos, Calif.
  Marlboro Tool & Mfg. Co., Charles St. & New Brunswick Ave., Matawan, N. J.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back and Back Covers.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

## MACHINES—Vibration Fatigue Testing

All American Tool & Mfg. Co., 1014 W. Fullerton St., Chicago 14, Ill. Calidyne Co., The, 751 Main St., Winchester,

Mass.

- Mass.
  L. A. B. Corp., 31 Union Pl., Summit, N. J.
  MB MFG. CO., 1060 State St., New Haven 11, Conn. SEE ADV. PG. 221.
  Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Colif. Calif.
- Sheffield Corp., The, Dayton 1, Ohio WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.
- 66, 67.

## MACHINES-Whiteprint

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- Dietzgen Co., Eugene, 2425 Sheffield Ave., Chi-cago 14, Ill. Paragon-Revolute Corp., 71 South Ave., Rochester
- 4, N. Y.
  Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, Ill.
  Peck & Harvey, 5736-38 N. Western Ave., Chicago 45, Ill.

## MACHINES-Wire Drawing

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. KAHLE ENGINEERING CO., 1307 7th St., North Bergen, N. J. SEE ADV. PG. 152.

## MACHINES-Wire Stripping

- Eraser Co., Inc., The, Industrial Products Div., 104 S. State St., Syracuse, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. Ideal Industries, Inc., Park & Borden Avenues,
- Sycamore, Ill. Pyramid Products Co., 2224 S. State St., Chicago, Ill.

## MAGNETIC ANALYSIS EQUIPMENT

- Fisher Scientific Co., 717 Forbes St., Pittsburgh
- Hair Orden Pa.
  J9, Pa.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
- Leeds & Northrup Co., 4970 Stenton Ave., Phila.
- 44, Pa. Magnetic Analysis Corp., 42-44 Twelfth St., Long Island City 1, N. Y.

## MAGNETIZERS AND DEMAGNETIZERS

Annis Co., R. B., 1101 N. Delaware St., Indian-apolis, Ind. DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill. Grayhill, 1 N. Pulaski Rd., Chicago 24, Ill. Ideal Industries, Inc., Park & Borden Aves., Successor III

- Sycamore, Ill. INDIANA STEEL PRODUCTS CO., 6 N. Michigan
- Ave., Chicago 2, Ill. SEE ADV. PG. 198. Luma Electric Equipment Co., P. O. Box 132,
- Luma Electric Equipment Co., P. O. Box 132, Toledo I, Ohio
  Magnetic Analysis Corp., 42-44 12th St., L. I. City 1, N. Y.
  Magnetic Devices Corp., 232 Broad Ave., Palisades Park, N. J.
  Radio Frequency Labs., Boonton, N. J.
  Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y.
  Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
  Sperman Metal Specialties, 27 Columbia Place, Brooklyn 2, N. Y.

## MAGNETOMETERS

- Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Geophysical Instrument Co., 1820 N. Nash St.,
- Arlington, Va.
- Titanium Alloy Mfg. Co., 111 Broadway, New York 6, N. Y.

#### MAGNETRON

See Tubes

## MAGNETS-Electro

- See Also Coils, Magnet
- ALLIED CONTROL CO. INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Bittermann Electric Co., Box 665, Canaan, Conn. Cutler-Hammer, Inc., 315 No. 12th St., Milwau-
- kee 1, Wis. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. GUARDIAN ELECTRIC MFG. CO., 1621 W.
- GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60. Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y. Houlihan Co., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. Kurman Electric Co.
- Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
  Magnetic Devices Corp., 232 Broad Ave., Palis-ades Park, N. J.
  Mission Electric Mfg. Co., 132 W. Colorado Blvd., Basedong, Colif.

- Pasadena, Calif.
   Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
   Standard Electrical Products Co., Dayton 3, Ohio

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. Wheeler Insulated Wire Co., Inc., Waterbury 91,

1949-1950 DIRECTORY of

Conn.

Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

## MAGNETS-Permanent

- ARNOLD ENGINEERING CO., 147 E. Ontario St., Chicago, Ill. SEE ADV. PG. 140.
  Crowley & Co., Inc., Henry L., 1 Central Ave., W. Orange, N. J.
  Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N, Y.
  GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
  General Magnetic Corp., 1001 Erwin Ave., Detroit 5. Mich.
- General Magnetic Corp., 1001 Erwin Ave., Detroit 5, Mich.
  INDIANA STEEL PRODUCTS CO., 6 N. Michigan Ave., Chicago 2, Ill. SEE ADV. PG. 198.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  MAGNETIC CORE CORP., 142-144 S. Highland Ave., Ossining, N. Y. SEE ADV. PG. 130.
  Magnetic Devices Corp., 232 Broad Ave., Palisades Park, N. J.
  Simmonds Saw & Steel Co., Lockport, N. Y. Taylor-Wharton Iron & Steel Co., Highbridge, N. J.

- N. J. Thomas & Skinner Steel Products Co., 1122 E.
- 23rd St., Indianapolis, Ind.

#### MARKERS, WIRE

See Code & Tab Markers

#### **MEGAPHONES**—Electronic

- American Communications Corp., 306 Broadway, New York 7, N. Y. Audio Equipment Co., 80-20 45th Ave., Elmhurst,
- N. Y. Pioneer Electric & Research Corp., The, 7212 Circle Ave., Forest Park, Ill. Racon Electric Co., 52 E. 19th St., New York 3,
- N. Y. Taybern Equipment Co., 120 Greenwich St., New York 6, N. Y.

#### MEGOHMMETERS

115.

- Associated Research Inc., 3758 W. Belmont, Chi-
- cago 18, III. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Communication Measurements Lab., 120 Green-

Communication Measurements Lab., 120 Greenwich St., New York, N. Y.
 Delmhorst Instrument Co., 115 Cornelia St., Boonton, N. J.
 ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181.
 GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114. 115.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio MacLeod & Hanopol, 10 Joiner St., Charlestown

29, Mass. Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio MEASUREMENTS CORP., Boonton, N. J. SEE

ADV. PG. 110. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.

20, Ind. Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y. Precision Apparatus Co., Inc., 24-34 Horace Harding Blvd., Elmhurst, N. Y. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Po

Shalleross Mig. co., 10 Chem.
Pa.

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## METAL PARTS-Bushings

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. Amplex Div., Chrysler Corp., Detroit 31, Mich. Bound Brook Oil Less Bearing Co., Bound Brook,
- Buchanan Electrical Products Corp., 1290 Central
- Ave., Hillside, N. J. CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178. Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn. Corona Engineering Service, 94-52 Corona Ave.,
- Corona Engineering Service, 94-52 Corona Ave., Ehnhurst, N. Y.
   Eastern Specialty Co., Philadelphia 40, Pa.
   Gatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-I HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209.Heli-Coil Corp., 47.23 35th St., Long Island City
- 1. N. Y. Instrument Parts Corp., P. O. 150, Ossining,
- INSULINE CORP. OF AMERICA, 36-02 35th Long Island City, N. Y. Ave., SEE ADV. PG. 80.
- International Merit Products Corp., 254 W. 54th
- St., New York 19, N. Y. Johnson Co., E. F., Waseca, Minn. Kellogg Switchboard & Supply Co., 6650 S.
- Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Keystone Carbon Co., Inc., Saint Marys, Pa.
  La Magna Mfg. Co., Inc., East Rutherford, N. J.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Phila. 44, Pa.
  Radiad Service, 720 W. Schubert Ave., Chicágo 14, Ill.
- 14, Ill.
- Rattan Mfg. Co., The, 10 Wall St., New Haven 7. Conn. Rostan Corp., 202 E. 44th St., New York 17,
- N. Y.
- N. Y. St. Mary's Carbon Co., State Rd., St. Marys, Pa. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
- Waterbury Companies, Inc., Waterbury 90, Conn.

## METAL PARTS-Contacts

- Baker & Co., Inc., 113 Astor St., Newark 5, N. J. Buggie & Co., H. H., 2141 Madison Ave., Toledo
- 1, Ohio Eby y, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.
- Electro-Connector Corp., 110 W. Oxford St.,
- Phila. 22, Pa. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV. PG. 29.
- GENERAL PLATE DIV., Metals & Controls Corp.,
- Attleboro, Mass. SEE ADV. PG. 149. Greene Mfg. Corp., G. G., Warren, Pa. HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209.

- 209.
  Johnson Co., E. F., Waseca, Minn.
  Keystone Carbon Co., Inc., Saint Marys, Pa.
  Milford Rivet & Machine Co., Milford, Conn.
  St. Mary's Carbon Co., State Rd., St. Marys, Pa.
  Stackpole Carbon Co., State Rd., St. Marys, Pa.
  STAVER CO., INC., 91 Pearl St., Brooklyn 1,
  N. Y. SEE ADV. PG. 188.
  Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  United Carr Fastener Corp., Cambridge 42, Mass.
  Volkert Metal Stampings Inc., John, 141 Spencer St., Brooklyn 5, N. Y.

## **METAL PARTS-Laminated**

- Amplex Div., Chrysler Corp., Detroit 31, Mich. Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-TH ford
- GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.

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- HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209
- Johnson Co., E. F., Waseca, Minn. Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J. MAKEPEACE CO., D. E., Attleboro, Mass. SEE ADV. PG. 84.

## METAL PARTS-Lead

- Alpha Metals Inc., 363 Hudson Ave., Brooklyn 1,
- Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill.
- National Lead Co., 111 Broadway, New York 6, N. Y Penn Fibre & Specialty Co., 2030 E. Westmore-
- Iand St., Phila 44, Pa.
   STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.

#### METAL PARTS-Powdered

- Amplex Div., Chrysler Corp., Detroit 31, Mich. ARNOLD ENGINEERING CO., 147 E. Ontario St., Chicago 11, Ill. SEE ADV. PG. 140.
- Bound Brook Oil-Less Bearing Co., Bound Brook, Ν
- Callite Tungsten Corp., 540 39th St., Union City,
- N. J. Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV.
- Sheridan Ru, North Chicago, H. SEE ADV. PG. 29.
  Keystone Carbon Co., Inc., St. Marys, Pa.
  MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis, Ind. SEE ADV. PGS.
  71-74.

71-74.
NATIONAL MOLDITE CO., Hillside 5, N. J. SEE ADV. PG. 146.
St. Mary's Carbon Co., State Rd., St. Marys, Pa. Stackpole Carbon Co., St. Marys, Pa.
U. S. Graphite Co., Div. of the Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
Waterbury Companies, Inc., Waterbury 90, Conn.

## METAL PARTS-Screw Machine

- Ace Mfg. Corp., 1255 E. Erie Ave., Philadelphia 24. Pa.
- Adel Precision Products Corp., 10777 Van Owen St., Burbank, Calif. Alden Products Co., 117 N. Main St., Brock-
- ton 64, Mass. ALLMETAL SCREW PRODUCTS CO., INC., 33
- Greene St., New York 13, N. Y. SEE ADV. PG. 32.
- ART-LLOYD METAL PRODUCTS CORP., 2973 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
  ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232.
  Automatic Metal Products Co., 315 Berry St., Brooklyn 1, N. Y.
  Autoscrew Co., 216-222 W. 18th St., New York, N. Y.

- N. Y.
- Buchmann Spark-Wheel Corp., 4-20 47th Ave.,
- Buchmann Spark-Wheel Corp., 420 4101 Ave., Long Island City 1, N. Y.
   CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178.
   Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn.
  Corbin Screw Div., Amer. Hardware Corp., High Myrtle & Grove Sts., New Britain, Conn.
  Dual-Remote Control Co., Garden City, Mich.
  Eastern Specialty Co., Philadelphia 40, Pa.
  Eby, Inc., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.
  ENGINEERING CO., 27 Wright St., Newark, N. J. SEE ADV. PG. 228.
  Ericsson Screw Machine Products Co., 25 Lafa-yette St., Brooklyn 1, N. Y.
  Federal Screw Products Co., 224 W. Huron St., Conn.

- Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
- Gatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J. Trenton, N. J. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford III
- GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209

- Instrument Development & Mfg. Corp. 3018 E. Foothill Blvd., Pasadena 8, Calif. Instrument Parts Corp., P. 0. 150, Ossining,
- Instrument Value
   N. Y.
   INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
   Products Corp., 254 W. 54th
- International Merit Products Corp., 254 W. 54th St., New York 19, N. Y. Johnson Co., E. F., Waseca, Minn. Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.

- Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. La Magna Mig. Co., Inc., East Rutherford, N. J. Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
- Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
- Magnetic Metal Products Corp., The, Norwalk, Conn.
- Milford Rivet & Machine Co., Milford, Conn. Milwaukee Stamping Co., 800 S. 72nd St., Mil-waukee, Wis.
- Molded Insulation Co., Aircraft Control Div., 335
- E. Price St., Phila., Pa. National Screw & Mfg. Co., Cleveland 4, Ohio Osgood Engineering Co., 110 Pleasant St., Malden,
- Mass.
- Phonograph Needle Mfg. Co., Inc., 42-46 Dud-ley St., Providence 5, R. I. Radiad Service, 720 W. Schubert Ave., Chicago 14, Ill.
- Reister Mfg. Co., Hagerstown, Md. Remler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calif. Rostan Corp., 202 E, 44th St., New York 17, N V
- N. Y. . Louis Screw & Bolt Co., 6900 Broadway, St.
- St. Louis 15, Mo. Searle Aero Industries, Inc., Orange, Calif. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. Standard Pressed Steel Co., Jenkinstown, Pa. Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Aux New York 18, N. Y. SEE ADY POS

5th Av., New York 18, N. Y. SEE ADV. PGS. 240-244.

Thomas Products, Inc., 9 Bentley St., Salem,

Titan Metal Mfg. Co., Bellefonte, Pa. Tudor Products Co., 57 E. Alpine St., Newark

Tudor Products Co., b / E. Appine Sc., Robins, S. M. J.
United Carr Fastener Corp., Cambridge 42, Mass.
United Screw & Bolt Corp., 2513 W. Collecton St., Chicago, Ill.
Vallorbs Jewel Co., Lancaster, Pa.
Waltham Screw Co., 77 Rumford Ave., Waltham, Mass.
Westfield Metal Products Co., Inc., Westfield, Mass.

METAL PARTS—Small Metal Stampings

Ace Manufacturing Corp., 1255 East Erie Ave., Philadelphia 24, Pa.
Acklin Stamping Co., 1923 Nebraska Ave., To-ledo 7, Ohio
Adel Precision Products Corp., 10777 Van Owen

Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Air-King Products Co., Inc., 170 53rd St., Brook-lyn, N. Y. Alden Products Co., 117 No. Main St., Brockton 64, Mass.

O4, Mass.
American Brass Co., Waterbury 88, Conn.
American Emblem Co., Inc., P. O. Box 116R, Utica, N. Y.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.

Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174. ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232. Atlas Metal Stamping Co., Castor & Kensington Avenues, Philadelphia 24, Pa. Auburn Mig. Co., Middletown, Conn. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Barnes Gibson-Baymond Div. of Associated

Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11,

D-85

Mass.

Mass.

Mich.

St., Burbank, Calif.

## METAL PARTS

1949-1950 DIRECTORY of

- Carby Mfg. Co., Inc., 62 Cottage Place, Waterbury 5. Conn.
- Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- Conn. Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill. CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. Colgate Mfg. Corp., Lindenhurst, L. I., N. Y. Congress Tool & Die Div., Tann Corp., 3300 Denton Ave., Detroit 12, Mich. Craft Mfg. Co., 3949 W. Schubert St., Chicago, Ill.

- Ill.

- Ill.
  Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
  Cuyahoga Spring Co., 10272 Berea Rd., Cleve-land, Ohio
  Dahlstrom Metallic Door Co., Jamestown, N. Y.
  Dalmo Victor Co., San Carlos, Calif.
  Dual Remote Control Co., Garden City, Mich.
  Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y.
  Eastern Specialty Co., Philadelphia 40, Pa.
  Eby, Inc., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.
  Calin Control Co., 207 Main St., Worcester,
- Edin Electronics Co., 207 Main St., Worcester,
- Mass. Electronic Supply Co., 207 Main St., Worcester,

- Mass. ENGINEERING CO., 27 Wright St., Newark, N. J. SEE ADV. PG. 228. Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Louis Park, Minneapolis 16, Minn. Felt Products Mfg. Co., 1504 N. Carroll Ave. Chicago 7, III. Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y. Fryling Mfg. Co., 639 W. 12th St., Erie, Pa. Gadgets Inc., 3629 N. Dixie Drive, Dayton 5, Ohio

- Ohio Garrett Co., Inc., George K., 1421 Chestnut St., Philadelphia 2, Pa.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
- Goat Co., Inc., Fred, 314 Dean St., Brooklyn, N. Y.

- N. Y. Grammes & Sons, L. F., 389 Union St., Allen-town 2, Pa. Greene Mfg. Corp., G. G., Warren, Pa. Gregory Mfg. Co., Inc., The, 67 Franklin St., New Haven 11, Conn. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209. Howard Mfg. Corp., 1401 S. Main St., Council

- Howard Mig. Corp., 1401 S. Main Gu, Connelling, Buffs, Iowa
  Hubbard Spring Co., M. D., Central Ave., Pontiac, Mich.
  Hunter Pressed Steel Co., Lansdale, Pa.
  Instrument Development & Mig. Corp., 3018
  E. Foothill Blvd., Pasadena 8, Calif.
  INSTRUMENT SPECIALTIES CO., INC., 254
  Bergen Blvd., Little Falls, N. J. SEE ADV.
  PG. 180.
  INSULINE CORP. OF AMERICA, 36-02 35th
  Ave., Long Island City, N. Y. SEE ADV.
  PG. 80. Ave., Lo PG. 80.
- International Instruments, Inc., 331 East St.,
- New Haven 11, Conn. Johnson Co., E. F., Waseca, Minn. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.
- King Laboratories, Inc., 127 Solar St., Syra-cuse 4, N. Y.

- cuse 4, N. Y. Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. Kirk & Blum Mig. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y. **KOBZY TOOL CO.**, 1535 N. Dayton Ave., Chi-cago 22, Ill. SEE ADV. PG. 205. Kolton Electric Mig. Co., 123 N. J. Railroad Ave., Newark 5, N. J. La Magran Mig. Co., Inc., East Rutherford, N. J.
- Ave., Newark G. N. J. La Magna Mfg. Co., Inc., East Rutherford, N. J. Lansing Stamping Co., 1159 S. Pennsylvania Ave., Lansing, Mich. Loral Electronics Corp., 794 E. 140th St., New
- York 54, N. Y.
- Lorentzen Inc., H. K., 391 W. Broadway, New York 12, N. Y. Magnetic Metals Co., Hayes Ave., at 21st St., Camden, N. J.
- Magnetic Products Corp., The, Norwalk, Conn.
- D-86

- Maritime Quality Hardware Co., Inc., Belfast, Me.
- Market Forge Co., Everett 49, Mass. Measurement Engineering Ltd., Arnprior, Ont.,
- Canada Miller Mfg. Co., M. A., 1169 E. 43rd St., Chi-cago 15, Ill. Milwaukee Stamping Co., 800 S. 72nd St., Mil-waukee, Wisc. Minerallac Electric Co., 25 N. Peoria St., Chi-

- Minerallac Electric Co., 25 N. Peoria St., Chicago, III.
  Minute Man Products, Inc., 309 E. 22nd St., New York 10, N. Y.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
  NATIONAL CO., INC., 61 Sherman St., Malden, Mass. SEE ADV. PGS. 105-108.
  GLYMPIC TOOL & MFG. CO., INC., 39 Chambers St., New York 7. N. Y. SEE ADV. PG. 174.
  PATTON-MacGUYER CO., 17 Virginia Ave., Providence 5, R. I. SEE ADV. PG. 184.
  Paul & Beekman Inc., 1801 Cortland St., Philadelphia 40, Pa.
- delphia 40, Pa. Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y. Precision Fabricators Inc., Roosevelt Rd.,
- Precision Fabricators Inc., Roosevelt Rd., Rochester, N. Y. Presto Electric Co., Inc., 4511 New York Ave., Union City, N. J. Quadriga Mfg. Co., 213 W. Grand Ave., Chi-cago 11, Ill. Radiad Service, 720 Schubert Ave., Chicago 14,
- Ill.
- III.
  Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa.
  REEVES SOUNDCRAFT CORP., 10 E. 52nd St., New York 22, N. Y. SEE ADV. PG. 199.
  Reister Mfg. Co., Hagerstown, Md.
  Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
  Pourge Computer & Brass Inc. 230 Park Ave.

- cisco 10, Calif. Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y. Reynolds Metals Co., Technical Service Dept., 2500 S. Third St., Louisville 1, Ky. Robinson Aviation, Inc., Teterboro, N. J. Roston Corp., 202 E. 44th St., New York 17, N. Y.

- Searle Aero Industries, Inc., Orange, Calif. Sheffco Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J.

- Sinenco Mig. Co., 110 W. Ruby Ave., Palisades Park, N. J.
  Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y.
  Sperman Metal Specialties, 27 Columbia Place, Brooklyn 2, N. Y.
  Stamford Metal Specialty Co., Inc., 429 W. Broadway, New York 12, N. Y.
  STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.
  Stimpson Co., Inc., Edwin, 74 Franklin Ave., Brooklyn 5, N. Y.
  Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, Ill.
  SWITCHCRAFT, INC., 1328-30 N. Halstead St., Chicago 22, Ill. SEE ADV. PG. 231.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Av., New York 18, N. Y. SEE ADV. PGS. 240-244.
  Thomas Products, Inc., 9 Bentley St., Salem,
- Thomas Products, Inc., 9 Bentley St., Salem, Mass.
- Tubing Seal-Cap Inc., 2810 E. 11th St., Los Angeles, Calif.
- Tudor Products Co., 57 E. Alpine St., Newark 5, N. J.
- Ucinite Co., The, Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. United Carr Fastener Corp., Cambridge 42, Mass.

- United Carr Fastener Corp., Cambridge 42, Mass.
  United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago, Ill.
  Viewlex Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
  Volkert Metal Stampings Inc., John, 141 Spencer St., Brooklyn 5, N. Y.
  WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
  Waterbury Companies, Inc., Waterbury 90,
- Waterbury Companies, Inc., Waterbury 90, Conn

- Conn. WEBSTER SPRING CORP., 97 S. 5th St., Brook-lyn 11, N. Y. SEE ADV. PGS. 229, 233. WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218. Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.

- Wilson Co., The H. A., 105 Chestnut St., New-ark 5, N. J. Wood Co., Inc., C. D., 70-17 83rd St., Glendale, L. I., N. Y.
- Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass. Worcester Pressed Steel Co., 100 Barber Ave.,
- Wordester I Passed Ser Co., 100 Barber Ave., Woroght Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wisc. Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

#### **METAL PARTS**—Trimmings

Conn.

See Paints METALS

Aluminum

Pa.

N. Y.

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Alnico

Antimony

Arsenic

N. Y.

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METALLIC PAINTS

- American Emblem Co., Inc., P. O. Box 116R,
- American Emblem Co., Inc., P. O. Box 116R, Utica, N. Y. Bailey Co., Inc., 21 Water St., Amesbury, Mass. Dahlstrom Metallic Door Co., Jamestown, N. Y. Eastern Metalls Industries, 250 W. 54th St., New York 19, N. Y. Grammes & Sons, L. F., 389 Union St., Allen-
- town 2, Pa. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- Reynolds Metals Co., Technical Service Dept., 2500 S. Third St., Louisville 1, Ky. Thomas Products, Inc., 9 Bentley St., Salem,
- Mass. United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago, Ill. Volkert Metal Stampings, Inc., John, 141 Spencer St., Brooklyn 5, N. Y. Waterbury Companies, Inc., Waterbury 90,

Aluminum Co. of America, Gulf Bldg., Pittsburgh,

Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5,

Permanente Products Co., Inc., 1924 Broadway,

Permanente Products Co., Inc., 1924 Broadway, Oakland 12, Calif.
Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
Reynolds Metals Co., Technical Serv. Dept., 2500 So. Third St., Louisville 1, Ky.
Uniform Tubes, Shurs Lane & Laruiston Sts., Roxborough, Phila., Pa.
York Materials Co., Inc., P. O. Box 510, Ja-maica. N. Y.

ARNOLD ENGINEERING CO., 147 E. Ontario St., Chicago, Ill. SEE ADV. PG. 140. GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Stackpole Carbon Co., St. Marys, Pa. Thomas & Skinner Steel Products Co., 1122 E. 23rd St., Indianapolis, Ind.

Division Lead Co., 836 W. Kinzie St., Chicago 22, 111.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
National Lead Co., 111 Broadway, New York 6, N. Y.

Division Lead Co., 836 W. Kinzie St., Chicago 22, II. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5,

King Laboratories Inc., 127 Solar St., Syra-

## Beryllium and Beryllium Alloys

Beryllium Corp., The, Reading, Pa. Brush Beryllium Co., The, 4301 Perkins Ave.,

Brush Beryllium Co., The, 4301 Perkins Ave., Cleveland 3, Ohio
GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
Little Falls Alloys, Inc., 189 Caldwell Ave., Paterson 1, N. J.
Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

#### **Brass and Bronze**

American Brass Co., Waterbury 88, Conn. Chase Brass & Copper Co., Inc., Waterbury 91, Conn.

- Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5,

Refining Co., 120 Broadway, New York 5, N. Y.
Little Falls Alloys, Inc., 189 Caldwell Ave., Paterson 1, N. J.
Phosphor Bronze Corp., The, 2200 Washington Ave., Philadelphia 46, Pa.
Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
Riverside Metal Co., Riverside, N. J.
Scovill Mfg. Co., Waterville Screw Prods. Div., Waterbury, Conn.
Titan Metal Mfg. Co., Bellefonte, Pa.
Uniform Tubes, Shurs Lane & Laruiston Sts., Roxborough, Phila., Pa.
Western Brass Mills, Div. of Olin Industries, Inc., East Alton, Ill.
York Materials Co., Inc., P. O. Box 510, Ja-maica, N. Y.

#### Cadmium

Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill. Merck & Co., Inc., Rahway, N. J.

## **Cesium** Compounds

Foote Mineral Co., 10 E. Chelten Ave., Phila. 44, Pa.

#### Chromium

Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Keystone Carbon Co., Inc., Saint Marys, Pa.

## **Coefficient Metals**

- Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa. Magnetic Metals Co., Hayes Ave. at 21st St.,
- Canden, N. J. Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

#### Columbium

- Electro Metallurgical Division, Union Carbide
- Electro Metallurgical Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
   FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV. DC 20 PG. 29.

#### Copper

- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- American Brass Co., Waterbury 88, Conn. Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5,
- N. Y. N. Y. Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y. Uniform Tubes, Shurs Lane & Laruiston Sts., Roxborough, Phila., Pa. Western Brass Mills, Div. of Olin Industries,
- E. Alton, Ill. York Materials Co., Inc., P. O. Box 510, Ja-
- maica, N. Y.

## **Electric Sheets**

- Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa.
- Follansbee Steel Co., Pittsburgh 30, Pa.

#### Foil-Aluminum, Tin & Lead

- Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa.
- Baker Co., Inc., 113 Astor St., Newark 5, N. J. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
- Johnston Tin Foil & Metal Co., 6100 S. Broad-way, St. Louis 11, Mo. National Lead Co., 111 Broadway, New York 6, N. Y.
- Permanente Products Co., Inc., 1924 Broadway,
- Oakland 12, Calif. Reynolds Metals Co., Technical Serv. Dept., 2500 So. Third St., Louisville 1, Ky. Uniform Tubes, Shurs Lane & Laruiston Sts., Roxborough, Phila., Pa.

#### Gold and Gold Allovs

- AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192
- Baker & Co., Inc., 113 Astor St., Newark 5,

- N. J. BRAININ CO., C. S., 233 Spring St., New York 13, N. Y. SEE ADV. PG. 188. Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Goldsmith Bros. Smelting & Refining Co., 109 M. Weberk Aux Chiner U.
- N. Wabash Ave., Chicago, Ill. HANDY & HARMAN, 82 Fulton St., New York 7, N. Y. SEE ADV. PG. 204. MAKEPEACE CO., D. E., Attleboro, Mass. SEE
- ADV. PG. 84. NEY CO., J. M., 179 Elm St., Hartford, Conn. SEE ADV. PG. 56. 2218 S. Bacine Ave., Chicago, Tricon Mfg. Co., 8318 S. Racine Ave., Chicago,
- WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. SEE Div., 10 E. 40 ADV. PG. 191.
- Wildberg Bros. Smelting & Refining Co., 742
  Market St., San Francisco 2, Calif.
  Wilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

#### **High Permeability Alloys**

- Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa.
- Pa.
   Amplex Div., Chrysler Corp., Detroit 31, Mich.
   ARNOLD ENGINEERING CO., 147 E. Ontario St., Chicago 11, Ill. SEE ADV. PG. 140.
   Carpenter Steel Co., The, 142 W. Bern St.,

- Carpenter Steel Co., Ine, 142 w. Bent St., Reading, Pa.
  DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. SEE ADV. PG. 43.
  Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y.
  I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Phila. 30, Pa. SEE ADV. PGS. 48, 49.
  Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.
- Camden, N. J. MAKEPEACE CO., D. E., Attleboro, Mass. SEE
- ADV. PG. 84. Simmonds Saw & Steel Co., Lockport, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.
- 868, P. 66, 67.

#### Laminated Metal Products

- ART-LLOYD METAL PRODS. CORP., 29-73 Cropsey Ave., Brooklyn, N. Y. SEE ADV. PG. 174.
- 1'4. Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J. Magnetic Products Corp., The, Norwalk, Conn.

## MAKEPEACE CO., D. E., Attleboro, Mass. SEE

METALS

ADV. PG. 84. Tricon Mfg. Co., 8318 S. Racine Ave., Chicago, 131.

Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

#### Lead

- Alpha Metals, Inc., 363 Hudson Ave., Brooklyn 1, N. Y. Division Lead Co., 836 W. Kinzie St., Chicago
- 22, Ill. 22, III. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5,
- N. Y.
- Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill. National Lead Co., 111 Broadway, New York 6,
- N. Y. Uniform Tubes, Shurs Lane & Laruiston Sts., Roxborough, Phila., Pa.

## Lithium Compounds (for cathode tube screen settling)

- Foote Mineral Co., 10 E. Chelten Ave., Phila. 44, Pa. Merck & Co., Inc., Rahway, N. J. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240 944
- 240-244.

#### Maanesium

Manganese

Mercurv

NJ

22, Ill.

Molybdenum

N. Y.

- BURGESS BATTERY CO., Battery Div., Free-port, Ill. SEE ADV. PG. 88. Dow Chemical Co., Midland, Mich. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5,

N. Y.

#### Magnetic Iron Oxide (for cores)

- Foote Mineral Co., 10 E. Chelten Ave., Phila. 44, Pa.
- 44, Pa.
  Plastic Metals Division, The National Radiator Co., 169 Bridge Street, Johnstown, Pa.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England
  WILLIAMS & CO., C. K., 2001 Lynch Ave., East St. Louis, Ill. SEE ADV. PG. 32.

Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Plastic Metals Division, The National Radiator Co., 169 Bridge Street, Johnstown, Pa.

Callite Tungsten Corp., 540 39th St., Union City,

Division Lead Co., 836 W. Kinzie St., Chicago

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass. Goldsmith Bros. Smelting & Refining Co., 109

N. Wabash Ave., Chicago, Ill. Merck & Co., Inc., Rahway, N. J. North American Philips Co., 100 E. 42nd St., New York 17, N. Y.

Callite Tungsten Corp., 540 39th St., Union City, N. J. Cleveland Tungsten, Inc., 10200 Meech Ave.,

Cleveland Tungsten, Inc., 10200 Meeen Ave., Cleveland, Ohio Cross Co., H., 15 Beekman St., New York, N. Y. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Electro Metallurgical Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17,

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METALS, MAGNETOSTRICTION

See NICKELS and NICKEL ALLOYS

## METALS

- FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, P 66, 67.

#### Monel

Alloy Metal Wire Co., Prospect Pk. (Moore Sta.),

- Pa. DRIVER-HARRIS CO., 201 Middlesex St., Har-rison, N. J. SEE ADV. PG. 43. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. International Nickel Co., Inc., The, 67 Wall St., New York 5, N. Y. JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. SEE ADV. PG. 102.

## Nickel and Nickel Alloys

Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa. Alloy Metal Wire Co., Prospect Pk. (Moore Sta.),

- ARAOLD ENGINEERING CO., 147 E. Ontario St., Chicago 11, Ill. SEE ADV. PG. 140. Carpenter Steel Co., The, 142 W. Bern St.,
- Cohn Corp., Sigmund, 44 Gold St., New York, N. Y.
- N. Y. DRIVER-HARRIS CO., 201 Middlesex St., Har-rison, N. J. SEE ADV. PG. 43. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5,

- N. Y. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Haynes Stellite Co., Unit of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Hoskins Mfg. Co., 4445 Lawton Ave., Detroit

- Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.
  International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
  JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. SEE ADV. PG. 102.
  Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.
  Plastic Metals Division, The National Radiator Co., 169 Bridge Street, Johnstown, Pa.
  Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
  Riverside Metal Co., Riverside, N. J.
  Simmonds Saw & Steel Co., Lockport, N. Y.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave. SEE ADV. PGS. 240-244.
  Western Brass Mills, Div. of Olin Industries, East Alton, III.
  Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

#### Nickel Ribbon

- Alloy Metal Wire Co., Prospect Pk. (Moore Sta.), Pa.
- Cohn Corp., Sigmund, 44 Gold St., New York, N. Y.
- Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J.
- Newark, N. J. DRIVER-HARRIS CO., 201 Middlesex St., Har-rison, N. J. SEE ADV. PG. 43. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Hoskins Mfg. Co., 4445 Lawton Ave., Detroit
- Mich
- S, MICH. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### Palladium

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- AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.
- Baker & Co., Inc., 113 Astor St., Newark 5,
- N. J. BRAININ CO., C. S., 233 Spring St., New York 13, N. Y. SEE ADV. PG. 188. Cohn Corp., Sigmund, 44 Gold St., New York, N. Y. Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.

- GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Goldsmith Bros. Smelting & Refining Co., 109
- N. Wabash Ave., Chicago, Ill. MAKEPEACE CO., D. E., Attleboro, Mass. SEE
- ADV. PG. 84. Tricon Mfg. Co., 8318 S. Racine Ave., Chicago,
- TIL.
- Wilbur Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

#### Phosphor Bronze

- American Brass Co., Waterbury 88, Conn.
- Amplex Div., Chrysler Corp., Detroit 3, Mich. BRAININ CO., C. S., 233 Spring St., New York. SEE ADV. PG. 188.
- Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Little Falls Alloys, Inc., 189 Caldwell Ave.,

- Little Falls Alloys, Inc., 189 Caldwell Ave., Paterson 1, N. J.
  Phosphor Bronze Corp., The, 2200 Washington Ave., Philadelphia 46, Pa.
  Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
  Riverside Metal Co., Riverside, N. J.
  Western Brass Mills, Div. of Olin Industries, E. Alton, Ill.

#### Platinum

- AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.
- Baker Co., Inc., 113 Astor St., Newark 5, N. J. Cohn Corp., Sigmund, 44 Gold St., New York, N. Y.
- N. Y. Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill. Tricon Mfg. Co., 8318 S. Racine Ave., Chi-cago, Ul
- cago, Ill. Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

#### **Powdered Metals**

- ARNOLD ENGINEERING CO., 147 E. Ontario St., Chicago 11, Ill. SEE ADV. PG. 140. Callite Tungsten Corp., 540 39th St., Union City, N. J. Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio
- Cleveland, Ohio Division Lead Co., 836 W. Kinzie St., Chicago 22. Ill.
- FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV.
- GENERAL ANILINE & FILM CORP., Antara Prods., 444 Madison Ave., New York 17, N. Y. SEE ADV. PG. 185.
- SEE ADV. PG. 185. National Lead Co., 111 Broadway, New York 6, N. Y. Plastic Metals Div., The, National Radiator Co., 169 Bridge St., Johnstown, Pa. Powdered Metal Products Corp., Franklin Park,
- HI.
- Ill.
  Reynolds Metals Co., Technical Serv. Dept., 2500 So. Third St., Louisville 1, Ky.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
  WILLIAMS & CO., C. K., 2001 Lynch Ave., East St. Louis, Ill. SEE ADV. PG. 32.
  Wilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

#### Silicon

- Dow Corning Corp., Midland, Mich. Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y. Magnetic Metals Co., Hayes Ave. at 21st St.,

- Canden, N. J. Canden, N. J. Plastic Metals Division, The National Radiator Co., 169 Bridge Street, Johnstown, Pa. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

## Silver

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.

1949-1950 DIRECTORY of

- Baker & Co., Inc., 113 Astor St., Newark 5, N J
- BRAINN CO., C. S., 233 Spring St., New York 13, N. Y. SEE ADV. PG. 188. Callite Tungsten Corp., 540 39th St., Union
- Callite Tungsten Corp., 540 39th St., Union City, N. J.
  Eastern Smelting & Refining Corp., 107-109 Brookline St., Boston 18, Mass.
  GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
  Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill.
  HANDY & HARMAN, 82 Fulton St., New York 7, N. Y. SEE ADV. PG. 204.
  MAKEPEACE CO., D. E., Attleboro, Mass. SEE ADV. PG. 84.

- MAKEPEACE CO., D. E., Attleboro, Mass. SEE ADV. PG. 84.
  Merck & Co., Inc., Rahway, N. J.
  NEY CO., J. M., 179 Elm St., Hartford, Conn. SEE ADV. PG. 56.
  North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
  Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
  Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

## Silver Alloys and Compounds

- AMERICAN PLATINUM WORKS, N. J. R. R. Ave., at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.
- Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
- BRAININ CO., C. S., 233 Spring St., New York 13, N. Y. SEE ADV. PG. 188. Callite Tungsten Corp., 540 39th St., Union
- City, N. J. Division Lead Co., 836 W. Kinzie St., Chicago
- 22, Ill.
  Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
  GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
  Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill.
  HANDY & HARMAN, 82 Fulton St., New York 7, N. Y. SEE ADV. PG. 204.
  MAKEPEACE CO., D. E., Attleboro, Mass. SEE ADV. PG. 84 22, Ill.

ADV. PG. 84. NEY CO., J. M., 179 Elm St., Hartford, Conn. SEE ADV. PG. 56. Tricon Mfg. Co., 8318 S. Racine Ave., Chicago,

Wildberg Bros. Smelting & Refining Co., 742
Market St., San Francisco 2, Calif.
Wilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

Allegheny Ludlum Steel Corp., Pittsburgh 22,

American Rolling Co., 368 Curtis St., Middletown,

American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio. Armco Steel Corp., 703 Curtis St., Middletown,

Carnegie Illinois Steel Corp., U. S. Steel Sub., Carnegie Bldg., Pittsburgh, Pa. Carpenter Steel Co., The, 142 W. Bern St.,

Carpenter Steel Co., Ine, 142 W. Belli St., Reading, Pa.
Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N. Y.
Lukens Steel Co. and Divisions, By-Products Steel Co. & Lukenweld, 447 Lukens Bldg., Coatesville, Pa.
Republic Steel Corp., Republic Bldg., Cleveland
1 Object

Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y. Ryerson & Son, Inc., J. T., Box 8000-A, Chi-cago, Ill.

Simmonds Saw & Steel Co., Lockport, N. Y. Summerill Tubing Co., Div., Columbia Steel & Shafting Co., P. O. Box 1557, Pittsburgh 30,

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Steel

Pa.

Ohio

Ohio

1, Ohio

Pa.

Wickwire Spencer Steel Div., The Colorado Fuel and Iron Corp., 500 Fifth Ave., New York 18, N. Y.

**ELECTRONIC** and **ALLIED PRODUCTS** 

York Materials Co., Inc., P. O. Box 510, Jamaica, N. Y.

## Steel, Electrical

- Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa.
- American Rolling Co., 368 Curtis St., Middletown, Ohio
- American Steel & Wire Co., U. S. Steel Corp., Sub., Rockefeller Bldg., Cleveland 13, Ohio Armco Steel Corp., 703 Curtis St., Middletown,
- Ohio
- Ohio Carnegie-Illinois Steel Corp., U. S. Steel Sub., Carnegie Bldg., Pittsburgh, Pa. Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa. Follansbee Steel Co., Pittsburgh 30, Pa. Magnetic Metals Co., Hayes Ave., at 21st St., Camden, N. J. Republic Steel Corp., Republic Bldg., Cleve-land 1, Ohio Rverson & Son, Inc., J. T. Box 8000.4 Chi.

- Ryerson & Son, Inc., J. T., Box 8000-A, Chi-cago, Ill.

## Steel, Stainless

- Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa Alloy Metal Wire Co., Prospect Pk. (Moore Sta.),
- Pa. American Rolling Co., 368 Curtis St., Middle-
- town, Ohio
- American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Armco Steel Corp., 703 Curtis St., Middletown, Ohio
- Carnegie Illinois Steel Corp., U. S. Steel Sub., Carnegie Building, Pittsburgh, Pa. Carpenter Steel Co., The, 142 W. Bern St.,

- Carpenter Steel Co., Ine, 142 W. Bern St., Reading, Pa.
  Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N. Y.
  DRIVER-HARRIS CO., 201 Middlesex St., Har-rison, N. J. SEE ADV. PG. 43.
  Lukens Steel Co. & Divisions, By-Products Steel Co. & Lukenweld, 447 Lukens Bldg., Coates-willo De.
- ville, Pa. Republic Steel Corp., Republic Bldg., Cleveland
- Republic Steel Corp., Republic Day, 1, 1, Ohio Ryerson & Son, Inc., J. T., Box 8000-A, Chi-cago, Ill. Simmonds Saw & Steel Co., Lockport, N. Y. Summerill Tubing Co., Div., Columbia Steel & Shafting Co., P. O. Box 1557, Pittsburgh 30, Day
- Pa. York Materials Co., Inc., P. O. Box 510, Ja-maica, N. Y.

#### Strontium

King Laboratories Inc., 127 Solar St., Syracuse 4. N. Y.

#### Tantalum

FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV. PG. 29.

#### Thermostatic Bi-Metals

- Baker & Co., Inc., 113 Astor St., Newark 5,
- N. J. BRAININ CO., C. S., 233 Spring St., New York 13, N. Y. SEE ADV. PG. 188. Callite Tungsten Corp., 540 39th St., Union City, N. J. Chace Co., W. M., 1600 Beard Ave., Detroit, Mink

- Chace Co., W. M., 1600 Beard Ave., Detroit, Mich.
  Eastern Smelting & Refining Corp., 107-109 W.
  Brookline St., Boston 18, Mass.
  GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
  Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

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## Tin

- Alpha Metals, Inc., 363 Hudson Ave., Brooklyn 1, N. Y. Division Lead Co., 836 W. Kinzie St., Chicago
- 22, Ill. Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5,
- N.Y. Glaser Lead Co., Inc., 31 Wyckoff Ave., Brook-

- Glaser Lead Co., Inc., 31 Wyckoff Ave., Brook-lyn, N. Y. Merck & Co., Inc., Rahway, N. J. National Lead Co., 111 Broadway, New York 6, N. Y. Uniform Tubes, Shurs Lane & Laruiston St., Roxborough, Phila., Pa.

## Tungsten

- Callite Tungsten Corp., 540 39th St., Union City, N. J. Cleveland Tungsten, Inc., 10200 Meech Ave.,

- Cleveland Tungsten, Inc., TODO AND AND Cleveland, Ohio EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Electro Metallurgical Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17,
- FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV. PG. 29
- MALLORY & CO., INC., P. R., 3029 E. Wash-ington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
- St., New York 17, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. 5th Ave., Nev PGS. 240-244.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

#### **Tungsten Ribbon**

- Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio
- Cohn Corp., Sigmund, 44 Gold St., New York, N. Y.
- Cross Co., H., 15 Beekman St., New York, N. Y.
- N. Y. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV.
- Sinfridan Rd., North Chicago, Ill. SEE ADV. PG. 29. North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### Zinc

- Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
- Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
- Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn, N. Y. Merck & Co., Inc., Rahway, N. J. National Lead Co., 11 Broadway, New York 6,
- N. Y.

#### Zirconium

- Electro Metallurgical Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17,
- N. Y. Foote Mineral Co., 10 E. Chelten Ave., Phila.
- 44, Pa. Titanium Alloy Mfg. Co., 111 Broadway, New York 6, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box
- 868, Pittsburgh 30, Pa. SEE PGS. 66, 67.

## METEOROLOGICAL EQUIPMENT-Electronic

Air Associates, Inc., Teterboro, N. J. American Radio Co., 611 E. Garfield Ave., Glendale, Calif.

METERS

- Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif. Commercial Equipment Co., 112 W. 18th St.,
- Kansas City 8, Mo. Communication Measurements Lab. Inc., 120 Greenwich St., New York, N. Y.
- Hastings Instrument Co., Box 1275, Hampton, Va.
- Leupold & Stevens Instruments, 4445 N. E. Glisan St., Portland 13, Ore. Measurement Engineering Ltd., Arnprior, On-
- tario, Canada POLYTECHNIC RESEARCH & DEVELOPMENT
- CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63. Serdex, Inc., 91 Cambridge St., Boston, Mass. Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y.
- **METERS**, Acceleration
- See Accelerometers

#### **METERS**—Attenuation

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Communication Equipment & Engrg. Co., 5646
- W. Race St., Chicago 44, Ill. Daven Co., 191 Central Ave., Newark 4, N. J. Meters, Inc., 915 Westfield Blvd., Indianapolis
- 5. Ind. POLYTECHNIC RESEARCH & DEVELOPMENT
- CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63. Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale, Pa. Sierra Electronic Corp., Belmont & San Carlos,
- Calif
- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

#### METERS—Cable Testing

METERS—Counting Rate

ton 64, Mass.

Wash.

- Columbia Electric Mfg. Co., 4519 Hamilton Ave., N.E., Cleveland 14, Ohio
  Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.
  Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
  Radar Engineers, 110 University St., Seattle 1, Wash.

Shallcross Mfg. Co., 10 Jackson Ave., Colling-

dale, Pa. Thermionic Engineering Corp., Pompton Plains,

WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193. Willard Storage Battery Co., 246 E. 131st St., Cleveland 1, Ohio

Airlectron, P. O. Box 151, Caldwell, N. J. Alden Products Co., 117 No. Main St., Brock-

ton 64, Mass. Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Cyclotron Specialties Co., Moraga 8, Calif. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Geophysical Instrument Co., 1820 N. Nash St.

Geophysical Instrument Co., 1820 N. Nash St., Arlington, Va. Nuclear Instrument & Chemical Co., 223-233 W. Erie St., Chicago 10, Ill. Tracerlab Inc., 55 Oliver St., Boston 10, Mass.

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## METERS-d'Arsonval

See Also Galvanometers

- 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.
- Angeles 15, Call. Electric Design & Mfg. Corp., Burlington, Iowa ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska
- Esterline Angus Co., Inc., P. O. Box 596, Indianapolis, Ind. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio
- International Instruments, Inc., 331 East St., New Haven 11, Conn.
- Lewis Engineering Co., 52 Rubber Ave., Nauga-
- tuck, Conn. Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42. Mass. Reliance Electric Instrument Co., 3027 Van Buren
- Reliance Electric Instrument Co., 3021 van Buren St., Chicago 12, Ill. Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y. Sun Electric Corp., 6323 Avondale Ave., Chicago
- 31. Ill.

- 31, Ill.
  Supreme, Inc., Greenwood, Miss.
  Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
  Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## METERS-Decibel

- 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. Electric Design & Mig. Corp., Burlington, Iowa ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 233. GENERAL ELECTRIC CO., 51

- PG. 233. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Hickok Electrical Instrument Co., 10514 Dupont Ave. Clavaland Obio.
- Ave., Cleveland, Ohio
- International Instruments, Inc., 331 East St., New Haven 11, Conn.
- McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn.
- MARION ELECTRICAL INSTRUMENT CO., Man-chester, N. H. SEE ADV. PG. 79. Meters, Inc., 915 Westfield Blvd., Indianapolis 20,
- Ind.
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Roller-Smith, Bethlehem, Pa. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- Pa
- Triplett Electrical Instrument Co., 286 Harmon
- Rd., Bluffton, Ohio WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## METERS-Distortion and Noise

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BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Doolittle Radio, Inc., 7421 S. Loomis Bldg., Chicago 36, Ill.

- Espey Mfg. Co., Inc., 528 E. 72nd St., New York,
- GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schutzenar G., See ADV. PGS. 5-18.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 147

- 115.
  HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  PICKERING AND CO., 309 Woods Ave., Ocean-side, L. I., N. Y. SEE ADV. PG. 130.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.

## METERS-Elapsed Time

- Aero Instrument Co., 2021 N. Lincoln St., Bur-
- bank, Calif. Berkeley Scientific Co., 6th & Nevin, Richmond, Calif

- Canr. Bristol Co., The, Waterbury 91, Conn. Burlington Instrument Co., Burlington, Iowa CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette
- ELECTRO-IECH EQUIPMENT CO., 117 Latayette St., New York 13, N. Y. SEE ADV. PG. 181. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69. Industrial Timer Corp., 115 Edison PL, Newark 5 N. J.
- 5, N. J. J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229. Jarvis Electronics Corp., 6058 W. Fullerton Ave.,

- Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
   MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
   Rhodes, Inc., M. H., 30 Bartholomew Ave., Hart-ford, Conn.
   Bowe Engineering Corp. 2422 N. Pulaski, Ed.
- Rowe Engineering Corp., 2422 N. Pulaski Rd.,
- Chicago 39, Ill.
- Sheffield Instrument Corp., 2021 N. Lincoln St., Burbank, Calif.
- Thermo Labs., Inc., 355 W. 26th St., New York Y
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193. Zernickow Co., O., 15 Park Row, New York 7, N. Y.

## **METERS**—Electronic Capacitance

- BROWNING LABS., INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179.
  Clippard Instrument Laboratory, Inc., 1125 Bank St., Cincinnati 14, Ohio
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.
  Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10, Calif.
  MacLeod & Hanopol, 10 Joiner St., Charlestown 29, Mass.

- 29, Mass.
- McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn. National Technical Lab., 820 Mission St., S. Pasa-
- dena, Calif. Network Manufacturing Corp., Bayonne, N. J. Paterson Co., C. J., 3947 Broadway, Kansas City, Mo.
- Sprague Electric Co., North Adams, Mass. Weston Laboratorics, Weston 93, Mass. Wheeler Labs., Inc., 259-09 Northern Blvd., Const Nach. N Wheeler Labs., Inc. Great Neck, N. Y.

## METERS-Field Intensity

- Clarke Instrument Corp., 910 King St., Silver Spring, Md.
- Deutschmann Corp., Tobe, Norwood, Mass.

FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

1949-1950 DIRECTORY of

- SEE ADV. PGS. 5-18. Measurement Engineering Ltd., Arnprior, Ontario,
- Canada
- MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110. Motorola, Inc., 4545 W. Augusta Blvd., Chicago . 111
- 51, III.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front and Cooper Sts., Camden, N. J. SEE ADV. PGS. 179, Inside Back & Back Covers.
  Radio Transceiver Labs., 116-23 Jamaica Ave., Richmond Hill 18, N. Y.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  Stoddart Aircraft Radio Co., 6644 Santa Monica Blvd., Hollywood 38, Calif.
  TRANSVISION INC., 460 North Ave., New Rochelle, N. Y. SEE ADV. PG. 172.

## METERS-f-m Deviation

See Also Monitors

METERS-Flow

METERS—Footcandle

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- BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179. Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chi-
- cago 36, Ill. Federal Telecommunication Labs., Inc., 500 Wash-
- Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Measurement Engineering Ltd., Arnprior, Ontario,

Ontario, Canada Monitor Products Co., 915 Fremont Ave., So. Pasadena, Calif.

Pasadena, Calit.
Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

METERS—Flow
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio
Bristol Co., The, Waterbury 91, Conn.
Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
Commercial Research Labs. Inc., 20 Bartlett Ave., Detroit 3, Mich.
Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio
Fischer-Porter Co., Hatboro, Pa.
Flowmeter Corp. of America, High Falls, N. Y.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Schenectady 5, N. Y.
SEE ADV. PGS 5-18.
Giannini & Co., Inc., 285 W. Colorado St., Pasa-dena 1, Calif.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
Sherron Electronics Corp., 1201 Flushing Ave., Brooklyn 6, N. Y.
U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.

De Jur-Amsco Corp., Northern Blvd. at 45th St.,

L. I. City, N. Y. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

SEE ADV. PGS. 5-18. MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.

Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

Ripley Co., Inc., P. O. Box 31, Middletown, Conn. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## METERS-Frequency

- Aero Instrument Co., 2021 Lincoln St., Burbank,
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Biddle Co., James G., 1316 Arch St., Philadelphia
- BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179. Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
- Cole Instrument Co., 1320 S. Grand Ave., Los
- Cole Instrument Co., 1920 S. Grand Ave., Los Angeles 15, Calif. Daven Co., 191 Central Ave., Newark 4, N. J. Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chi-
- cago 36, Ill. Furst Electronics, 10A Jefferson St., Chicago 6,
- GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Electronics Dept., Svracuse, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 35, Mass. See ADV. PGS. 114, 115. Hastings Instrument Co., Box 1275, Hampton, Vo.
- Va. Heath Co., Benton Harbor, Mich. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Hickok Electrical Instrument Co., 10514 Dupont
- Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
  J B T INSTRUMENTS, INC., 441 Chapel St., New Haven, 8, Conn. SEE ADV. PG. 229.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  LAMPKIN LABORATORIES, INC., Bradenton, Fla. SEE ADV. PG. 233.
  LAVOIE LABORATORIES, INC., Bradenton, SEE ADV. PG. 182.
  Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
  Measurement Engineering Ltd. Arnprior. Outario.

- Measurement Engineering Ltd., Amprior, Ontario,
- Canada MICO INSTRUMENT CO., 80 Trowbridge St., Cambridge 38, Mass. SEE ADV. PG. 170. Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. Monitor Products Co., 915 Fremont Ave., So. Pasadena, Calif.
- Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, III.
- bit, ill.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
  Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Roller-Smith, Bethlehem, Pa.
  Sheffield Instrument Corp., 2021 N. Lincoln St.,

- Sheffield Instrument Corp., 2021 N. Lincoln St., Burbank, Calif. Sierra Electronic Corp., Belmont & San Carlos,
- Calif
- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. Thermo Labs., Inc., 355 W. 26th St., New York
- N
- N. Y.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
   WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## METERS—Hearing Aid

- DeJur-Amsco Corp., Northern Blvd. at 45th St.,
- L. I. City, N. Y. Electro-Mechanical Instrument Co., 812 Chestnut St., Perkasie, Pa.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

- International Instruments, Inc., 331 East St., New

- International Instruments, Inc., 331 East St., New Haven 11, Conn.
  J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.
  MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79.
  SHURITE METERS, 61 Hamilton St., New Haven 8, Conn. SEE ADV. PG. 225.
  STERLING MFG. CO., 9205 Detroit Ave., Cleve-land 2, Ohio. SEE ADV. PG. 232.
  TELEX, INC., Telex Park, Minneapolis 1, Minn. SEE ADV. PG. 170.

## METERS—Impedance

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
- Federal Telecommunication Labs., Inc., 500 Wash-
- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. National Technical Lab., 820 Mission St., S. Paradona Colli
- Pasadena, Calif. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif
- Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. 51,
- Technology Instrument Corp., 1058 Main St., Waltham, Mass.

## METERS—Impedance & Phase Angle Audio

Technology Instrument Corp., 1058 Main St., Waltham 54, Mass.

## METERS-Impedance & Phase Angle r-f

Technology Instrument Corp., 1058 Main St., Waltham 54, Mass.

## METERS-Light

- DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Photocon Research Products, 1062 N. Allen Ave., Beredage 7. Colif.
- Pasadena 7, Calif. WESTON ELECTRICAL INSTRUMENT CORP.
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## METERS-Medical

- DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.
  Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y.
  Electronic Supply Co., 207 Main St., Worcester, Marce
- Mass. Photocon Research Products, 1062 N. Allen Ave.,
- Pasadena 7, Calif. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.

#### METERS—Microwave

- Decimeter, Inc., 1430 Market St., Denver 3,
- Colo. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. Microwave Equipment Co., North Caldwell, N. J.
- Millen Mfg. Co., James, 150 Exchange St., Mal-Mass
- den, Mass. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63. Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

- b1, b2.
  Waveguide Mfg. & Equipment Co., Inc., 190-A Duane St., New York, N. Y.
  Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

#### **METERS**—Modulation

See Also Monitors, Modulation

- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chi-
- cago 36, Ill.
- cago 36, 111. Federal Telecommunication Labs., Inc., 500 Wash-ington Ave., Nutley 10, N. J. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 113. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Measurement Engineering Ltd., Arnprior, Ontario, Canada.
- Canada
- Watropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Monitor Products Co., 915 Fremont Ave., So. Pasadena, Calif.
- Motorola, Inc., 4545 W. Augusta Blvd., Chicago
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### METERS-Moisture

Mo.

TH

Pa.

Phila. 44, Pa.

METERS—Output

Ave., Cleveland, Ohio

Haven 11, Conn.

- American Instrument Co., 8030 Georgia Ave.,
- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Berkeley Scientific Co., 6th & Nevin, Richmond,
- Calif.
- Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y. Delmhorst Instrument Co., 115 Cornelia Street, Boonton, N. J.
- Boonton, N. J. Fielden Electronics, Inc., 1171 New York Ave., Huntington Station, N. Y. Foxboro Co., The, Foxboro, Mass. **GENERAL ELECTRIC CO.**, Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Illinois Testing Labs., Inc., 420 N. La Salle St., Chicago 10, Ill.

- MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110. Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. Moisture Register Co., P. O. Drawer No. 910,
- Alhambra, Calif. Network Manufacturing Corp., Bayonne, N. J. Paterson Co., C. J., 3947 Broadway, Kansas City,

Serdex, Inc., 91 Cambridge St., Boston, Mass.

Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.

Revark 5, N. J.
Tech Laboratories, Inc., Bergen & Edsall Blvd., Palisades Park, N. J.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.
Thwing-Albert Instrument Co., 5351 Pulaski Ave.,

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217. Cole Instrument Co., 1320 S. Grand Ave., Los

Angeles 15, Calif. Daven Co., 191 Central Ave., Newark 4, N. J. Electronic Development Co., 4420 N. 23rd St.,

Omaha 11, Nebraska ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 233.

Feiler Engrg. Co., 945 W. George St., Chicago 14,

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Hickok Electrical Instrument Co., 10514 Dupont

International Instruments, Inc., 331 East St., New

McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn. MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79. Meters, Inc., 915 Westfield Blvd., Indianapolis

Meters, Inc., 920 (Construction)
 20, Ind.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,

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## METERS

- Simpson Electric Co., 5218 W. Kinzie St., Chi-
- cago 44, Ill. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Triplett Electrical Instrument Co., 286 Harmon
- Rd., Bluffton, Ohio WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 868, Pi 66, 67.

#### METERS—Panel

- ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- Assembly Products, Inc., Chagrin Falls 6, Ohio Beede Electrical Instrument Co., Inc., Penacook, N. H.
- N. H. Burlington Instrument Co., Burlington, Iowa Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y. Electric Design & Mfg. Corp., Burlington, Iowa Electric Heat Control Co., The, 9123 Innuan Ave., Cluvelord 5. Object

- Cleveland 5, Ohio Electro-Mechanical Instrument Co., 812 Chestnut
- St., Perkasie, Pa. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette
- St., New York 13, N. Y. SEE ADV. PG. 181. Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ALV. PG. 233. GENEPAL CLECTRON
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
- Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio International Instruments, Inc., 331 East St.,

- Miternational Instruments, Inc., 331 East St., New Haven 11, Conn.
   J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.
   MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79.
   Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind. Ind.
- Roller-Smith, Bethlehem, Pa. Sensitive Research Instrument Corp., 9 Elm St.,

- Sensitive Research Instrument Corp., 9 Elm St., Mt. Vernon, N. Y.
  SHURITE METERS. 61 Hamilton St., New Haven 8, Conn. SEE ADV. PG. 225.
  Simpson Electric Co., 5218 W. Kinzie St., Chi-cago 44, Ill.
  STERLING MFG. CO., 9205 Detroit Avc., Cleve-land 2, Ohio. SEE ADV. PG. 232.
  Supreme Inc., Greenwood, Miss.
  Triplett Electrical Instrument Co., 286 Harmon Rd., Blufton, Ohio
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

### METERS-PH Meters, Recorders & Comparators

- Comparators
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio
  Bristol Co., The, Waterbury 91, Conn.
  Brown Instrument Co., Wayne & Robert Aves., Philadelphia 44, Pa.
  Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
  Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.

- Coleman instruments, Inc., 518 Matison St., May-wood, Ill.
   Electronic Mechanical Products Co., 13-15-17 N.
   Virginia Ave., Atlantic City, N. J.
   Fisher Scientific Co., 717 Forbes St., Pittsburgh 10, Dec.
- Virginia Ave, Atlantic City, iv. o.
  Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.
  Foxboro Co., The, Foxboro, Mass.
  LaMotte Chemical Products Co., Towson 4, Balti-more, Md.
  Leeds & Northrup Co., 4970 Stenton Ave., Phila-delphia 44, Pa.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

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- Minnesota Electronics Corp., 97 E. Fifth St., St.
- Paul 1, Minn. National Technical Labs., 820 Mission St., South Pasadena, Calif.
- Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
- Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
   Thwing-Albert Instrument Co., 5351 Pulaski Ave.,
- Philadelphia 44, Pa. Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

## METERS-Phase Angle

- American Radio Co., 611 E. Garfield Ave., Glen-
- American Radio Co., 611 E. Garneid Ave., Glendale, Calif.
  Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
  Clarke Instrument Corp., 910 King St., Silver Spring, Md.
  Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  Esterline-Angus Co., Inc., P. O. Box 596, Indian-
- apolis, Ind. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3,
- Calif.

- Calif. Technology Instrument Corp., 1058 Main St., Waltham, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

#### METERS—Photoelectric Reflection

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
  American Scientific Co., P. O. Box 1, Highbridge Station, New York 52, N. Y.
  Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. J.
  Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J.
  G-M Laboratories, Inc., 4313 N. Knox Ave., Chi-cago, Ill.

- cago, Ill.
- cago, III.
   Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
   MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79.
   National Technical Lab., 820 Mission St., South Bacadana, Colif.
- Pasadena, Calif. Photovolt Corp., 95 Madison Ave., New York 16,
- N.Y
- Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y

#### **METERS**—Power Factor

- BOONTON RADIO CORP., Boonton, N. J. SEE ADV. PG. 61. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Esterline-Angus Co., Inc., P. O. Box 596, Indian-

- Esterline-Angus Co., Inc., P. U. BOX 520, Industrapolis, Ind. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hickok Electrical Instrument Co., 10514 Dupont Ava. Claveland Obio

- Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio Roller-Smith, Bethlehem, Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

#### METERS-O

- American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif.

- dale, Calif. BOONTON RADIO CORP., Boonton, N. J. SEE ADV. PG. 61. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Measurement Engineering Ltd., Arnprior, Ontario, Concident
- Canada

## METERS-RF Power

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217, Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

1949-1950 DIRECTORY of

- Electric Design & Mfg. Corp., Burlington, Iowa Jones Electronics Co., M. C., 96 N. Main St., Bristol, Conn
- Rollin Co., 2070 N. Fair Oak Ave., Pasadena 3,
- SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

## METERS-Shock

Schottland, Frederick D., 104-18 Metropolitan Ave., Forest Hills, N. Y.

## METERS-Sound Level

- Daven Co., 191 Central Ave., Newark 4, N. J. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,
- 115. International Instruments, Inc., 331 East St.,
- New Haven 11, Conn. Massa Laboratories, 3868 Carnegie St., Cleveland,
- Ohio Rek-O-Kut Co., Inc., 38-01 Queens Elvd., L. I. City, N. Y. Scott Inc., Herman Hosmer, 385 Putnam Ave.,
- Cambridge 39, Mass. Sound Apparatus Co., Stirling, N. J. Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
   Western Electro-Acoustic Labs., 621 S. Spring St., Los Angeles 14, Calif.

#### METERS—Standing Wave Ratio

**METERS**—Tension

METERS—Thermocouple

- Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J. Jones Electronics Co., M. C., 96 N. Main St.,
- Bristol, Conn.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

Boulin Instrument Corp., 65 Madison Ave., New York 16, N. Y. Dillon & Co., W. C., 5410 W. Harrison St., Chi-

cago 44, Ill. Sipp-Eastwood Corp., Keen & Summer Sts., Paterson, N. J.

Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
Assembly Products, Inc., Chagrin Falls 6, Ohio
Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217.
Bristol Co., The, Waterbury 91, Conn.
Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
Burlington Instrument Co., Burlington, Iowa
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Electric Design & Mfg. Corp., Burlington, Iowa

Angeles 15, Calif. Electroic Design & Mfg. Corp., Burlington, Iowa Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska Foxboro Co., The, Foxboro, Mass. Gordon Co., Claud S., 3000 S. Wallace St., Chi-cago 16, Ill. Hickok Electrical Instrument Co., 10514 Dupont Avec Claudead Obio

Ave., Cleveland, Ohio Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.

International Instruments, Inc., 331 East St., New Haven 11, Conn.
 J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.

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## Lewis Engineering Co., 52 Rubber Ave., Nauga-

- MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.
- Minneapolis-Honeywell Regulator Co., 2753
- Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
  Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
  Roller-Smith, Bethlehem, Pa.
  Sensitive Research Instrument Corp. 9 Flm Ave.

- Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y. Simpson Electric Co., 5218 W. Kinzie St., Chi-cago 44, Ill.
- Thwing-Albert Instrument Co., 5351 Pulaski Ave.,
- Philadelphia 44, Pa. Triplett Electrical Instrument Co., 286 Harmon

- Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinguysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
  Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, 10
- Chicago 7, Ill.

## **METERS**—Vibration

- Calidyne Co., The, 751 Main St., Winchester, Mass.
- Commercial Research Labs., Inc., 20 Bartlett

- Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich.
  Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif.
  Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  Heiland Research Corp., 130 E. 5th Ave., Denver 9, Colo.
- 9, Colo. Massa Laboratories, 3868 Cornegie St., Cleveland,
- Ohio Scott Inc., Herman Hosiner, 385 Putnam Ave.,
- Cambridge 39, Mass. Sound Apparatus Co., Stirling, N. J. Televiso Products. Inc., 7466 West Irving Park Road, Chicago 34, Ill. Vibroscope Co., 6 East 39th St., New York 16,
- N. Y.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### **METERS**—Viscosity

- Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa. Paterson Co., C. J., 3947 Broadway, Kansas City,
- Mo.
- Mo. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.

## METERS-Wave

- METERS—Waye
  American Electroneering Co., 2112 La Brea Ave., Los Angeles, Calif.
  BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
  Decimeter, Inc., 1430 Market St., Denver 2, Colo.
  DeVine Laboratories, Madison, N. J.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115, HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto. Calif. SEE ADV. PGS. 64, 65.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  LAVOIE LABORATORIES. Morganville, N. J.

- N. J. SEE ADV. PG. 215. LAVOIE LABORATORIES, Morganville, N. J.
- SEE ADV. PG. 182. Millen Mfg. Co., James, 150 Exchange St., Mal-
- POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Thermo Labs., Inc., 355 W. 26th St., New York 1. N. Y

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## METERS-X-Ray Intensity

- Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Electronic Control Corp., 1573 E. Forest St., De-troit Mich.
- troit, Mich. Geophysical Instrument Co., Key Blvd. & Nash
- St., Arlington, Va. National Technical Lab., 820 Mission St., S.
- Pasadena, Calif. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. Nuclear Instrument & Chemical Corp., 223 W.
- Erie St., Chicago 10, Ill. Omaha Scientific Supply Co., 3623 Lake St., Omaha 4, Nebraska
- Picker X.Ray Corp., 300 Fourth Ave., New York 10, N. Y. Radiation Counter Labs., Inc., 1844 W. 21st St., Contemportation Counter Contemportation Contemportation Counter Labs.
- Chicago 8, Ill. Sensitive Research Instrument Corp., 9 Elm St.,

- Sensitive Research Instrument Corp., J. Em. 3c., Mt. Vernon, N. Y. STERLING MFG. CO., 9205 Detroit Ave., Cleve-land 2, Ohio. SEE ADV. 232. VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67 66, 67.

#### MICA

#### See Insulation Materials

#### MICROAMMETERS

- Assembly Products, Inc., Chagrin Falls 6, Ohio Beede Electrical Instrument Co., Inc., Penacook, . Н Ν
- N. H. BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126. Burlington Instrument Co., Burlington, Iowa Coastwise Electronics Corp., Inc., 130 N. Beau-dry Ave., Los Angeles, Calif. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15. Calif.

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y.
  Electric Design & Mfg. Corp., Burlington, Iowa
  Electronic Development Co., Hardington, Iowa
  ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. SEE ADV. PGS. 5-18.
- Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
- International Instruments, Inc., 331 East St., New Haven 11, Conn. Lewis Engineering Co., 52 Rubber Ave., Nauga-
- MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ltd.
- Ind.
- Ind. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div. Front & Cooper Sts., Caniden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass. Poller Swith Betkindene De

- Roller-Smith, Bethlehem, Pa. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
- Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, Ill.
- Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
- Supreme Inc., Greenwood, Miss. Triplett Electrical Instrument Co., 286 Harmon
- Road, Bluffton, Ohio Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
- Chicago 10, 10. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP.,
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

#### MICRO-MICROAMMETERS

BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
National Technical Lab., 820 Mission Street, South Pasadena, Calif.
Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22 N V.

MICROPHONES

Brooklyn 22, N. Y. Brooklyn 22, N. Y. Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, III.

## MICROFARADAMETERS

Clippard Instrument Laboratory, Inc., 1125 Bank St., Cincinnati 14, Ohio Conant Labs., 6500 O St., Lincoln 5, Neb.

- Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
- Measurement Engineering Ltd., Arnprior, Ontario, Can
- WESTON ELECTRICAL INSTRUMENT CORP.
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## MICROMETERS-Electronic

Mass.

St.

Carson Micrometer Corp., 2 E. Main St., Little

Falls, N. J. DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y. Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill.

- St., Chicago 6, 111.
  La Rose & Associates, W. T., 646 Second Ave., Troy, N. Y.
  Sherron Electronics Corp., 1201 Flushing Ave., Brooklyn 6, N. Y.
  Standard Electronic Research Corp., 2 East End Ave., New York 21, N. Y.
  Stevens-Arnold, Inc., 22 Elkins St., S. Boston, Mass

Wilmotte Inc., Raymond M., 1469 Church St., N. W., Washington 5, D. C.

AVIOMETER, Div. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG, 206. ELECTRO-VOICE, INC., Buchanan, Mich., SEE

ADV. PG. 195. Flight Research Engineering Corp., P. O. Box I-F, Richmond 1, Va. Miles Reproducer Co., Inc., 812 Broadway, New

Miles Reproducer Co., inc., exponential and ave., York 3, N. Y. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago, III. SEE ADV. PG, 230. Racon Electric Co., 52 E. 19th St., New York 3,

RADIO CORP. OF AMERICA, RCA Victor Div Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers, Louis Microphone Co., 2726-28 Brentwood Blvd., St. Louis 17, Mo.

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. AVIOMETER, Div. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG, 206, ELECTRO-VOICE, INC., Buchanan, Mich. SEE ADV. PG, 195

Kaar Engineering Co., 2815 Middlefield Rd., Palo

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
RADIO CORP. OF AMERICA, RCA Victor Div. Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
SHURE BROTHERS, 225 W. Huron St. Chicago, Ill. SEE ADV. PG. 148.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
Stromberg-Carlson Co., Rochester, N. Y.
Telephonics Corp., 350 W. 31st St., New York, N. Y.

TURNER CO., The, 909 17th St., N. E., Cedar Rapids, Iowa. SEE ADV. PG, 96.

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MICROPHONES—Carbon

ADV. PG. 195.

Alto, Calif.

MICROPHONES-Aircraft Type

## MICROPHONES

# 1949-1950 DIRECTORY of

University Loudspeakers Inc., 80 S. Kensico Ave.,

White Plains, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

## MICROPHONES—Condenser

- Altec-Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
  AVIOMETER, Div. of Roauwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Stephens Mfg. Corp., 8538 Warner Drive, Culver City. Calif.
- City, Calif. Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y

#### MICROPHONES—Contact

- American Microphone Co., 370 So. Fair-Oaks Ave.,

- American Microphone Co., 310 So. Fair-Odas Ave., Pasadena 1, Calif.
   AMPERITE CO., 561 Broadway, New York 12, N. Y. SEE ADV. PG. 90.
   Astatic Corp., The, Conneaut, Ohio BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
   ELECTRO-VOICE, INC., Buchanan, Mich. SEE ADV. PG. 195 ADV. PG. 195.
- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y

- York 3, N. Y.
  Rowe Industries, 1702 Wayne St., Toledo 9, Ohio
  St. Louis Microphone Co., 2726-28 Brentwood Blvd., St. Louis 17, Mo.
  Simpson Mfg. Co., Inc., Mark, 32-28 49th St., L. I. City 3, N. Y.
  TURNER CO., THE, 909 17th St., N. E. Cedar Rapids, Iowa. SEE ADV. PG. 96.

#### MICROPHONES—Crystal

- American Microphone Co., 370 So. Fair-Oaks Ave., Pasadena 1, Calif. Astatic Corp., The, Conneaut, Ohlo BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169. Du Mont Labs., Inc., Allen B., 2 Main Ave., Parencia N. J.
- Passaic, N. J. ELECTRO-VOICE, INC., Buchanan, Mich. SEE
- ADV. PG. 195. Glohe Phone Mfg. Co., 2 Linden St., Reading,
- Mass. Medical Electronics Co., P. O. Box 3541, Cleve-
- land 18, Ohio
- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
- York 3, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
  PGS. 197, Inside Back and Back Covers.
  SHURE BROTHERS, 225 W. Huron St., Chicago, Ill. SEE ADV. PG. 148.
  Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
  Stromberg-Carlson Co., Rochester, N. Y.
  Tibbetts Industries Inc., Camden, Maine

- Tibbetts Industries, Inc., Camden, Maine TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. SEE ADV. PG. 96.

## MICROPHONES—Dynamic

- American Microphone Co., 370 So. Fair-Oaks Ave., Pasadena 1, Calif.
  AMPERITE CO., 561 Broadway, New York 12, N. Y. SEE ADV. PG. 90.
  Astatic Corp., The, Conneaut, Ohio
  AVIOMETER, Div. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
- TH ELECTRO-VOICE, INC., Buchanan, Mich. SEE
- ADV. PG. 195. Globe Phone Mfg. Co., 2 Linden St., Reading,
- Lektra Labs., 30 E. 10th Street, New York, N. Y.
- Miles Reproducer Co., Inc., 812 Broadway, New
- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. PERMOFLUX CORP., 4900 W. Grand Ave., Chicago, Ill. SEE ADV. PG. 230. Racon Electric Co., 52 E. 19th St., New York 3,
- RADIC CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

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- Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, Ill.
- Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

- 10, Calif.
  St. Louis Microphone Co., 2726-28 Brentwood Blvd., St. Louis 17, Mo.
  SHURE BROS., 225 W. Huron St., Chicago, Fll. SEE ADV. PG. 148.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Telephonics Corp., 350 W. 31st St., New York, N V
- N. Y. TURNER CO., THE, 909 17th St., N. E. Cedar Rapids, Iowa. SEE ADV. PG. 96. University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

## MICROPHONES-Velocity

- AMPERITE CO., 561 Broadway, New York 12, N. Y. SEE ADV. PG. 90. AVIOMETER, Div. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. ELECTRO-VOICE, INC., Buchanan, Mich. SEE
- ELECTRO-VOICE, INC., Buchanan, Mich. SEE ADV. PG. 195.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, Ill.
  TURNER CO., THE, 909 17th St., N. E. Cedar Rayids, Iowa. SEE ADV. PG. 96.
  Webster Engineering Co., 105 Tenth St., N. E., Cedar Rapids, Iowa

## MICROSCOPES—Electronic

- Farrand Optical Co., Inc., Bronx Blvd. & 238th St., New York 66, N. Y.
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

# MICROWAVE TRANSMISSION LINES & MICROWAVE ACCESSORIES

Bendix Radio Div., Bendix Aviation Corp., Balti-

- more 4, Md. Buggie & Co., H. H., 2141 Madison Ave., Toledo
- I, Ohio Corning Glass Works, Corning, N. Y. Crystal Research Labs., Inc., 29 Allyn St., Hart-

- Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn.
  Dalmo Victor Co., San Carlos, California
  De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gorham Co., Bronze Div., Providence 7, R. I.
  Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
  Kent Co., F. C., 64-72 Howard St., Irvington, N. J.

- Kent Co., F. C., 64-72 Howard St., Irvington, N. J.
  Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
  Microwave Equipment Co., North Caldwell, N. J.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y.
  SEE ADV. PG, 63.
  Dermine Lactowards Comp. 52 W. Houston St.

- SEE ADV. PG. 63.
  Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  Shutter, Carl W., Rockville Center, N. Y.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  SYLVANIA FLECTRIC PRODS. INC. 500 Eth.
- 51, 52. SYLVANIA ELECTRIC PRODS., INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. Ave., Ne 240-244.
- Technicraft Laboratories, Inc., Box 1908, Water-
- bury, Conn. TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 231. Waveguide Mfg. & Equipment Co., Inc., 190-A
- Duane St., New York, N. Y.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. Wheeler Labs., Inc., 259-09 Northern Blvd., Great Neck, N. Y.

#### MILLIAMMETERS

- Assembly Products, Inc., Chagrin Falls 6, Ohio BALLANTINE LABS., INC., Boonton, N. J. SEE ADV. PG. 134.
- Beede Electrical Instrument Co., Inc., Penacook, Н
- N. H. BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126. Burlington Instrument Co., Burlington, Iowa Cole Instrument Co., 1320 S. Grand Ave., Los Apredes 15 Colf.
- Angeles 15, Calif. DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.
- Long Island City I, N. Y. Development Engineering Co., Inc., The, 1818 Ashland St., Houston 8, Texas Electric Design & Mfg. Corp., Burlington, Iowa Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio Electro-Mechanical Instrument Co., 812 Chest-mut St. Parkasie Pa
- nut St., Perkasie, Pa
- ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. Electronic Development Co., 4420 N. 23rd St.,
- Omaha 11, Nebraska. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV.
- PG 233 Esterline-Angus Co., Inc., P. O. Box 596, In-
- dianapolis, Ind. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC (CO., Schenectady 5, N. 1. SEE ADV. PGS. 5-18.
   International Instruments Inc., 331 East St., New Haven 11, Conn.
   J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.
   Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck Conn
- Tuck, Conn.
  MARION ELECTRICAL INSTRUMENT CO., Manchester, N. H. SEE ADV. PG. 79.
  Meters, Inc., 915 Westfield Blvd., Indianapolis
- 20. Ind. Metropolitan Electronics & Instruments Co., 42

Warren St., New York 7, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper St., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rawson Electrical Instrument Co., 110 Potter

St., Cambridge 42, Mass. Reliance Instrument Co., 3027 W. Van Buren

Reliance Instrument Co., 3021 W. Van Durch St., Chicago 12, Ill. Roller-Smith, Bethlehem, Pa. Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y. SHURITE METERS, 61 Hamilton St., New Haven 8, SEE ADV. PG. 225. Simmon Electric Co., 5218 W. Kinzje St., Chi-

Simpson Electric Co., 5218 W. Kinzie St., Chi-

Simpson Electric Co., 5218 W. Khizle St., Chicago 44, Ill.
 STERLING MFG. CO., 9205 Detroit Ave., Cleveland 2, Ohio. SEE ADV. 232.
 Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
 Sur Electric Comp. 6222 Avendels Ava. Chicago 44

York 7, N. Y. Sun-Electric Corp., 6323 Avondale Ave., Chi-cago 31, Ill. Supreme, Inc., Greenwood, Miss. Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

Assembly Products, Inc., Chagrin Falls 6, Ohio BALLANTINE LABS., INC., Boonton, N. J. SEE

Beede Electrical Instrument Co., Inc., Penacook, N. H.

N. H. BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.

Burlington Instrument Co., Burlington, Iowa

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- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

- Angeles 15, Calif. Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich. DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y. Development Engineering Co., Inc., The, 1818 Ashland St., Houston 8, Texas Electric Design & Mfg. Corp., Burlington, Iowa Electric Design & Mfg. Corp., Burlington, Iowa Electric Heat Control Co., The, 9123 Innnan Ave., Cleveland 5, Ohio ELECTRO-TECH EQUIPMENT CO., 117 Lafay-ette St., New York 13, N. Y. SEE ADV. PG. 181.
- 181. Electronic Development Co., 4420 N. 23rd St.,
- Omaha 11, Nebraska ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV.
- PG. 233. Esterline-Angus Co., Inc., P. O. Box 596, In-
- dianapolis, Ind. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC Co., Schenectary 6, 17, 27, SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.
- Lewis Engineering Co., 52 Rubber Ave., Naugatuck Conn MARION ELECTRICAL INSTRUMENT CO., Man-
- chester, N. H. SEE ADV. PG. 79. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.

- 20, Ind.
  Metropolitan Electronics & Instruments Co., 42
  Warren St., New York 7, N. Y.
  Minneapolis-Honeywell Regulator Co., 2753
  Fourth Ave. S., Minneapolis, Minn.
  RADIO CORP. OF AMERICA, RCA Victor Div.,
  Front & Cooper Sts., Camden, N. J. SEE ADV.
  PGS. 197, Inside Back and Back Covers.
  Rawson Electrical Instruments Co., 110 Potter St., Cambridge 42. Mass.
- ter St., Cambridge 42, Mass. Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill. Roller-Smith, Bethlehem, Pa.

- Roller-Smith, Bethlehem, Pa.
  Sensitive Research Instrument Corp., 9 Elm St., Mt. Vernon, N. Y.
  Simpson Electric Co., 5218 W. Kinzie St., Chi-cago 44, Ill.
  Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
  Sun Electric Corp., 6323 Avondale Ave., Chi-cago 31, Ill.
  Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
  Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- WESTON ELECTRICAL INSTRUMENT CORP. 618 Frelinghuysen Ave., Newark 5, N. J. SEE
- ADV. PG. 193. Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.

## MIRRORS—Television

- Austin Co., O., 335 Throop Ave., Brooklyn 21,
- N. Y.
  Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
  Fish-Schurmann Corp., 230 E. 45th St., New York 17, N. Y.
  Optical Film Engineering Co., 2125 Cherry St., Philadelphia 3, Pa.
  Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los

- Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles 26, Calif.
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

## MONITORS-Broadcast

- Alden Products Co., 117 No. Main St., Brock-
- ton 64, Mass. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Doolittle Radio, Inc., 7421 South Loomis Blvd., Chicago 36, Ill.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y. Monitor Products Co., 815 Fremont Ave., So.
- Pasadena, Calif. Northeastern Engineering, Inc., Manchester,
- RADIO CORP. OF AMERICA, RCA Victor Div. Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
- Radio Engineering Laboratories, Inc., 35-54 36th St., Long Island City, N. Y. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Western Electric Co., Inc., 195 Broadway, New York 7 N. Y.
- York 7, N. Y.

## MONITORS-Frequency

- Alden Products Co., 117 No. Main St., Brockton

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179.
  Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chicago 36, Ill.
  Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gates Radio Co., 2010, Ill.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
  LAMPKIN LABORATORIES, INC., Bradenton, Fla. SEE ADV. PG. 233.
  Link Radio Corp., 125 W. 17th St., New York, N. Y.

- Measurement Engineering Ltd., Arnprior, On-Measurement Engineering Ltd., Arnprior, On-tario, Canada
  Millen Mfg. Co., James, 150 Exchange St., Mal-den, Mass.
  Mobile Communications Co., 110 W. Ocean Blvd., Long Beach 2, Calif.
  Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif.
  Motorola Inc., 4545 W. Augusta Blvd., Chicago 51. Ill.

- 51, Ill.
- Northeastern Engineering, Inc., Manchester,
- N. H. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-
- PANORAMIC RADIO PRODUCTS INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV. PG. 213.
- PG. 213.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52

- Dechnical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  West Coast Electronics Co., 1601 S. Burling-ton Ave., Los Angeles 6, Calif.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

## MONITORS—Modulation

- Doolittle Radio, Inc., 7421 S. Loomis Bldg., Chicago 36, Ill. Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaie, N. J.
- 3, Mo. CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. Cyclohm Motor Corp., Racine, Wisc. DeJur-Amsco Corp., Northern Blvd., at 45th St., Long Island City 1, N. Y. Delco Apphance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y. Diabl. Mig. Co. 1129 Finderne Ave., Somerville, Passaic, N. J. FEDERAL TELEPHONE & RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Gates Radio Co., Quincy, Ill. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
 LAMDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. SEE ADV. PG. 177.

Measurement Engineering Ltd., Arnprior, Ontario, Canada Mobile Communications Co., 110 W. Ocean Blvd.,

- Long Beach 2, Calif. Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif. Motorola Inc., 4545 W. Augusta Blvd., Chicago
- 51, Ill. Northeastern Engineering, Inc., Manchester,
- H.
- N. H. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Triplett Electrical Instrument Co., 286 Harmon Pd. Bluffion, Obio
- Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
  Waterproof Electric Co., 72 E. Verdugo Ave., Burbank, Calif.
  West Coast Electronics Co., 1601 S. Burling-ton Ave., Los Angeles 6, Calif.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

## MONITORS-Television Master

- Du Mont Labs., Inc., Allen B., 2 Main Ave.,
- Du Mont Lass, Inc., Allen B., 2 Main Ave., Passaic, N. J.
   GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115, Industrial Television Inc., 359 Lexington, Clif-ton, N. J.
- POLARAD ELECTRONICS CO., 9 Ferry St., New
- PULARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
   Remington Rand, Inc., Systems Div., Vericon Dept., South Norwalk, Conn.
   Telequip Radio Co., 1901 S. Washtenaw, Chi-cago, Ill.
   Television Projects, Inc., 3660 Coral Way Miami

Television Projects, Inc., 3660 Coral Way, Miami 35, Fla.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y. Motorola Inc., 4545 W. Augusta Blvd., Chicago

Northeastern Engineering, Inc., Manchester,

N. H. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Technical Materiel Corp., The, 453 W. 47th St.,

Air Associates Inc., Teterboro, N. J. Alliance Mfg. Co., Lake Park Blvd., Alliance,

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. Baldor Electric Co., 4353 Duncan Ave., St.

Louis, Mo. Barber Colman Co., Rockford, Ill. Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, Ill. Bogue Electric Mg. Co., 52 Iowa Ave., Pater-

son, N. J. Burke Electric Co., 12th & Cranberry Sts.,

Century Electric Co., 1806 Pine St., St. Louis

Diehl Mfg. Co., 1129 Finderne Ave., Somerville, N. J.

Eastern Air Devices, Inc., 585 Dean St., Brook-lyn 17, N. Y.

Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Eicor, Inc., 1501 W. Congress St., Chicago 7,

D-95

MONITORS—(FS) Transmitter

51. Ill.

Ohio

Erie, Pa.

TII.

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New York 19, N. Y

MOTORS—Fractional hp

## MOTORS

- ELECTRIC INDICATOR CO., 21 Parker Ave., Stamford, Conn. SEE ADV. PG. 132. Electric Motor Corp., Racine, Wisc. Electric Specialty Co., 211 South St., Stamford,
- Conn.
- Conn. Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y. Fasco Industries, Inc., Rochester 2, N. Y. FORD INSTRUMENT CO., INC., 31-10 Thom-son Ave., L. I. City, N. Y. SEE ADV. PG. 90. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- SEE ADV. PGS. 5-18. General Industries Co., Taylor & Olive Sts., Elyria, Ohio
- Globe Industries, 125 Sunrise Place, Dayton, Ohio
- Heinze Electric Co., 685 Lawrence St., Lowell, Mass.
- Holtzer-Cabot, Inc., 125 Amory St., Boston 19,
- L & R Mfg. Co., 577 Elm St., Arlington, N. J. Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids, 2, Mich.
- Leland Electric Co., The, 1501 Webster St., Day-
- Leland Electric Co., The, 1501 Webster St., Dayton 1, Ohio
  Magnetic Products Corp., The, Norwalk, Conn.
  Marathon Electric Mig. Corp., Randolph & Cherry Sts., Wausau, Wise.
  Marco Industries, Inc., Depew, N. Y.
  Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.
  Oster Mfg. Co., John, Racine, Wisconsin
  Piqua Machine & Mfg. Co., Young & College Sts., Piqua, Ohio
  Redmond Co., Inc., Owosso, Mich.
  Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.

- Chicago 12, Ill. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio Russell Electric Co., 340 W. Huron St., Chi-cago 10, N. Y. Scovill Mig. Co., Waterville Screw Prods. Div., Waterbury, Conn. Small Motors Inc., 2076 Elston Ave., Chicago 14, Ill.

- Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50. Ill.
- b0, III.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck. N. Y. SEE ADV. PGS. 51, 52.
  U. S. Electrical Motors, Inc., 200 E. Slauson Ave., Los Angeles 64, Calif.
  Universal Electric Co., 300 E. Main St., Owosso, Mich.
- Mich. Victor Electric Products, Inc., 2950 Robertson

- Victor Electric Products, Inc., 2950 Robertson Ave., Cincinnati 9, Ohio
  Wagner Electric Corp., 6400 Plymouth Ave., St. Louis, Mo.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  Wincharger Corp., E. 7th & Division Sts., Sioux Citte Java City, Iowa

#### MOTORS—Phonograph

- Alliance Mfg. Co., Lake Park Blvd. Alliance, Ohio
- Garchild Camera & Instrument Corp., 88-06
   Van Wyck Blvd., Jamaica 1, N. Y.
   Garrard Sales Corp., 315 Broadway, New York 7, N. Y.
   General Industries Co., Taylor & Olive Sts.,

- General Industries Co., Taylor & Olive Sts., Elyria, Ohio
  Gleason-Avery Inc., Auburn, N. Y.
  Magnetic Products Corp., The, Norwalk, Conn.
  Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.
  Redmond Co., Inc., Owosso, Mich.
  Rek-0-Kut Co., Inc., 38-01 Queens Blvd., L. I. City, N. Y.
  Robbins & Myers, Inc., 1345 Laganda Ave., Springfield 99, Ohio
  Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 39, Ill.
  Wincharger Corp., E. 7th & Division Sts., Sioux

- Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa

#### **MOTORS**—Remote Control

Air Associates Inc., Teterboro, N. J. ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220.

Barber Colman Co., Rockford, Ill.

- Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
- Cutler-Hammer, Inc., 315 No. 12th St., Milwau-kee 1, Wisc. Eclipse-Pioneer Div., Bendix Aviation Corp.,

- Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Eicor, Inc., 1501 W. Congress St., Chicago 7, Ill. ELECTRIC INDICATOR CO., 21 Parker Ave., Stamford, Conn. SEE ADV. PG. 132. FORD INSTRUMENT CO., INC., 31-10 Thom-son Ave., L. I. City, N. Y. SEE ADV. PG. 90. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. KOLLSMAN INSTRUMENT DIV. of Square D Co., 80-08 45th Ave., Elmhurst, N. Y. SEE ADV.

- 80-08 45th Ave., Elmhurst, N. Y. SEE ADV. PG. 36.
  Magnetic Products Corp., The, Norwalk, Conn. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
  Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.
  Oster Mfg. Co., John, Racine, Wisc.
  ROBINETTE CO., W. C., 802 Fair Oaks Ave., South Pasadena, Calif. SEE ADV. PG. 204.
  Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y.
  TRANSICOIL CORP., 114 Worth St., New York 13, N. Y. SEE ADV. PG. 222.

## MOTORS-Servo

- Air Associates Inc., Teterboro, N. J. ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220. Cyclohm Motor Corp., Racine, Wisc. Diehl Manufacturing Co., 1129 Finderne Ave.,

- Somerville, N. J. Eastern Air Devices Inc., 585 Dean St., Brook-lyn 17, N. Y. Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
- Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  ELECTRIC INDICATOR CO., 21 Parker Ave., Stamford, Conn. SEE ADV. PG. 90.
  FORD INSTRUMENT CO., INC., 31-10 Thom-son Ave., L. I. City, N. Y. SEE ADV. PG. 90.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Globe Industries, 125 Sunrise Pl., Dayton, Ohio Hansen Mfg. Co., Inc., Princeton 10, Indiana Holzter-Cabot, Inc., 125 Amory St., Boston 19, Mass.

- KOLLSMAN INSTRUMENT DIV. of Square D Co., 80-08 45th Ave., Elmhurst, N. Y. SEE ADV. PG. 36. Lear, Inc., 110 Ionia Ave., NW, Grand Rapids 2,
- Mich.
- Magnetic Products Corp., The, Norwalk, Conn. Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif. Reeves Instrument Corp., 215 E. 91st St., New
- Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
  SPERRY GYROSCOPE Co., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  TRANSICOIL CORP., 114 Worth St., New York 13, N. Y. SEE ADV. PG. 222.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

MOTORS-Synchronous

- Alden Products Co., 117 No. Main St., Brock-
- ton 64, Mass. Amglo Corp., 4234 Lincoln Ave., Chicago 18,

- Barber Colman Co., Rockford, Ill.
  Bendix Aviation Corp., Pacific Div., 11600
  Sherman Way, N. Hollywood, Calif.
  Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, Ill.
  Burke Electric Co., 12th & Cranberry Sts.,
- Erie, Pa Century Electric Co., 1806 Pine St., St. Louis 3, Mo. Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-
- lvn 2. N.
- lyn 2, N. Y. Columbia Electric Mfg. Co., 4519 Hamilton Ave., N.E., Cleveland 14, Ohio CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. SEE ADV. PG. 224. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Cyclohm Motor Corp., Racine, Wise. Eastern Air Devices Inc., 585 Dean St., Brook-Ivn 17, N. Y.
- lyn 17, N. Y.

Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Eicor, Inc., 1501 W. Congress St., Chicago 7,

1949-1950 DIRECTORY of

- III. ELECTRIC INDICATOR CO., 21 Parker Ave., Stamford, Conn. SEE ADV. PG, 136. Electric Machinery Mfg. Co., 1331 NE Tyler St., Minneapolis 13, Minn. Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio Electric Specialty Co., 211 South St., Stam-ford, Conn. Electrume Motor Products Corp. 565 W. Wash-

- ford, Conn. Electyme Motor Products Corp., 565 W. Wash-ington Blvd., Chicago 6, Ill. Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y. FORD INSTRUMENT CO., INC., 31-10 Thom-son Ave., L. I. City, N. Y. SEE ADV. PG. 90. Garrard Sales Corp., 315 Broadway, New York 7, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEF ADV PGS 5-18
- SEE ADV. PGS. 5-18.
- Gleason-Avery, Inc., Auburn, N. Y. Hansen Mfg. Co., Inc., Princeton 10, Indiana HAYDON MFG. Co., INC., 584 E. Elm St., Tor-rington, Conn. SEE ADV. PGS. 68, 69. Holtzer-Cabot, Inc., 125 Amory St., Boston 19,
- Mass
- Mass.
  KOLLSMAN INSTRUMENT DIV. of Square D Co., 80-08 45th Ave., Elmhurst, N. Y. SEE ADV. PG. 36. PG. 36.
  Magnetic Products Corp., The, Norwalk, Conn.
  Mission Electric Mig. Co., 132 W. Colorado Blvd., Pasadena, Calif.
  Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill.
  Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio
  Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
  Star Electric Motor Co., 200 Bloomfield Ave., Bloomfield. N. J.

Star Electric Motor Co., 200 Bloomheld Ave., Bloomfield, N. J.
TELECHRON INC., Homer Ave., Ashland, Mass. SEE ADV. PG. 85.
TRANSICOIL CORP., 114 Worth St., New York 13, N., Y. SEE ADV. PG. 222.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Alliance Mfg. Co., Lake Park Blvd., Alliance,

Amglo Corp., 4234 Lincoln Ave., Chicago 18,

Angio Colp., 1934 Entoin Aver, Catego Fo, III.
Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, III.
CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99.
Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, III.
Gleason-Avery, Inc., Auburn, N. Y.
Globe Industries, 125 Sunrise PL., Dayton, Ohio Hansen Mfg. Co., Inc., Princeton 10, Ind.
Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
Magnetic Products Corp., The, Norwalk, Conn.
Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif.

Littelfuse, Inc., 4757 Ravenswood Ave., Chi-cago 40, Ill.

Bendix Radio Div., Bendix Article Div., timore 4, Md. General Tire & Rubber Co., Silentbloc Div., Wabash, Ind. Hamilton Kent Mfg. Co., Kent, Ohio Korfund Co., Inc., 4815 32nd Pl., L. I. City 1,

N. Y. LORD MFG. CO., 1635 W. 12th St., Erie, Pa. SEE ADV. PG. 103. Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.

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MOUNTINGS-Vibration and Shock Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. BARRY CORP., THE, 179 Sidney St., Cambridge, Mass. SEE ADV. PG. 47. Bendix Radio Div., Bendix Aviation Corp., Bal-

MOUNTINGS-Meter Back

MOTORS—Timing

Ohio

111.

- MB MFG. CO., 1060 State St., New Haven 11, Conn. SEE ADV. PG. 221. Racon Electric Co., 52 E. 19th St., New York
- 3, N. Y

3, N. I. Robinson Aviation, Inc., Teterboro, N. J. Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. United-Carr Fastener Corp., Cambridge 42,

Mass. U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.

## MOUNTS-Antenna

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Brach Mfg. Corp., L.S., 200 Central Ave., New-
- ark, N. J. Breeze Corpns., Inc., 41 S. Sixth St., Newark 7,
- N HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Metalace Corp., 2101 Grand Concourse, Bronx,
- Metalace Corp., 2101 Grand Concurse, Disna, N. Y.
  Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y.
  PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.

- York, N. Y. Rostan Corp., 202 E. 44th St., New York 17, N. Y.
- Shur-Antenna-Mount, Inc., Sea Cliff, N. Y. Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa.

## **MOUNTS**—Thermistor

- Barber Colman Co., Rockford, Ill. Buggie & Co., H. H., 2141 Madison Ave., To-ledo 1, Ohio GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18.

## MULTIPLIERS-Meter

- BALLANTINE LABS., INC., Boonton, N. J. SEE ADV. PG. 134.
- Burlington Instrument Co., Burlington, Iowa Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Burbank, Calif. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
- Hugers of Contral Ave., Newark 4, N. J. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
- Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
   INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113.
   MARION ELECTRICAL INSTRUMENT CO., Man-abacter N. M. SEE ADV. DC. 70.

- chester, N. H. SEE ADV. PG. 79. Measurement Engineering Ltd., Arnprior, On-

- Measurement Engineering Ltd., Arnprior, On-tario, Can.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
  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.
  Sensitive Research Instrument Corp., 9 Elm St. Mt Varmen N. Y.
- Sensitive Research Instrument Corp., 9 Elm St., Mt. Vernon, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Colling-dale, Pa.
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.
- 240-244. Tech Laboratories, Inc., Bergen & Edsall Blvds.,
- Palisades Park, N. J.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
   WESTON ELECTRICAL INSTRUMENT CORP., 618 Freinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## MULTITESTERS

- Bradshaw Instruments Co., 348 Livingston St., Brooklyn 17, N. Y. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette
- St., New York 13, N. Y. SEE ADV. PG. 181. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG.
- 233. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG, 172. Heath Co., Benton Harbor, Mich. Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, Ohio
- International Instruments, Inc., 331 East St., New Haven 11, Conn. Measurement Engineering Ltd., Arnprior, Onta-
- rio, Can.
- FIO, Can.
  Metropolitan Electronics & Instruments Co., 42
  Warren St., New York 7, N. Y.
  Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
  RMS Electronics, Inc., 622 E. 6th St., New York, N. V.
- Y
- N. Y. Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Design Co., 1353 Sterling Pl., Brooklyn, N. Y.
- Reiner Electronics Co., 152 W. 25th St., New York, N. Y. Simpson Electric Co., 5218 W. Kinzie St., Chi-

- Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, 111.
  Star Measurements Co., 442 East 166th St., New York 56, N. Y.
  Supreme, Inc., Greenwood, Miss.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Thermo Labs., Inc., 355 W. 26th St., New York I, N. Y. Triplett Electrical Instrument Co., 286 Harmon
- Rd., Blufton, Ohio WESTON ELECTRICAL INSTRUMENT CORP., 618 Freylinghuysen Ave., Newark, N. J. SEE
- ADV. PG. 193.

## MULTIVIBRATORS

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brock-
- CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG, 175. ELECTRONIC MEASUREMENTS CO., Red Bank,
- ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
   EL-TRONICS, INC., 2647 No. Howard St., Phila-33, Pa. SEE ADV. PG. 189.
   GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
   Measurement Engineering Ltd., Amprior, Onta-rio, Canada
- rio, Canada Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Radar Engineers, 110 University St., Seattle 1, Wash
- Wash.
- Radex Corp., 2076 N. Elston Ave., Chicago 14, III.
- Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.

### MUSIC SYSTEMS-Industrial and Commercial

- Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, Ill.
- cago 7, 11. Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y. American Communications Corp., 306 Broadway, New York 7, N. Y. Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Bogen Co., David, 663 Broadway, New York 12, N. Y.
- 12, N. Y.
   Cinema Engrg. Co., 1510 W. Verdugo Ave., Burbank, Calif.
   Collins Audio Products Co., P. O. Box 368, Westfield, N. J.

Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y. Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

NEEDLES

- Coral Gables 34, Fla. Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. Electronic Systems Co., 201 N. Wells St. Chi-
- Electronic Systems Co., 201 N. Wells St., Chi-cago 1, Ill.
- Cago 1, 111.
  EL-TRONICS, INC., 2647 No. Howard St., Phila.
  33, Pa. SEE ADV. PG. 189.
  Executone, Inc., 415 Lexington Ave., New York 17, N. Y.
- Hallicrafters Co., 4401 W. Fifth Ave., Chicago
- 24, Ill. Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
- Loral Electronics Corp., 794 E. 140th St., New
- York 54, N. Y. M. P. Concert Installations, Fairfield 10, Conn. Minnesota Electronics Corp., 97 E. Fifth St.,
- Minnesota Electronics Corp., et al. St. Paul 1, Minn. Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. Radio-Music Corp., Port Chester, N. Y.
- Radio-Music Corp., Port Chester, N. Y. Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, III. Remler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calif. Riggs & Jeffreys, Inc., 140 Glenridge Ave., Mont-clair N. J.
- clair, N. J. Rowe Industries, 1702 Wayne St., Toledo 9, Ohio
- Schulmerich Electronics, Inc., Sellersville, Pa. Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
- Cambridge 39, Mass. Simpson Mfg. Co., Inc., Mark, 32-28 49th St., L. I. City 3, N. Y. Stromberg-Carlson Co., Rochester, N. Y. Webster Electric Co., 1900 Clark St., Racine,
- Wise.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Wurlitzer Co., Rudolph, The, N. Tonawanda, N. Y.

ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG.

Aluminum Co. of America, Gulf Bldg., Pittsburgh,

Pa. American Steel & Wire Co., U. S. Steel Corp. Sub., Rockefeller Bldg., Cleveland 13, Ohio Atlas Tack Corp., Pleasant St., Fairhaven, Mass. Chase Brass & Copper Co., Inc., Waterbury 91,

Conn. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. Greene Mfg. Corp., G. G., Warren, Pa. Hassall, Inc., John, Clay & Oakland Sts., Brooklyn

22, N. Y. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

Acton Co., Inc., H. W., 370 7th Ave., New York 1, N. Y. Aim Industries, 41 Union Sq., New York 3,

N. Y. AUDIO DEVICES INC., 444 Madison Ave., New York 22, N. Y. SEE ADV. PG. 70. Clarkstan Corp., 11927 W. Pico Blvd., Los Angeles 34, Calif. Duotone Co., 799 Broadway, New York, N. Y. Eldeen Co., The, 610.616 W. National Ave., Milwaukee 4, Wisc. Electrovox Co., Inc., 66 Franklin St., East Orange, N. J.

Fidelitone Corp., 1616 Devon Ave., Chicago 26,

General Cement Mfg. Co., 919 Taylor Ave.,

Gould Moody Co., 395 Broadway, New York, N. Y.

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NAILS---Special

NAME PLATES

See Plates, Name

NEEDLES—Cutting

Ill.

Rockford, Ill.

Pa.

## NEEDLES

- International Merit Products Corp., 254 W. 54th St., New York 19, N. Y.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Miles Reproducer Co., Inc., 812 Broadway, New York 2, N. Y.
- Miles Reproductive Co., M. A., 1169 E. 43rd St., Chicago 15, Ill.
   Mirror Record Corp., 1133 Broadway, New York 10, N. Y.
- Permo, Inc., 6415 Ravenswood Ave., Chicago,
- TH.
- PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41. Recordisc Corp., 395 Broadway, New York, N. Y.

- N. Y. Recotone Corp., 251 Fourth Ave., New York 10, N. Y. **REEVES SOUNDCRAFT CORP.**, 10 E. 52nd St., New York 22, N. Y. SEE ADV. PG. 199. Rek-O-Kut Co., Inc., 38-01 Queens Blvd., Long Island City, N. Y. Walco Sales Co., 60 Franklin St., East Orange, N. J.
- N. J.
- Wilcox-Gay Corp., Charlotte, Mich. Zephyr Products Co., 160 E. 116th St., New York 29, N. Y.

## NEEDLES-Playback

- Acton Co., Inc., H. W., 370 7th Ave., New York 1, N. Y. Aero Needle Co., 619 N. Michigan Ave., Chi-cago 11, Ill. Aim Industries, 41 Union Sq., New York 3,

- Aim Industries, 41 Union Sq., New York 3, N. Y.
  AUDIO DEVICES INC., 444 Madison Ave., New York 22, N. Y. SEE ADV. PG. 70.
  Clarkstan Corp., 11927 W. Pico Blvd., Los Angeles 34, Calif.
  Duotone Co., 799 Broadway, New York, N. Y.
  Eldeen Co., The, 610-616 W. National Ave., Milwaukee 4, Wis.
  Electrovox Co., Inc., 66 Franklin St., East Orange, N. J.
- Fidelitone Corp., 1616 Devon Ave., Chicago 26, **T**11.
- Garrard Sales Corp., 315 Broadway, New York 7, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- Gould Moody Co., 395 Broadway, New York,
- N. Y. International Merit Products Corp., 254 W. 54th
- St., New York 19, N. Y.
   J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
   Jensen Industries Inc., 329 S. Wood St., Chi-
- Jensen Industries Inc., 329 S. Wood St., Chr-cago, Ill. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Miller Mfg. Co., M. A., 1169 E. 43rd St., Chi-cago 15, Ill. Mirror Record Corp., 1133 Broadway, New York 10, N. Y. Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif. Perino, Inc., 6415 Ravenswood Ave., Chicago, Ill.

- TIL.
- Pfanstiehl Chemical Co., 104 Lake View Ave., Waukegan, Ill. Phonograph Needle Mfg. Co., Inc., 42 Dudley
- St., Providence 5, R. I. PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41. Recordisc Corp., 395 Broadway, New York,
- Υ. N.
- N. Y. Recotone Corp., 251 Fourth Ave., New York 10, N. Y. REEVES SOUNDCRAFT CORP., 10 E. 52nd, St., New York 22, N. Y. SEE ADV. PG. 199. Rek-O-Kut Co., Inc., 38-01 Queens Blvd., Long Island City, N. Y. ROYAL DIAMOND TOOL CO., 403 Statler Bldg., Boston 16, Mass. SEE ADV. PG. 144. SHURE BROTHERS, 225 W. Huron St., Chicago, Ill. SEE ADV. PG. 148. Stark Sound Engineering Co., 2131 Fairfield.

- Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
   Tetrad Corp., 60 N. Broadway, Yonkers 2, N. Y.
- Tibbetts Industries, Inc., Camden, Me. Vallorbs Jewel Co., Lancaster, Pa.

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- Walco Sales Co., 60 Franklin St., East Orange, N. J. Webster-Chicago Corp., 5622 Bloomingdale Ave.,
- Chicago 39, Ill. Wilcox-Gay Corp., Charlotte, Mich. Zephyr Products Co., 160 E. 116th St., New York 29, N. Y.

#### NETWORKS—Directional Antenna Phasina

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
  Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Continental Electronics Mfg. Co., 1728 Wood St., Dallas 1. Tex.
- St., Dallas 1, Tex. General Ceramics & Steatite Corp., Keasbey,
- Johnson Co., E. F., Waseca, Minn. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

### NETWORKS—Matching

- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
  Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45.
  Collins Radio Co., Cedar Rapids, Iowa
  Continental Electronics Mfg. Co., 1728 Wood St., Dallas 1, Tex.

- Continental Electronics Mig. Co., 1728 wood St., Dallas 1, Tex. Daven Co., 191 Central Ave., Newark 4, N. J. House of Television, 601 W. 26th St., New York, N. Y. Lynch Co., F. W., 151 2nd St., San Francisco, Calif.
- Calif.
- Cann. Oak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y. Peerless Electrical Products Co., 6920 McKin-ley Ave., Los Angeles 1, Calif. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Conversity Conden N. I. SEE ADV.
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale, Pa.

- dale, Pa. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Wind Turbine Co., Tower & Antenna Div., E. Market St. & Penna. R. R., West Chester, Pa. Pa.

#### NETWORKS-Pulse Forming

CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, Ill. SEE ADV. PG. 214.

#### NUTS

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG.
- 32. Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa.
- ra. American Screw Co., Providence, R. I. Automatic Metal Products Co., 315 Berry St., Brooklyn 1, N. Y. Autoscrew Co., 216-222 W. 18th St., New York,
- Birnbach Radio Co., Inc., 145 Hudson St., New
- York, N. Y. Boots Aircraft Nut Corp., 50 John St., Stam-ford, Conn. Central Screw Co., 3501 Shields Ave., Chicago
- 9. Ill.
- Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- Continental Screw Co., New Bedford, Mass. Corbin Screw Div., American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.

Federal Screw Products Co., 224 W. Huron St., retteral Screw Froducts Co., 224 W. Huron St., Chicago 10, Ill. Garrett Co., Inc., George K, 1421 Chestnut St., Philadelphia 2, Pa. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. International Merit Products Corp., 254 W. 54th St. New York 19, N. Y.

1949-1950 DIRECTORY of

- St., New York 19, N. Y. Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
- Incorporated, P. O. Box 57, Baltimore Locke In 3, Md.
- National Screw & Mfg. Co., The, Cleveland 4, Ohio
- New England Screw Co., Keene, N. H. PALNUT CO., INC., 77 Cordier St., Irvington 11, N. J. SEE ADV. PG. 126. Parker-Kalon Corp., 200 Varick St., New York
- 14, N. Y. Pawtucket Mfg. Co., 327 Pine St., Pawtucket,
- R. I. Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago
- 50, Ill. Progressive Mfg. Co., 52 Norwood St., Torrington,
- Conn. Rattan Mfg. Co., The, 10 Wall St., New Haven
- 7, Conn Republic Steel Corp., Republic Bldg., Cleveland
- 1, Ohio
- 1, Unio Russell, Burdsall & Ward Bolt and Nut Co., Midland Ave., Port Chester, N. Y. St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif. Smith Lee Horman H. 405 44th St. Brockhow
- Beverly Hills, Calif. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. Standard Locknut & Lockwasher Inc., 118 W. St. Clair St., Indianapolis 4, Ind. Sterling Bolt Co., 209 W. Jackson Blvd., Chi-cago 6, Ill. Stokes Molded Products, Inc., Taylor St., at

Stokes Molded Products, Inc., Taylor St., at Webster, Trenton, N. J.
Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, Ill.
United Screw & Bolt Corp., 2513 W. Culler-ton St., Chicago, Ill.
Westfield Metal Products Co., Inc., Westfield, Mass.

Birnbach Radio Co., Inc., 145 Hudson St., New

York, N. Y. Boots Aircraft Nut Corp., New Canaan, Conn. CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, III. SEE ADV. PG. 190. Columbia Nut & Bolt Co., 945 Main St., Bridge-

port 3, Conn. Elastic Stop Nut Corp., 2330 Vauxhall Road, Union, N. J. Federal Screw Products Co., 224 W. Huron St.,

Chicago 10, 111. Garrett Co., Inc., George K., 1421 Chestnut St., Phila. 2, Pa. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

Laminated Shim Co., Inc., 56 Union St., Glen-

Laminated Shift Co., 10, 50 Onton Ot., dick brook, Conn. Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. National Screw & Mfg. Co., The, Cleveland 4,

New England Screw Co., Keene, N. H. PALNUT CO., INC., 77 Cordier St., Irvington 11, N. J. SEE ADV. PG. 126. Penn Engineering & Mfg. Corp., Box 311, Doyles-

town, Pa. PRODUCTION ENGINEERING CO., 173 Sargeant

PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212.
Russell, Burdsall & Ward Bolt and Nut Co., Midland Ave., Port Chester, N. Y.
Standard Pressed Steel Co., Jenkintown, Pa.
Sterling Bolt Co., 209 W. Jackson Blvd., Chi-cago 6, Ill.
Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, Ill.
Thompson-Bremer & Co., 1640 W. Hubbard St., Chicago, Ill.

Chicago, Ill. Tinnerman Products Inc., 2038 Fulton Rd., Cleveland 13, Ohio United Carr Fastener Corp., Cambridge 42, Mass.

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Mass.

Ohio

NUTS-Self-Locking

## NUTS-Self-Sealing

- Elastic Stop Nut Corp., 2330 Vauxhall Rd., Union, N. J. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill. Laminated Shim Co., Inc., 56 Union St., Glen-
- brook, Conn. National Screw & Mfg. Co., Cleveland 4, Ohio Radio Frequency Labs., Inc., Boonton, N. J.

## OHMMETERS

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. Associated Research Inc., 3758 W. Belmont,
- Chicago 18, Ill.
- Biddle Co., James G., 1316 Arch St., Philadel-phia 7, Pa.
   Bradshaw Instruments Co., 348 Livingston St.,
- Brooklyn 17, N. Y. Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Burbank, Calif. Clippard Instrument Lab., Inc., 1125 Bank St.,

- Clippard Instrument Lab., Inc., 1125 Bank St., Cincinnati 14, Ohio
  Cole Instrument Co., 1320 S. Grand Ave.. Los Angeles 15, Calif.
  Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y.
  DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.
  Douglas Radio Labs., 40 Wayland St., Boston 25, Mass.
- 25. Mass.
- Electric Design & Mfg. Corp., Burlington, Iowa ELECTRONIC DESIGNS, INC., Irvington, N. Y. SEE ADV. PG. 230.
- Electronic Development Co., 4420 N. 23rd St.,
- Omaha 11, Nebraska ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 233.
- Esterline-Angus Co., Inc., P. O. Box 586, In-

- Esterline-Angus Co., Inc., F. O. Box 500, Indianapolis, Ind.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Heath Co., Benton Harbor, Mich.
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
  International Instruments, Inc., 331 East St., New Haven 11, Conn.
- International Instruments, Inc., 331 East St., New Haven 11, Conn. J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229. Jackson Electrical Instrument Co., 16 S. Pat-terson Blvd., Dayton 1, Ohio Leeds & Northrup Co., 4970 Stenton Ave., Phi-ladelphia 44, Pa. Lyman Electronic Corp., 12 Cass St., Spring-field, Mass. MARION FLECTRICAL INSTRUMENT CO. Mark

- MARION ELECTRICAL INSTRUMENT CO., Man-chester, N. H. SEE ADV. PG. 79. Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio Measurement Engineering Ltd., Arnprior, Onta-rio Canada
- rio, Canada Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.
- 20, Ind.
  Metropolitan Electronics & Instruments Co.,
  42 Warren St., New York 7, N. Y.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
  Precision Apparatus Co., Inc., 92.27 Horace Harding Blvd., Elmhurst, N. Y.
  Precision Resistor Co., 334 Badger Ave., New-ark 8, N. J.
  Mc F. J. C. Co., J. C. C. C. C. C.

- RMS Electronics, Inc., 622 E. 6th St., New York,
- N Y
- N. Y. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Design Co., 1353 Sterling Pl., Brooklyn, N. Y.
- N. Y. Roller-Smith, Bethlehem, Pa. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale, Pa. SHURITE METERS, 61 Hamilton St., New Haven 8, Conn. SEE ADV. PG. 225.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

- Simpson Electric Co., 5218 W. Kinzie St., Chi-
- Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, Ill.
  Star Measurements Co., 442 East 166th St., New York 56, N. Y.
  Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
  Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
- Cago 31, 11. Superior Instruments Co., 227 Fulton St., New York 7, N. Y. Supreme, Inc., Greenwood, Miss. Triplett Electrical Instrument Co., 286 Harmon

- Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
  Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, III.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
  Weston Laboratories, Weston 93, Mass.
  Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

## OPTICAL EQUIPMENT AND OPTICAL SPECIALTIES

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brock-

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  American Optical Co., Scientific Instrument Div., Box A., Buffalo 15, N. Y.
  Argus Inc., Ann Arbor, Mich.
  Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232.
  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.
- 12, Pa.
  12, Pa.
  Corning Glass Works, Corning, N. Y.
  Eastinan Kodak Co., Industrial Photographic Sales Div., 343 State St., Rochester 4, N. Y.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
  Fish-Schurman Corp., 230 East 45th St., New York 17, N. Y.
  Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
  Geophysical Instrument Co., 1820 N. Nash St., Arlington, Va.

- Geophysical Instrument Co., 1820 N. Nash St., Arlington, Va. Inland Plastic of America, Inc., 20 W. 30th St., New York, N. Y. Jarrell-Ash Co., 165 Newberry St., Boston 16, Magr.
- Mass. Larrimore Sales Co., P. O. Box 1234, St. Louis 1. Mo.
- Optical Film Engineering Co., 2125 Cherry St.,
- Philadelphia 3, Pa. Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles 26, Cal. Perkin Elmer Corp., The, Glenbrook, Conn. Polan Industries, 220 Eighth St., Huntington, W. Va.

- W. Va.
  Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
  Syncor Products Co., Malden, Mass.
  Valpey Crystals, Highland St., Holliston, Mass.
  Viewlex Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
  Zenith Optical Co., Div. of Polan Industries, Huntington 19, West Virginia

## OSCILLATORS-Audio Fork Controlled

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton
- 64, Mass. 64, Mass.
  Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
  ELECTRONIC MEASUREMENTS CORP., Red Bank, N. J. SEE ADV. PG. 172.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.

Hathaway Instrument Co., 1315 S. Clarkson St., acLeod & Hanopol, 10 Joiner St., Charles-town 29, Mass. MacLeod

- Measurement Engineering Ltd., Arnprior, On-tario, Canada
- tario, Canada Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. PICKERING AND CO., 309 Woods Ave., Ocean-side, L. I., New York. SEE ADV. PG, 130. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Sierra Electronic Corp., Belmont & San Carlos, Calif
- Calif. Times Facsimile Corp., 229 W. 43rd St., New York, N. Y.

## **OSCILLATORS**—Audio Frequency

- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo. Alden Products Co., 117 No. Main St., Brock-
- ton 64, Mass.
- ton b4, Mass. American British Technology, Inc., 57 Park Ave., New York 16, N. Y. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif.
- Amplifier Corp. of America, 396 Broadway, New York 13. N. Y.
- Ampiner Corp. of America, 396 Broadway, New York 13, N. Y.
   BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
   BOONTON RADIO CORP., Boonton, N. J. SEE ADV. PG, 61.
- ADV. PG. 61. BUD RADIO, INC., 2118 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. Central Scientific Co., 1700 Irving Park Rd., Chicago 12, 11
- Chicago 13, Ill. Clarke Instrument Corp., 910 King St., Silver Clarkstan Corp., 910 King St., Silver Spring, Md. Clarkstan Corp., 11927 W. Pico Blvd., Los An-geles 34, Calif. Clough Brengle Co., 6014 N. Broadway, Chi-cago, Ill.

Coastwise Electronics Corp., Inc., 130 N. Beau-dry Ave., Los Angeles, Calif. Columbus Electronics Corp., 229 S. Waverly St.,

Yonkers, N. Y. Commercial Equipment Co., 112 W. 18th St.,

Columbus Electronics Corp., 229 S. Waverly St., Yonkers, N. Y.
Commercial Equipment Co., 112 W. 18th St., Kansas City S, Mo.
Development Engineering Co., Inc., The, 1818 Ashland St., Houston S, Texas
Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass.
ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
Electronic Development Lab., 2655 W. 19th St., Chicago 8, III.
ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
Erco Radio Labs. Inc., E. Stewart Ave., Garden City, N. Y.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
Feiler Engineering Co., 945 W. George St., Chi-cago 14, III.
GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
GENERAL RADOLO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
Heath Co., Benton Harbor, Mich.
HEWLET-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Instrument Electronics, 42-17A Douglaston Parkway, Douglaston, L. I., N. Y.
Jackson Electrical Instrument Co., 16 S. Pat-terson Blvd., Dayton 1, Ohio
MacLeod & Hanopol, 10 Joiner St., Charles-town 29, Mass.
MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.
Metropolitan Electronics & Instruments Co., 42 Warren St. New York 7 N Y.

MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.
Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
Monitor Prods. Co., 815 Fremont Ave., So. Pasadena, Calif.
PICKERING AND CO., 309 Woods Ave., Ocean-side, L. I., New York. SEE ADV. PG. 130.

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## OSCILLATORS

- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Conper Sts. Conden N. J. SEE ADV.

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y.
  Reiner Electronics Co., 152 W. 25th St., New York N.
- Tork, N. I.
  Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
  Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
  Shallcross Mfg. Co., 10 Jackson Ave., Colling-dale Pa York, N. Y.
- dale, Pa.
- dale, Pa. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C.2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240, 244
- 240-244.
- Televiso Products Inc., 7466 West Irving Park Road, Chicago 34, Ill. Thermionic Engineering Corp., Pompton Plains,
- N. J.
- Weinschel Engineering Co., 123 William St., New York 7, N. Y.

## OSCILLATORS-Cavity

- Decimeter Inc., 1430 Market St., Denver 2,
- ELECTRONIC MEASUREMENTS CO., Red Bank,
- ELECT RONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
  Metropolitan Electronics & Instruments Co., 42
  Warren St., New York 7, N. Y.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y.
  SEE ADV. PG. 63.
  Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

- Televiso Products Inc., 7466 West Irving Park Road, Chicago 34, Ill. 52

## OSCILLATORS—Crystal

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91.
Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diaga Calif.

- Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
  CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Crystal Research Labs., Inc., 29 Allyn St., Hart-ford, Conn.
  Eidson Electronic Co., 1801 N. Third St., Tem-ple. Texas
- ple, Texas ELECTRONIC MEASUREMENTS CO., Red Bank,

- ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
   Gates Radio Co., Quincy, Ill.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
   Hickok Electrical Instrument Co., 10514 Dupont Aug. Claudand Obio.
- Hickok Electrical Institutient Co., 10011 Depute Ave., Cleveland, Ohio
   KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
   Knights Co., James, 131 S. Wells St., Sandwich,
- TIL
- LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182. Measurement Engineering Ltd., Arnprior, On-
- tario, Canada Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Monitor Prods. Co., 815 Fremont Ave., So. Pasa-
- dena, Calif.
- Norrman Labs., Ernst, Williams Bay, Wisc.

D-100

- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
  Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
  REEVES-HOFFMAN CORP., 321 Cherry St., Car-lisle, Pa. SEE ADV. PG. 104.
  Reiner Electronics Co., 152 W. 25th St., New York, N. Y.
- Reiner Electronics Co., 152 W. 25th St., New York, N. Y.
  Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C.
  Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
  Standard Piezo Co., 127 Cedar St., Carlisle, Pa.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, Loudon, W.C.2, England
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

- New York 19, N. Y. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- YORK (I, N. Y.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
   Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

## OSCILLATORS-Microwave Power

- Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y. Decimeter Inc., 1430 Market St., Denver 2,

- Decimeter Inc., 1430 Market St., Denver 2, Colo.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  Leru Laboratories, Inc., 360 Bleecker St., New York 14, N. Y.
  Melpar, Inc., 452 Swann Ave., Alexandria, Va.
  Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
  Microwave Equipment Co., North Caldwell, N. J.
  POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court Ct., Brooklyn 2, N. Y. SEE ADV. PG. 63.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  SYLVANIA ELECTRIC PRODUCTS INC. 500
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

## OSCILLATORS-Oven Crystal Control

- BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91.
  Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
  CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG, 175.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Crystal Research Labs., Inc., 29 Allyn St., Hart-ford, Conn.
- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Knights Co., James, 131 S. Wells St., Sandwich,
- III.
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Monitor Prods. Co., 815 Fremont Ave., So. Pasa-
- dena, Calif. Monroe Coil Co., 1606 N. California St., Chicago,
- Ill. All. Norrman Labs., Ernst, Williams Bay, Wisc. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
- DEL ADV. FG. 03.
  Precision Piezo Service, 427 Mayflower St., Ba-ton Rouge, La.
  Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y.

Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Technical Materiel Corp., The, 453 W. 47th St.,

1949-1950 DIRECTORY of

- New York 19, N. Y. Valpey Crystals, Highland St., Holliston, Mass. Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y. Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

## OSCILLATORS-Radio Frequency

- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
  BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91.
  Bradshaw Instruments Co., 348 Livingston St., Brooklyn 17. N. Y.
- Bradshaw instruments Co., 340 Elvingston Co., Brooklyn 17, N. Y. Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif. Clarke Instrument Corp., 910 King St., Silver Spring Md

- Spring, Md. Coastwise Electronics Corp., Inc., 130 N. Beau-dry Ave., Los Angeles, Calif. Collins Radio Co., Cedar Rapids, Iowa Columbus Electronics Corp., 229 S. Waverly St.,
- Yonkers, N. Y. Commercial Equipment Co., 112 W. 18th St.,
- Kansas City 8, Mo. D. & M. Mfg. Co., 2 Delford Ave., Bergen-field, N. J. Decimeter Inc., 1430 Market St., Denver 2,
- Colo. Electronic Development Lab., 2655 W. 19th St.,
- Chicago 8, Ill. ELECTRONIC MEASUREMENTS CO., Red Bank,

- ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
  Erco Radio Labs., Inc., E. Stewart Ave., Gar-den City, N. Y.
  Espey Mig. Co., Inc., 528 E. 72nd St., New York, N. Y.
  Essex Electronics, Berkeley Heights, N. J.
  Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill.
  Gates Radio Co., Quincy, Ill.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  Heath Co., Benton Harbor, Mich.
  Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland, Ohio
  Inductograph Laboratory, Box 76, Brookfield, Conn.

Inductograph Laboratory, Bon vo, Low vo, Conn.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio
 KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
 Knights Co., James, 131 S. Wells St., Sandwich, Ill.
 Wich, Ill.
 Accessing M. T. 646 Second Ave.

La Rose & Associates, W. T., 646 Second Ave., Troy, N. Y. Measurement Engineering Ltd., Arnprior, Ontario,

MEASUREMENTS CORP., Boonton, N. J. SEE

ADV. PG. 110. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Monitor Prods. Co., 815 Fremont Ave., So. Pasa-

dena, Calif. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-

155.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. **RADIO RECEPTOR CO.**, 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.

Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3,

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Canada

Calif.

Rowe Engineering Corp., 2422 N. Pulaski Rd.,

**ELECTRONIC** and **ALLIED PRODUCTS** 

Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
Schuttig & Co., Inc., 9th & Kearney St., N. E., Washington 17, D. C.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Simpson Electric Co., 5218 W. Kinzie St., Chi-cago 44, Ill.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
Superior Instruments Co., 227 Fulton St., New York 7, N. Y.
Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
Technology Instrument Corp., 1058 Main St., Waltham, Mass.
Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
Weston Laboratories, Weston 93, Mass.
Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

**OSCILLATORS**—Ultrasonic

BOONTON RADIO CORP., Boonton, N. J. SEE

ADV. PG. 61. CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175.

Mass. SEE ADV. PG. 175.
Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri
Crystal Research Labs., Inc., 29 Allyn St., Hart-ford Communication Accessories

ford, Conn. ELECTRONIC MEASUREMENTS CO., Red Bank,

N. J. SEE ADV. PG. 172. Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Knights Co., James, 131 S. Wells St., Sandwich, T

TH

Measurement Engineering Ltd., Arnprior, Ontario, Canada

Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Monitor Prods. Co., 815 Freunont Ave., So. Pasa-dena, Calif.

dena, Calif. National-Simplex-Bludworth, Inc., Bludworth Ma-rine Div., 92 Gold St., New York 7, N. Y. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio Sonic Corp., 186 Union Ave., New Rochelle, N. V.

N. Y. Sherron Electronics Co., 1201 Flushing Ave.,

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Submarine Signal Div., Raytheon Mfg. Co., Wal-there Marganetic Statement (2019) (2

Submarine Signal Div., Raytheon Mfg. Čo., Waltham, Mass.
Televiso Products Inc., 7466 West Irving Parkway, Chicago 34, Ill.
Triplett & Barton, Inc., 831 N. Lake St., Burbank, Calif.
Valpey Crystals, Highland St., Holliston, Mass.
Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

## OSCILLATORS, GRID GRIP-High Frequency & vhf

Vine Laboratories, Madison, N. J. MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.

## OSCILLOGRAPHS-Direct Writing

Alden Products Co., 117 No. Main St., Brockton Mas

 Development Co., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
 Edin Electronics Co., 207 Main St., Worcester, Mass.

Electro-Medical Lab. Inc., Holliston, Mass. Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y.

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## Electrofax Corp., 30 Burtis Ave., New Canaan,

Conn.
KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
Offner Electronics Inc., 5320 N. Kedzie Avenue, Chicago 25, 111

Chicago 25, Ill. Radio Inventions, Inc., 155 Perry St., New York

RAMID INVENTIONS, INC., 155 Perry St., New York 14, N. Y.
 RAHM INSTRUMENTS, INC., 12 West Broadway, New York 7, N. Y. SEE ADV. PG. 222.
 SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.

## OSCILLOGRAPHS-Multi-Element

Alden Products Co., 117 No. Main St., Brockton Mass 64

BRUSH DEVELOPMENT CO., THE, 3405 Per-kins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.

CENTURY GEOPHYSICAL CORP., Tulsa 3, Ok-

CENTURY GEOPHYSICAL CORP., Tulsa 3, Oklahoma. SEE ADV. PG. 164.
CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif.
Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.

Edin Electronics Co., 207 Main St., Worcester, Mass.

Electrofax Corp., 30 Burtis Ave., New Canaan,

Conn. Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. Heiland Research Corp., 130 E. 5th Ave., Denver

9. Colo.

Wetropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Miller Corp., Wm., 362 W. Colorado St., Pasadena,

Calif.

Radio Inventions, Inc., 155 Perry St., New York

Radio Inventions, Inc., IDD Perry St., New York 14, N. Y.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.
Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## OSCILLOGRAPHS—Recording

Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton

Alden Products Co., 117 No. Main St., Drockton 64, Mass.
Alfax Paper & Engrg. Co., 40 Riverside Ave., Brockton 27 E. B., Mass.
BRUSH DEVELOPMENT CO., THE, 3405 Per-kins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
Central Research Laboratories, Inc., Red Wing, Mino.

Minn CENTURY GEOPHYSICAL CORP., Tulsa 3, Ok-

CHATHAM ELECTRONICS CORP., 1018a a, 0K-Indoma. SEE ADV. PG. 164.
 CHATHAM ELECTRONICS CORP., 475 Wash-ington St., Newark 2, N. J. SEE ADV. PG. 28.
 Consolidated Engineering Corp., 620 N. Lake Ave., Decoder of Colling

Pasadena 4, Calif. Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.

Edin Electronics Co., 207 Main St., Worcester,

Ma

ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. Electrofax Corp., 30 Burtis Ave., New Canaan,

Conn. Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y. Eltron, Inc., 407 N. Jackson St., Jackson, Mich.

Engineering Lab., Inc., 602 E. 4th St., Tulsa 3,

Okla. Furst Electronics, 10A S. Jefferson St., Chicago 6, Ill.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. Heiland Research Corp., 130 E. 5th Ave., Denver

9. Colo.

Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.

Miller Corp., Wm., 362 W. Colorado St., Pasadena, Calif.

**OSCILLOSCOPES** 

Radio Inventions, Inc., 155 Perry St., New York N.

RAHM INSTRUMENTS, INC., 12 West Broadway, New York 7, N. Y. SEE ADV. PG. 222.
 SANBORN CO., 39 Osborn St., Cambridge 39,

SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.
 Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## OSCILLOGRAPHS-Transient Study

American Electroneering Co., 2112 S. La Brea

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179.
BRUSH DEVELOPMENT CO., THE, 3405 Per-kins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 189 160

168, 169. Central Research Laboratories, Inc., Red Wing,

Minn. Du Mont Labs., Inc., Allen B., 2 Main Ave.,

Passaic, N. J. Eltron, Inc., 407 N. Jackson St., Jackson, Mich. Furst Electronics, 10A S. Jefferson St., Chicago 6, Ill.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Heiland Research Corp., 130 E. 5th Ave., Den-ver 9, Colo. INDUSTRIAL ELECTRONICS, INC., 2457 Wood-

Word Ave., Detroit 1, Mich. SEE ADV. PG. 2457 Woodward Ave., Detroit 1, Mich. SEE ADV. PG. 226.
Ionic Equipment Co., 1705 N. Kenmore Ave., Los Angeles 27, Calif.
KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
Miller Corp., Wm., 362 W. Colorado St., Pasadena, Calif.

Cant. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England WESTINGHOUSE ELECTRIC CORP., P. O. Box CORP., Distributed 20, Dr. SEE ADV. PGS 66, 67

868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y.

American British Technology, Inc., 57 Park Ave., New York 16, N. Y. American Electroneering Co., 2112 S. La Brea

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126.
BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179.
Central Research Laboratories, Inc., Red Wing, Minn.

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill. Commercial Research Labs., Inc., 20 Bartlett

Ave, Detroit 3, Mich. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Du Mont Laboratories, Inc., Allen B., 2 Main

Mont Laboratories, Inc., Allen B., 2 Main Ave., Passaic, N. J.
 ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.

Electronic Development Lab., 2655 W. 19th St.,

Chicago 8, Ill. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG.

200.
Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
Eltron, Inc., 407 N. Jackson Street, Jackson, Mich.

Federal Telecommunication Labs., Inc., 500 Wash-

D-101

ington Ave., Nutley 10, N. J.

OSCILLOSCOPES—Cathode Ray

For Accessories--See Hoods, Viewing

Calif.

Minn.

233.

OSCILLOMETERS

# 1949-1950 DIRECTORY of

- OVENS
- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill.
- Furst Electronics, 10A S. Jefferson St., Chicago 111

GENERAL ELECTRIC CO., Schenectady 5, N. Y.

GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
 Heath Co., Benton Harbor, Mich.
 Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio

- Ave., Cleveland, Unio INDUSTRIAL ELECTRONICS, INC., 2457 Wood-ward Ave., Detroit 1, Mich. SEE ADV. PG. 226. Jackson Electrical Instrument Co., 16 S. Patter-
- Jackson Electrical Instrument Co., 10 S. Patterson Blvd., Dayton 1, Ohio
   KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
   LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. SEE ADV. PG. 177.
   LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182
- ADV. PG. 182. Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.

Measurement Engineering Ltd., Arnprior, Ontario,

- Can.
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Millen Mfg. Co., James, 150 Exchange St., Mal-
- Millen Mfg. Co., James, 150 Exchange St., Mar-den, Mass.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. **RAHM INSTRUMENTS**, INC., 12 West Broadway, New York 7, N. Y. SEE ADV. PG. 222.
  Reiner Electronics Co., 152 West 25th St., New York, N. Y.

- York, N. Y. Research Elec Electronics Lab., 2459 Susquehanna
- Rd., Roslyn, Pa. Rowe Engineering Corp., 2422 N. Pulaski Rd.,

- 240-244. TEKTRONIX, INC., 712 S. E. Hawthorne Blvd., Portland 14, Ore. SEE ADV. PG. 32. Telemark Electronics Corp., 325 Troy Ave., Brooklyn 13, N. Y. Television Equipment Corp., 238 William St., New York 7, N. Y. Thermo Labs., Inc., 355 W. 26th St., New York

- I. N.Y.
   Triumph Míg. Co., 913 W. Van Buren St., Chi-cago 7, 111.
   WATERMAN PRODUCTS Co., INC., 2445-63 Emerald St., Philadelphia 25, Pa. SEE ADV.
- PG. 146.
- Weston Laboratories, Weston 93, Mass.

### OVENS-Electric

STEINER-IVES CO., 16 Avenue L, Newark 5, N. J. SEE ADV. PG. 192.

## OVENS-Infra-Red Drying

Fostoria Pressed Steel Corp., Fostoria, Ohio Miskella Infra-Red Co., The, E. 73rd & Grand Ave., Cleveland 4, Ohio North American Electric Lamp Co., 1014 Tyler St., St. Louis 6, Mo. Special Chemicals Corp., 30 Irving Pl., New York 3, N. Y. Trumbull, Electric Marco Computer St.

- Trumbull Electric Mfg. Co., Plainville, Conn.

## PAINTS—Conductive (For Printed Circuit)

- Acheson Colloids Corp., Port Huron, Mich. du Pont de Nemours & Co., Inc., E. I., Wilming-
- ton 98, Del. General Cement Mfg. Co., 919 Taylor Ave., Rockford. Ill.
- Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y. Sauerisen Cements Co., Sauerisen Bldg., Pitts-
- burgh 15, Pa.

## PANELS-Instrument

- Airborne Electronics Co., Metropolitan Airport Hangar #3, Van Nuys, Calif. ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.

- N. Y.
  Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio
  Bristol Co., The, Waterbury 91, Conn.
  Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
  Collins Radio Co., Cedar Rapids, Iowa
  Dahlstrom Metallic Door Co., Jamestown, N. Y.
  Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y.
  Falstrom Co., 44 Falstrom Court, Passaic, N. J.
  Foxboro Co., The, Foxboro, Mass.
  Gates Radio Co., Quincy, Ill.
  General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.

- ford, Ill.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
- HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209. Hopp Press, Inc., 460 W. 34th St., New York,
- N. Y. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.
- Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- N

- N. Y. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50. Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio La Magna Mfg. Co., Inc., East Rutherford, N. J. Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, IU.
- Chicago 39, Ill. Masonite Corp., 111 W. Washington St., Chi-cago 2, Ill.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.
- Mica Insulator Co., Schenectady 1, N. Y. Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. MYCALEX CORP. OF AMERICA, 60 Clifton Blvd.,

- MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124, 125.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
  Pierce Template Corp., 2646 N. Coral St., Phila-delphia 25, Pa.

- Pierce Template Corp., 2646 N. Coral St., Phila-delphia 25, Pa.
  Premier Metal Etching Co., 21-03 44th Ave., Long Island City, N. Y.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Printloid Inc., 95 Mercer St., New York, N. Y.
  REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
  Radiad Service, 720 W. Schubert Ave., Chicago 14. III. 14, Ill.
- Reiner Electronics Co., 152 W. 25th St., New York, N. Y.
- Robinson Aviation, Inc., Teterboro, N. J.
- Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
- Stamford Metal Specialty Co., Inc., 429 W. Broadway, New York 12, N. Y.
- Sun Dial Corp., E. Passaic Ave., Caldwell Township, N. J.
- Synthane Corp., Oaks, Pa.
- WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
- Waterbury Companies, Inc., Waterbury 90, Conn. WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Philadelphia 31, Pa.

## **PANELS**—Receiver & Transmitter

- ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- Bendix Radio Div., Bendix Aviation Corp., Balti-
- more 4, Md. Caltron Co., 1406 So. Hobart Blvd., Los Angeles
- 6, Calif.

- 6, Calif.
  Collins Radio Co., Cedar Rapids, Iowa
  Dahlstrom Metallic Door Co., Jamestown, N. Y.
  Etched Products Corp., 39-01 Queens Blvd., Long
  Island City, N. Y.
  Gates Radio Co., Quincy, Ill.
  INSULINE CORP. OF AMERICA, 36-02 35th
  Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  Johnson Co., E. F., Waseca, Minn.
  KARP METAL PRODUCTS CO., INC., 215 63rd
  St., Brooklyn 20, N. Y. SEE ADV. PG. 50.
  LaMagna Mfg. Co., Inc., East Rutherford, N. J.
  Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
- 2. Ill
- Millen Mfg. Co., James, 150 Exchange St., Mal-
- Miller Jing, Co., Ballicy, 100
   den, Mass.
   MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS. 124, 125.
   NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105, 108.
   Pierce Template Corp., 2646 N. Coral St., Phila-dalable 25 De Pierce Template Corp., 2646 N. Corał St., Philadelphia 25, Pa.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Printloid Inc., 95 Mercer St., New York, N. Y.
  REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
  Robinson Aviation, Inc., Tetreboro, N. J.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  Sun Dial Corp., E. Passaic Ave., Caldwell Township, N. J.
  Synthane Corp., Oaks, Pa.

ship, N. J.
Synthane Corp., Oaks, Pa.
United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG, 174.

PG. 174. Autocall Co., The, Shelby, Ohio Bardwell & McAllister, Inc., P. O. Box 1310, Hollywood, Calif. BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank Calif.

Burbank, Calif. Collins Radio Co., Cedar Rapids, Iowa Cook Electric Co., 2700 Southport Ave., Chicago,

Converse Conversion of the conversion o

Measurement Engineering Ltd., Arnprior, Ontario,

Canada Millen Mfg. Co., James, 150 Exchange St., Mal-

Mullen Mig. Co., James, 150 Exchange St., Mar-den, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md. Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.

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PANELS-Relay Rack

2 III.

Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
Par-Metal Products Corp., 32-62 49th St., Long Island City 3, N. Y.
Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
Printloid Inc., 95 Mercer St., New York, N. Y.
REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
Robinson Aviation, Inc., Teterboro, N. J.
Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.
WEISS, JERRY L., 21 Plandome Rd., Manhasset, L. I., N. Y. SEE ADV. PG. 218.
Western Electric Co., Inc., 195 Broadway, New Nilsson Electrical Lab., Inc., 103 Lafayette St.,

ELECTRONIC and ALLIED PRODUCTS

Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### PAPER

See Insulation Materials

#### PAPER—Facsimilie Recording

Alfax Paper & Engrg. Co., 40 Riverside Ave., Brockton 27 E. B., Mass. Electrofax Corp., 30 Burtis Ave., New Canaan,

Conn.

Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio Inventions, Inc., 155 Perry St., New York

14, N. Y. Times Facsimile Corp., 229 W. 43rd St., New

York, N. Y. Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.

## PERMEAMETERS-High H

Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.

#### PHENOLIC MOLDING COMPOUNDS

See Insulating Compounds

#### **PHONOGRAPHS**—Electric Phonographs & Record Players

- Admiral Corp., 3800 Cortland St., Chicago 47, Ill.
- 111. Aim Industries, 41 Union Sq., New York 3, N. Y. Aireon Mfg. Corp., 1401 Fairfax Trafficway, Kansas City 15, Kansas Air-King Products Co., Inc., 170 53rd St., Brook-lyn, N. Y. American Communications Corp., 306 Broadway, New York 7, N. Y. American Electropering Co. 2112 S. La Broadway, New York 7, N. Y.

New York 7, N. Y. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Andrea Radio Corp., 2701 Bridge Plaza, North, L. I. City, N. Y. Audar Inc., Argos, Indiana Audio Industries, Michigan City, Ind. Autocrat Radio Co., 3855 N. Hamilton Ave., Chicago, Ill.

- Chicago, Ill. Bardwell & McAllister, Inc., P. O. Box 1310,
- Hollywood, Calif. Bell Sound Systems, Inc., 555 Marion Rd., Col-umbus 7, Ohio

- umbus 7, Ohio Berndt-Bach, inc., 7377 Beverly Blvd., Los An-geles 36, Calif. Bogen Co., David, 663 Broadway, New York 12, N. Y. Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y. Califone Corp., 1041 N. Sycamore Ave., Holly-wood 38, Calif. Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
- III.
- Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
- Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.
- Continental Electronics, Ltd., 252 Norman Ave., Brooklyn 22, N. Y. Coronet Radio & Television Corp., 500 W. 52nd St., New York 19, N. Y. Crystal Devices Co., Inc., 50 Mill Rd., Freeport,
- N. Y. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.

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- Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
- Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
- Five Star Radio Co., 416 Broadway, Cambridge, Mass. Garrard Sales Corp., 315 Broadway, New York
- N. Y Godfrey Mfg. Co., 171 S. 2nd St., Milwaukee 4, Wis.
- Harris Mfg. Co., 2422 W. Seventh St., Los An-geles 5, Calif.
- geles 5, Calif. Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
- geles 7, Calif. International Detrola Corp., Detrola Radio Div., 1501 Beard Ave., Detroit, Mich. M. P. Concert Installations, Fairfield 10, Conn. Magnovox Co., The, Norwalk, Conn. Magnovox Co., The, Components Div., Fort Wayne 4, Ind. Maguire Industries Inc., Electronics Dept., Bridge-uet Corp.
- port, Conn.
- Meck Industries, John, Liberty at Pennsylvania,
- Plymouth, Ind. Mid-American Sales Co., 315-17-19 N. Cardinal Ave., St. Louis 3, Mo.
- Mirror Record Corp., 1133 Broadway, New York 10, N. Y. Newcomb Audio Products Co., 6824 Lexington
- Ave., Hollywood 38, Calif. Phileo Corp., Tioga & C Sts., Phila. 34, Pa. PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41. Radiad Service, 720 W. Schubert Ave., Chicago
- 14, Ill. RADIO CORP. OF AMERICA, RCA Victor Div.,
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, Ill.
- Ray-Dyne Mfg. Corp., 141 W. 24th St., New York
- Ray-Dyne Mig. Corp., 141 W. 24th Ot., New York 11, N. Y. Regal Electronics Corp., 603 W. 130th St., New York 27, N. Y. Riggs & Jeffreys, Inc., 140 Glenridge Ave., Montclair, N. J.
- Sandwich-Bowen Corp., 4712 Bethesda Ave., Bethesda, Md. Scott, Inc., Hermon Hosmer, 385 Putnam Ave.,
- Cambridge 39, Mass. Seeburgh Corp., J. P., 1500 N. Dayton Ave., Chi-cago 22, Ill. Shevers Inc., Harold, 33 W. 46th St., New York

- Shevers Inc., Harold, 33 W. 46th St., New York 19, N. Y.
  Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
  Speak-O-Phone Recording & Equipment Co., 28 W. 60th St., New York, N. Y.
  Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
  Symphonic Radio & Electronic Corp., 292-8 Main St., Cambridge 42, Mass.
  Symphony Radio & Television Corp., 721 N. Martel Ave., Los Angeles 46, Calif.
  Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago 23, Ill.
- 23, Ill.
- Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y. Telequip Radio Co., 1901 S. Washtenaw, Chicago,
- III.
- Tele-Tone Radio Corp., 540 W. 58th St., New York 19, N. Y. United Radio Electronics Corp., 901 W. Jackson
- Blvd., Chicago, Ill. Waters Conley Co., 501 First St., N. W., Roches-
- Watters on Radio Mfg. Corp., P. O. Box 840, Dallas, Texas Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y. Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis. Wilcox-Gay Corp., Charlotte, Mich.

## PHOTOFLASH EQUIPMENT-Electronic

Amglo Corp., 4234 Lincoln Ave., Chicago 18,

- Ill. Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass.

Electronic Products Co., 443 Greenwich St., New York, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

PHOTOCOPYERS

- SEE ADV. PGS. 5-18. Heath Co., Benton Harbor, Mich.
- Heiland Research Corp., 130 E. 5th Ave., Den-
- John Research Corp., 150 E. Still Ave., Derver 9, Colo.
   Ionic Equipment Co., 1705 N. Kenmore Ave., Los Angeles 27, Calif.
   K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
   Versite Liebe, 1910 W. Corped Am. Chicage 38
- Kemlite Labs., 1819 W. Grand Ave., Chicago 22,
- Ill.
- Kluge Electronics, Inc., 1913 Montrose St., Los Angeles 26, Calif. Lectronic Research Labs., 1021 Callowhill St.,

- Lectronic Research Level, Phila. 23, Pa. O'Connor & Co., John T., West Orange, N. J. Photobell Co., 116 Nassau St., New York 7, N. Y. Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif. Pasadena 7, Calif. CEF ADV.
- Pasadena 7, Calif. RAYTHEON MANUFACTURING CO., Equipment Sales Division, Waltham 54, Mass. SEE ADV.
- PG. 55. RESEARCH ELECTRONICS LAB., 2459 Susque-hanna Rd., Roslyn, Pa. SEE ADV. PG. 233. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244 244.
- Triumph Mfg. Co., 913 W. Van Buren St., Chi-cago 7, Ill. Webster Engineering Co., 105 Tenth St., N. E., Cedar Rapids, Iowa

#### PHOTOGRAPHIC MATERIALS-Films and Papers for Recording Instruments

Ansco Div. of General Aniline & Film Corp., Ansco Div. of General Aniline & Film Corp., Binghamton, N. Y. Eastman Kodak Co., Industrial Photographic Sales Div., 343 State St., Rochester 4, N. Y. Haloid Co., The, 6 Haloid St., Rochester, N. Y. Peerless Photo Products, Shoreham, L. I., N. Y. Post & Co., Frederick, Chicago, Ill.

PHOTOGRAPHIC MATERIALS-Spectro-

Eastman Kodak Co., Industrial Photographic Sales Div., 343 State St., Rochester 4, N. Y.

Ansco Div. of General Aniline & Film Corp., Binghamton, N. Y.

du Pont de Nemours & Co., Inc., E. I., Wilming-ton 98, Delaware
Eastman Kodak Co., Industrial Photographic Sales Div., 343 State St., Rochester 4, N. Y.
North American Philips Co., 100 E. 42nd St., New York 17, N. Y.

Adair & Rhamstine, 314 Beaubien St., Detroit

26, Mich.
Brociner Electronics Lab., 1546 Second Ave., New York 23, N. Y.
Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
Fish-Schurman Corp., 230 East 45th St., New York 17, N. Y.
Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.

44, Pa. National Technical Lab., 820 Mission St., S. Pasadena, Calif.

Photovolt Corp., 95 Madison Ave., New York 16,

Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.

PH METERS, RECORDERS AND COM-

D-103

PHOTOGRAPHIC MATERIALS-X-Ray

graphic Instruments

Films

**PHOTOMETERS** 

26, Mich.

N. Y.

PARATORS

**PHOTOCOPYERS** 

See Machines

See Meters

## PHOTOTUBES AND PHOTOCELLS

See Tubes

## PICKUPS—Crystal

See Crystal Cartridges

## **PICKUPS**—Industrial

Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa.

- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
- Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Thermo Labs., Inc., 355 W. 26th St., New York
- 1, N. Y.

## PICKUPS—Magnetic

- Astatic Corp., The, Conneaut, Ohio Audak Co., 500 Fifth Ave., New York, N. Y
- Bendix Co., DUD FIIII Ave., New York, N. Y.
   Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
   Caltron Co., 1406 Hobart Blvd., Los Angeles 6, Calif.
- Clarkstan Corp., 11927 W. Pico Blvd., Los An-geles 34, Calif. Commercial Research Labs., Inc., 20 Bartlett
- Commercial Research Laos., Inc., 20 Bartlett Ave., Detroit 3, Mich. Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill.ELECTRO-VOICE, INC., Buchanan, Mich. SEE
- ADV. PG. 195. Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y. Flight Research Engineering Corp., P. O. Box 1-F, Richmond 1, Va. Garrard Sales Corp., 315 Broadway, New York 7, N Y
- N
- N. Y. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. Lear, Inc., 110 Ionia Ave., N W, Grand Rapids 2, Mich. Mich.

- Mich. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back Cover and Back Cover. Radio-Music Corp., Port Chester, N. Y. Rek-O-Kut Co., Inc., 38-01 Queens Blvd., L. I. Citv. N. Y.
- City, N. Y. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill
- Valco Mfg. Co., 4700 W. Walton St., Chicago 51, 111
- Webster Electric Co., 1900 Clark St., Racine, Wis.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### PICKUPS-Photoelectric

- Acine Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
  Electronic Products Co., St. Charles, III.
  FORD INSTRUMENT CO., INC., 31-10 Thomson Ave., L. I. City, N. Y. SEE ADV. PG. 90.
  Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back Cover and Back Cover.
  Binley Co., Inc., P. O. Box 31, Middleown. Comp.
- Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.

### PICKUPS-Quartz Crystal

D-104

Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.

## PICKUPS—Transcription and Phonograph

- Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- Pa Pa. American Microphone Co., 370 So. Fair Oaks Ave., Pasadena 1, Calif. Astatic Corp., The, Conneaut, Ohio Audak Co., 500 Fifth Ave., New York, N. Y. Barber & Howard, East Ave., Westerly, R. I. BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Clavalend 14 Object SEE ADV. BCS 168 160

- Cleveland 14, Ohio. SEE ADV. PGS. 168, 169. Califone Corp., 1041 N. Sycamore Ave., Holly-wood 38, Calif. Caltron Co., 1406 So. Hobart Blvd., Los Angeles 34, Calif.

- 34, Calif.
  Clarkstan Corp., 11927 W. Pico Blvd., Los Angeles 34, Calif.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
  Garrard Seler Corp., 215 Broadway, New York, 7
- Garrard Sales Corp., 315 Broadway, New York 7,

- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Gray Mfg. Co., 16 Arbor St., Hartford, Conn. GRAY RESEARCH & DEVELOPMENT CO., 16 Arbor St., Hartford 1, Conn. SEE ADV. PG. 187
- Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich. Pfanstiehl Chemical Co., 104 Lakeview Ave.,

- Planstent Chemical Co., 197 Editerial Agency Waukegan, Ill.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  PICKERING AND CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130.
  PRESTO RECORDING CORP., Paramus, N. J.
  COND. DV. PCS. 40, 41.

- PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41.
  PROCTOR SOUNDEX CORP., 133 N. 6th Ave., Mt. Vernon, N. Y. SEE ADV. PG. 230.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back Cover and Back Cover. Radio-Music Corp., Port Chester, N. Y. Rek-0-Kut Co., Inc., 38-01 Queens Blvd., L. I. City, N. Y. Rowe Industries, 1702 Wayne St., Toledo 9, Ohio Shure Brothers, 225 W. Huron St., Chicago, Ill. Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
  Webster Electric Co., 1900 Clark St., Racine,
- Webster Electric Co., 1900 Clark St., Racine, Wis.
- W15.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  Zephyr Products Co., 160 E. 116th St., New York 29, N. Y.

#### **PILOTS**—Automatic

- Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
- Teterboro, N. J.
  Flight Research Engineering Corp., P. O. Box 1-F, Richmond 1, Va.
  Giannini & Co., Inc., 285 W. Colorado St., Pasa-dena 1, Calif.
  Intervox Corp., 2701 California Ave., Seattle, Work
- Wash. Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids
- Mich 2
- Mettler Co., Lee B., 406 S. Main St., Los Angeles 13, Calif.
   SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

#### PITCH

#### See Insulating Compounds

#### **PIVOTS**—Instrumental Jewel

- Electrovox Co., Inc., 66 Franklin St., East Orange,
- Blectrovox Co., Inc., 66 Frankin St., East Orange, N. J.
  Gatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J.
  Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill.
  International Merit Products Corp., 254 W. 54th St., New York 19, N. Y.

Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 15, Ill. New Hampshire Ball Bearings, 5 Main St., Peter-

1949-1950 DIRECTORY of

- borough, N. H.
- Permo, Inc., 6415 Ravenswood Ave., Chicago, Ill. Steel Co., Herman D., Lafayette Bldg., Phila-delphia 6, Pa. Swiss Jewel Co., Lafayette Bldg., Philadelphia 6,
- Pa.
- Fat.
   Tetrad Corp., 60 N. Broadway. Yonkers 2, N. Y.
   Vallorbs Jewel Co., Lancaster, Pa.
   Walco Sales Co., 60 Franklin St., East Orange, N. J.

## PLASTIC MATERIALS

Allyls

Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

#### **Cellulose** Acetate

2. Mass.

3, Ohio

NV

Ohio

Francisco 11, Calif.

**Cellulose Acetate Butyrate** 

- American Molding Powder & Chemical Corp., 44 Hewes St., Brooklyn 11, N. Y.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. SEE ADV. PG. 167.
  Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- Blum & Co., Julius, 532 W. 22nd St., N. Y., 11, N. Y.
- Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y. Dielectric Materials Co., 5315-17 N. Ravenswood
- Ave., Chicago 40, Ill. du Pont de Nemours & Co., Inc., E. I., Wilming-
- du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
  Eastnan Kodak Co., Industrial Photographic Sales Div., 343 State St., Rochester 4, N. Y.
  Emeloid Co., Inc., The, 1239 Central Ave., Hillside 5, N. J.
  Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.
  INSULATION MANUFACTURERS CORP., 565 W.
  Washington Blvd., Chicago 6, Ill. SEE ADV.

Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa. Monsanto Chemical Co., Plastics Div., Springfield

Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y. St., Buffalo, N. Y. Plastex Corp., 402 Mt. Vernon Ave., Columbus

Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y. Plastic Fabricators Co., 440 Sansome St., San

Plasticraft Products Co., 20 Hudson St., New York 13, N. Y. Plax Corp., P. O. Box 1019, Hartford, Conn. Polymer Corp., The, Reading, Pa. Spaulding Fibre Co., Inc., 310 Wheeler St., Tona-

Spatiang Fibre Co., inc., 510 Wheeler St., Fona-wanda, N. Y.
Tennessee Eastman Corp., Subsidiary Eastman Kodak Co., Kingsport, Tenn.
Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Philadelphia 31, Pa.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Bamberger Corp., A., 44 Hewes St., Brooklyn 11,

Blum & Co., Julius, 532 W. 22nd St., New York 11, N. Y. Dielectric Materials Co., 5315-17 N. Ravenswood

Ave, Chicago 40, 111. Eastman Kodak Co., Industrial Photographic Sales Div., 343 State St., Rochester 4, N. Y. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.

Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y. Plastic Corp., 402 Mt. Vernon Ave., Columbus 3,

Plastic Accessories, Inc., 460 Broome St., New

York 13, N. Y. Plasticraft Products Co., 20 Hudson St., New

York 13, N. Y. Plax Corp., P. O. Box 1019, Hartford, Conn. Polymer Corp., The, Reading, Pa. rennessee Eastman Corp., Subsidiary Eastman Kodak Co., Kingsport, Tenn.

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#### **Cellulose** Nitrate

- du Pont de Nemours & Co., Inc., E. I., Wilming-
- du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
  Enneloid Co., Inc., The, 1239 Central Ave., Hillside 5, N. J.
  Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.
  Monsanto Chemical Co., Plastics Div., Springfield 2, Mass.
- Oppenheimer Inc., Alan D., 582-584 Exchange St., Buffalo, N. Y. Willson Plastics Div., Willson Magazine Camera
- Co., 6022 Media St., Philadelphia 31, Pa.

### Ethyl Cellulose

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Bamberger Corp., A., 44 Hewes St., Brooklyn 11, 54th
- N.Y
- N. I. Dow Chemical Co., Midland, Mich. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. Hercules Powder Co., Inc., 900 Market St., Wil-mington 99, Del.
- INSULATION MANUFACTURERS CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
- PG. 137.
  Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa.
  Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y.
  Plastex Corp., 402 Mt. Vernon Ave., Columbus 3, Obic
- Ohio
- Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y. Plax Corp., P. O. Box 1019, Hartford, Conn. Polymer Corp., The, Reading, Pa.

## Melamine Formaldehyde

- American Cyanamid Co., Plastics Div., 30 Rocke-
- American Cyanamia Co., Flastics Div., 30 Rocke-feller Plaza, New York 20, N. Y. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. SEE ADV. PG. 167. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
- side 5, N. J. Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y. Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. Mica Insulator Co., Schenectady I, N. Y. Monsanto Chemical Co., Plastics Div., Springfield 2. Mass.

- 2, Mass.
- 2, Mass. Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y. Plaskon Div., Libbey-Owens-Ford Glass Co., 2112-14 Sylvan Ave., Toledo 6, Ohio Rohm & Haas Co., Washington Square, Phila. 5, Do Pa.
- Synthane Corp., Oaks, Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## Methyl Methacrylate

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Bamberger Corp., A., 44 Hewes St., Brooklyn 11,
- N. Y.
- N. Y.
  du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
  Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
  Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y.
  Peters Chemical Mfg. Co., 3623 Lake St., Melrose Park, Ill.
  Plastic Accessories, Inc., 460 Broome St., New
- Plastic Accessories, Inc., 460 Broome St., New
- Plastic Accessories, Inc., 400 broome St., Itc., York 13, N. Y.
  Plasticraft Products Co., 20 Hudson St., New York 13, N. Y.
  Plax Corp., P. O. Box 1019, Hartford, Conn.
  Rohm & Haas, Washington Square, Philadelphia
- 5. Pa.

## Phenol Formaldehyde-(Phenolics)

- American-Marietta Co., Adhesive, Resin and Chemical Div., 3400 13th Ave., S. W., Seattle ach
- 4, Wash. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. American Resinous Chemical Co., 103 Foster St.,
- Peabody, Mass.

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- Baer Co., N.S., 9 Montgomery St., Hillside, N. J. Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
- Borden Co., The, Chemical Div., Durite Plastics, 5000 Summerdale Ave., Phila. 24, Pa. Catalin Corp. of America, 1 Park Ave., New York
- Catalin Corp. of America, I Park Ave., Pa.
  Catalin Corp. of America, I Park Ave., New York 16, N. Y.
  Durez Plastics & Chemicals, Inc., 1921 Walck Rd, N. Tonawanda, N. Y.
  Emeloid Co., Inc., The, 1239 Central Ave., Hillside 5, N. J.
  Formica Company, The, Cincinnati 32, Ohio GENERAL ELECTRIC CO., Chemical Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
  Heresite & Chemical Co., Manitowoc, Wis.
  Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y.
  Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
  Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa.
  Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill.
  Marblete Corp., 37-20 30th St., Long Island City,

- Marblette Corp., 37-20 30th St., Long Island City, N. Y.
- Mica Insulator Co., Schenectady 1, N. Y. Monsanto Chemical Co., Plastics Div., Springfield
- 2, Mass.
- A. Mass.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Phila. 44, Pa.
  Plasticraft Products Co., 20 Hudson St., New York 12, N. V.
- Plastieratt Products Co., 20 Hudshi Cu., Hu York 13, N. Y. Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind. Rogers Corp., Manchester, Conn. Rohm & Haas Co., Washington Square, Phila. 5,

- Nohn & Frass Co., Washington Square, Phila. 5, Pa.
  SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111.
  Skoning Corp., 319-325 Taunton Ave., E. Providence 14, R. I.
  Synthane Corp., Oaks, Pa.
  Synvar Corp., 415 E. Front St., Wilmington, Del.
  Taylor Fibre Co., Norristown, Pa.
  Taylor Mfg. Co., 3056 W. Meinecke Ave., Milwakee 10, Wis.
  Valite Corp., Whitney Bldg., New Orleans 12, La.
  Watertown Mfg. Co., Watertown, Conn.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box.
  868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

#### Polyethylene

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Bakelite Corp., 30 E. 42nd St., New York 17, 54th
- N. Y. Bamberger Corp., A., 44 Hewes St., Brooklyn 11,
- N. Y. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill. du Pont de Nemours & Co., Inc., E. I., Wilming-ter 99, Del
- ton 98, Del. Electro-Technical Products Div., Sun Chemical
- Electro-Technical Products Div., Sun Chemical Corp., Nutley 10, N. J. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill. Plastex Corp., 402 Mt. Vernon Ave., Columbus 2 Obie
- Plastex Corp., 402 Mt. Vernon Ave., Columbus 3, Ohio Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y. Plax Corp., P. O. Box 1019, Hartford, Conn. Polymer Corp., The, Reading, Pa. Surprenant Mfg. Co., 199 Washington St., Boston, Mass.

- Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

#### Polystyrene

- American Molding Powder & Chemical Corp., 44 Hewes St., Brooklyn 11, N. Y.
- Here's St., Brooklyn 11, N. Y. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Bakelite Corp., 30 E. 42nd St., New York 17,

Blum & Co., Julius, 532 W. 22nd St., N. Y. 11, N. Y.

- Catalin Corp. of America, 1 Park Ave., New York
- 16, N. Y. Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill. Dow Chemical Co., Midland, Mich.

- General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
- Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa. Monsanto Chemical Co., Plastic Div., Springfield 2, Mass.
- Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y. Plastex Corp., 402 Mt. Vernon Ave., Columbus
- 3, Ohio

Polytetrafluoroethylene

ton 98. Del.

Resins

Wash.

N. J.

- Ohio
   Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
   Plasticraft Products Co., 20 Hudson St., New York 13, N. Y.
   Plax Corp., P. O. Box 1019, Hartford, Conn.
   Polymer Corp., The, Reading, Pa.
   Rohm & Haas Co., Washington Square, Phila-delphia 5, Pa.
   Western Felt Works, 4029 Ogden Ave., Chicago, III.
- TH.
- III. Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Philadelphia 31, Pa.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. du Pont de Nemours & Co., Inc., E. I., Wilming-

American Marietta Co., Adhesive, Resin & Chem-ical Div., 3400 13th Ave. S.W., Seattle 4,

Bakelite Corp., 30 E. 42nd St., New York 17, Bamberger Corp., A., 44 Hewes St., Brooklyn 11, N. Y.

N. I. Barrett Div., Allied Chemical & Dye Corp., 50 Rector St., New York 6, N. Y. Borden Co., The, Chemical Div., Durite Plastics, 5000 Summerdale Ave., Phila. 24, Pa. Catalin Corp. of America, 1 Park Ave., New York

16, N. Y. Dow Chemical Co., Midland, Mich. Dow Corning Corp., Midland, Mich. du Pont de Nemours & Co., Inc., E. I., Wilming-

ton 98, Del. Durez Plastics & Chemicals, Inc., 1921 Walck Rd., No. Tonawanda, N. Y. Emeloid Co., The, 1239 Central Ave., Hillside 5,

Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y. GENERAL ANILINE & FILM CORP., Antara Prods., 444 Madison Ave., New York 17, N. Y. SEE ADV. PG. 185.

SEE ADV. PG. 185. GENERAL ELECERIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Goodrich Chemical Co., B. F., Cleveland 15, Ohio Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio Hercules Powder Co., Inc., 900 Market St., Wil-wington 900 Del, Inc., 900 Market St., Wil-

Monsanto Chemical Co., Plastics Div., Springheid 2, Mass.
Plaskon Div., Libbey-Owens-Ford Glass Co., 2112-14 Sylvan Ave., Toledo 6, Ohio
Reichhold Chemicals, Inc., 601-707 Woodward Heights Blvd., Ferndale Sta., Detroit 20, Mich.
Rohm & Haas Co., Washington Square, Phila-delphia 5, Pa.
SCHENECTADY VARNISH CO., Schenectady, N. Y. SEE ADV. PG. 111.
Shawinigan Products Corp., 350 5th Ave., New York 1, N. Y.

York 1, N. Y. Sherwin-Williams Co., 101 Prospect Ave., N. W.,

Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1, Ohio Synvar Corp., 415 E. Front St., Wilmington, Del. U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y. U. S. Stoneware Co., The, Akron 9, Ohio Valite Corp., Whitney Bldg., New Orleans 12, La.

D-105

mington 99, Del. Heresite & Chemical Co., Manitowoc, Wis. Marbon Corp., Gary, Indiana Monsanto Chemical Co., Plastics Div., Springfield

Plax Corp., P. O. Box 1019, Hartford, Conn.

54th

## PLATES

#### Urea Formaldehyde

- American Cyanamid Co., Plastics Div., 30 Rocke-feller Plaza, New York 20, N. Y.
  American Marietta Co., Adhesive, Resin & Chemical Div., 3400 13th Ave., S. W., Seattle 4, Washington Statements (Seattle 4)
- Wash. American Resinous Chemical Co., 103 Foster St.,
- Peabody, Mass. Bakelite Corp., 30 E. 42nd St., New York 17,
- Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
- side b, N. J. Mica Insulator Co., Schenectady 1, N. Y. Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-14 Sylvan Ave., Toledo 6, Ohio Rohm & Haas Co., Washington Square, Phila. 5,
- Pa.
- Synvar Corp., 415 E. Front St., Wilmington, Del.

#### **Vinyl Compounds**

- American Resinous Chemical Co., 103 Foster St., Peabody, Mass. Bakelite Corp., 30 E. 42nd St., New York 17,
- N. Y. Bamberger Corp., A., 44 Hewes St., Brooklyn 11,
- N. Y.
- Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill. Dow Chemical Co., Midland, Mich.
- du Pont de Nemours & Co., Inc., E. I., Wilming-ton 98, Del.
- ton 98, Del. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Goodrich Chemical Co., B. F., Cleveland 15, Ohio Hamilton Kent Mfg. Co., Kent, Ohio Industrial Synthetics Corp., 225 North Ave., Gar-wood, N. J.

- wood, N. J. Monsanto Chemical Co., Plastics Div., Spring-field 2, Mass.
- held 2, Mass. Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y. Plastic Fabricators Co., 440 Sansome St., San Francisco 11, Calif. U. S. Stoneware Co., The, Akron 9, Ohio

#### **PLATES**—Instruction

- Acromark Co., 9-13 Morrell St., Elizabeth 4, N. J. Austin Co., O., 335 Throop Ave., Brooklyn 21,
- N. Y. Colonial Brass Co., 100 Vine St., Middleboro, Mass.
- Croname, Inc., 3701 Ravenswood Ave., Chicago, **III**.
- Electrical Insulation Co., Inc., 12 Vestry St., New York 13, N. Y.
- Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. Etched Products Corp., 39-01 Queens Blvd., Long
- Island City, N. Y. Hopp Press Inc., 460 W. 34th St., New York, N. Y.

- N. Y.
  Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
  Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill.
  Mica Insulator Co., Schenectady, N. Y.
  Plastic Fabricators Co., 440 Sansome Street, San Francisco 11, Calif.
  Premier Metal Etching Co., 21.03 44th Ave., Long Island City, N. Y.
  Waterbury Companies, Inc., Waterbury 90, Conn.
  Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

## PLATES—Name

- Acromark Co., 9-13 Morrell St., Elizabeth 4, N. J.
  American Emblem Co., Inc., P. O. Box 116R, Utica, N. Y.
  Anderson & Sons, Inc., Westfield, Mass.
  Art Roll Leaf Stamping Co., 3610 Palisade Ave., Union City, N. J.
  Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
  BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.

- Colonial Brass Co., 100 Vine St., Middleboro, Mass.
- Control Corp., 718 Central Ave., Minneapolis 14, Minn
- Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
- Electrical Insulation Co., Inc., 12 Vestry St., New
- Electrical Instantion Co., Inc., 12 (1997) Co., 11 York 13, N. Y.
  Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
  ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109.
- Etched Products Corp., 39-01 Queens Blvd., Long
- Island City, N. Y. Formica Insulation Co., 4662 Spring Grove Ave.,
- Cincinnati 32, Ohio GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18.
- Gordon Specialties Co., 542 S. Dearborn St., Chi-cago 5, Ill. Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa. Hopp Press Inc., 460 W. 34th St., New York, N. Y.
- N. 1. 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. SEE ADV. PG.
- 80
- LaMagna Mfg. Co., Inc., East Rutherford, N. J. Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill. Mica Insulator Co., Schenectady 1, N. Y
- New England Etching & Plating Co., 25 Spring St., Holyoke, Mass. Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y. Parisian Novelty Co., 3510 S. Western Ave., Chi-

- cago 9, Ill. Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y. Plastic Fabricators Co., 440 Sansome Street, San
- Francisco 11, Calif. Plasticraft Products Co., 20 Hudson St., New York 13, N. Y.
- Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 3, Calif.
- Premier Metal Etching Co., 21-03 44th Ave., Long
- Island City, N. Y. Printloid Inc., 95 Mercer St., New York, N. Y. Reister Mfg. Co., Hagerstown, Md. Sillcocks-Miller Co., 10 Parker Ave., W., So.
- Orange, N. J.
- United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
- United Radio Mig. Co., 191 Greenwich St., New York, N. Y.
   Waterbury Companies, Inc., Waterbury 90, Conn.
   Willson Plastics Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

## PLATING-Metal on Plastic

- Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- Crystal Research Labs., Inc., 29 Allyn St., Hart-ford, Conn.
- ford, Conn. Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa. National Research Corp., 70 Memorial Drive, Cambridge 42, Mass. Process & Instruments. 60 Greenpoint Ave.
- Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
- Waterbury Companies, Inc., Waterbury 90, Conn.

#### **PLUGS**—Terminal

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Aircraft-Marine Products, Inc., 1523 N. Fourth
- St., Harrisburg, Pa. Alden Products Co., 117 No. Main St., Brockton
- Mass
- 64, Mass. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Automatic Metal Products Co., 315 Berry St., Brooklyn 1, N. Y. Bead Chain Mfg. Co., 110 Mountain Grove St., Bridgeport 5, Conn. Buchanan Electrical Products Corp., 1290 Central Ave., Hillside, N. J.

Buggie & Co., H. H., 2141 Madison Ave., Toledo

1949-1950 DIRECTORY of

- Buggie & Co., H. H., 2141 Madison Ave., Toledo 1, Ohio
  Cannon Electric Development Co., 3209 Hum-boldt St., Los Angeles 31, Calif.
  Carter Radio Div., Precision Parts Co., 213 In-stitute Pl., Chicago 10, Ill.
  Eastern Specialty Co., Phila. 40, Pa.
  Eby, Inc., High H., 4700 Stenton Ave., Phila-delphia 44, Pa.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  General Cement Mfg. Co., 919 Taylor Ave., Rock-

- General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
- Hermaseal Co., Inc., Riverside Dr., Elkhart, Ind. HERMETIC SEAL PRODUCTS CO., 29-37 So. 6th St., Newark, N. J. SEE ADV. PG. 223.
- HEMMETIC SEAL PRODUCTS CO., 29:37 So. 6th St., Newark, N. J. SEE ADV. PG. 223.
  Industrial Products Co., Danbury, Conn.
  Instrument Parts Corp., P. 0. 150, Ossining, N. Y.
  INSULINE CORP. OF AMERICA, 36:02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  Johnson Co., E. F., Waseca, Minn.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, 111.
  Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
  Millen Mig. Co., James, 150 Exchange St., Mal-den, Mass.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
  Pacific Electricord Company, 9304 Santa Monica Blvd., Beverly Hills, Calif.
  Pyle-National Co., 1334 N. Kostner Ave., Chi-cago 51, Ill.

cago 51, 111. Remler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calif. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.

STAR EXPANSION PRODUCTS CO., 147-149 Cedar St., New York 6, N. Y. SEE ADV. PG.

States Co., 19 New Park Ave., Hartford 6, Conn.

Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alden Products Co., 117 No. Main St., Brockton

Alden Products Co., 117 No. Main St., Brockton 64, Mass. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. AUDIO DEVELOPMENT SALES, 2833 13th Ave., Minneapolis 7, Minn. SEE ADV. PG. 94. Audio Equipment Sales, 153 W. 33rd St., New Vacid 1 N. V.

York I, N. Y. Automatic Metal Products Co., 315 Berry St.,

Buttoniauc Metal Products Co., 315 Berry St., Brooklyn 1, N. Y. Bead Chain Mfg. Co., 110 Mountain Grove St., Bridgeport 5, Conn. Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.

Breeze Corpns., Inc., 41 S. Sixth St., Newark 7,

BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. Buggie & Co., H. H., 2141 Madison Ave., Toledo

1, Ohio Cannon Electric Development Co., 3209 Hum-boldt St., Los Angeles 31, Calif. Carter Radio Div., Precision Parts Co., 213 Insti-tute Place, Chicago 10, Illinois CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. Cinema Engineering Co., 1510 W. Verdugo Ave., Buybank, Calif.

Burbank, Calif. Cords Ltd., 780 Frelinghuysen Ave., Newark 5,

Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa. Electro Motive Mfg. Co., South Park & John St.,

Willimantic, Con. Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.

Chicago 10, 111. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, 111. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.

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PLUGS AND JACKS

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N. J

1, Ohio

N. J.

Chicago 10

Hubbell Inc., Harvey, Bridgeport 2, Conn.

Hubbell Inc., Harvey, Bridgeport 2, Conn.
Industrial Products Co., Danbury, Conn.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
Johnson Co., E. F., Waseca, Minn.
JONES, HOWARD B., Div., Cinch Mfg. Corp., 2460 W. George St., Chicago 18, Ill. SEE ADV. PG. 190.
Kellogg Switchboard & Supply Co., 6650 S.

ELECTRONIC and ALLIED PRODUCTS

- Kellog Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
- Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
- Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. Loral Electronics Corp., 794 E. 140th St., New
- York 54, N. Y. MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS.
- 71 74Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. Molded Insulation Co., Aircraft Products Div.,
- Molded Insulation Co., Aircraft Products Div., 335 E. Price St., Phila., Pa.
  Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
  Murdock Mig. Co., Wm. J., Chelsea, Mass.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
  Pacific Electricord Company, 9304 Santa Monica Blvd., Beverly Hills, Calif.
  Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

- Arenner Co., Ltu., 2101 Bryant St., San Francisco 10, Calif.
  RUSSELL & STOLL CO., INC., 125 Barclay St., New York 7, N. Y. SEE ADV. PG. 225.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  States Co., 19 New Park Ave., Hartford 6, Conn.
  SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.
  Telephonics Corp., 350 W. 31st St., New York, N. Y.
  Western Electric Co., Inc., 195 Broadway. New
- Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y. Winchester Electronics Co., 6 E. 46th St., New York 17, N. Y.

#### POINTERS-Dial

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
- Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
- ERIE RESISTOR CORP., 644 W. 12th St., Erie,
- Pa. SEE ADV. PG. 109. Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. Gemloid Corp., 79-10 Albion Ave., Elmhurst,
- N. Y. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill.

- Rockford, III.
  Grammes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1, Obio
- Ohio La Magna Mfg. Co., Inc., East Rutherford, N. J. Millen Mfg. Co., James, 150 Exchange St.,
- Millen Mfg. Co. Malden, Mass.
- Malden, Mass. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

- Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.
- Precision Tube Co., Inc., 3828 Terrace St., Phila-delphia 28, Pa.
- Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.

- 34, Mass.
  Searle Aero Industries, Inc., Orange, Calif.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Ucinite Co., Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  Uniform Tubes, Shurs Lane & Laruiston Sts., Roxborough, Phila., Pa.
  United Carr Fastener Corp., Cambridge 42, Mass.
  Vallorbs Lewel Co. Lancaster Pa.
- Vallorbs Jewel Co., Lancaster, Pa. Volkert Metal Stampings, Inc., John, 141 Spen-cer St., Brooklyn 5, N. Y.

## POINTS-Contact

- Baker Co., Inc., 113 Astor St., Newark 5, N. J. BRAININ CO., C. S., 233 Spring St., New York 13, N. Y. SEE ADV. PG. 188. Callite Tungsten Corp., 540 39th St., Union
- City, N. J. Cleveland Tungsten, Inc., 10200 Meech Ave.,
- Cleveland, Ohio ANSTEEL METALLURGICAL CORP., 2200 FANSTEEL Sheridan Rd., North Chicago, Ill. SEE ADV. PG. 29.
- Gibson Electric Co., 8350 Frankstown Avenue,
- Bittsburgh 21, Pa.
   GRAPHITE METALIZING CORP., 1041 Nepper-han Ave., Yonkers 3, N. Y. SEE ADV. PG. 177.
   MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- Speer Carbon Co., Lincoln Ave., St. Marys, Pa. United Carr Fastener Corp., Cambridge 42, Mass. Wilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

## POSTS-Binding

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. American Communications Corp., 306 Broadway,
- New York 7, N. Y. Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
- Blvd., Portland 15, Oregon CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG. 178. CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. Eastern Specialty Co., Phila. 40, Pa. Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44 Pa

- 44. Pa
- Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
- Chicago 10, 11. Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y. **GENERAL RADIO CO.**, 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. **HEWLETT-PACKARD CO.**, 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Insulation Mfg. Co., 11 New York Ave., Brooklyn, N V
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG.
- 80.
- Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
   Millen Mfg. Co., James, 150 Exchange St., Millen Mfg. Co Malden, Mass.
- Molded Insulation Co., Aircraft Control Div., 335
- E. Price St., Phila., Pa. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS, 105-108.
- Precision Fabricators Inc., Roosevelt Rd., E.
- Rochester, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
- Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N.Y.
- 20, N. Y. States Co., 19 New Park Ave., Hartford 6, Conn. SUPERIOR ELECTRIC CO., THE, 83 Laurel St., Bristol, Conn. SEE ADV. PGS. 142, 143. Thwing-Albert Instrument Co., 5351 Pulaski
- Ave., Philadelphia 44, Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box. 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## POTENTIOMETERS

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wisc.

POTENTIOMETERS

- Atlas Resistor Co., 423 Broome St., New York, N. Y.
- N. Y. Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio
- IV, Onio
   Bristol Co., The, Waterbury 91, Conn.
   Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
   Carter Radio Div., Precision Parts Co., 213
- Bivd., Portunit 19, Oregon Carter Radio Div., Precision Parts Co., 213 Institute Place, Chicago 10, Ill. CENTRALAB, Div. Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. Ave., 1 26, 27,
- Cinema Engineering Co., 1510 W. Verduga Ave.,
- Burbank, Calif. Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y.
- Daven Co., 191 Central Ave., Newark 4, N. J.
- DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y. Fairchild Camera & Instrument Corp., 88-06 Van

- Fairchild Cantera & Instrument Corp., 66-00 van Wyck Blvd., Jamaica 1, N. Y. Foxboro Co., The, Foxboro, Mass. Gamewell Co., The, Newton Upper Falls 64, Mass. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Geophysical Instrument Co., 1820 N. Nash St., Adjuster Va
- Arlington, Va. Giannini & Co.,
- Inc., 285 W. Colorado St.,
- Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.
  GIBBS DIV., George W. Borg Corp., Delevan, Wisc. SEE ADV. PG. 95.
  HELIPOT CORP., 1011 Mission St., South Pasa-dena, Calif. SEE ADV. PG. 25.
  INTERNATIONAL RESISTANCE CO., 401 N.
  Broad St. Philodelphia 9, De SEE ADV. DCS.
- Broad St., Philadelphia 8, Pa. SEE ADV. PGS. 20. 21.
- Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y. MALLORY & CO., INC., P. R., 3029 E. Washing-
- ington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74. Minneapolis-Honeywell Regulator Co., 2753

Fourth Ave. S., Minneapolis, Minn. Muter Co., 1255 S. Michigan Ave., Chicago, Ill. National Technical Lab., 820 Mission St., S.

OHMITE MANUFACTURING CO., 4835 W. Flour-

noy St., Chicago 44, Ill. SEE ADV. PG. 201. Reeves Instrument Corp., 215 E. 91st St., New

Reeves instrument Corp., 210 E. 013t Oct, 102.
York, N. Y.
REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. SEE ADV. PG. 186.
Rubicon Co., 3751 Ridge Ave., Phila., Pa.
Schaefer Bros. Co., 1059 W. 11th St., Chicago, 71

Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,

Pa. Stackpole Carbon Co., St. Marys, Pa. Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Technology Instrument Corp., 1058 Main St., Waltham Mass

Waltham, Mass. Thwing-Albert Instrument Co., 5351 Pulaski Ave.,

Thing-Abert Instrument Co., 5351 Pulaski AVe., Philadelphia 44, Pa. Trimm, Inc., 400 W. Lake St., Libertyville, Ill. WARD LEONARD ELECTRIC CO., 31 South St., Mount Vernon, N. Y. SEE ADV. PG. 151. WESTON ELECTRICAL INSTRUMENT CORP.,

618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV, PG, 193.

Wheelco Instruments Co., 847 W. Harrison St.,

POTENTIOMETERS - Linear & Non

Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y.
Giannini & Co., Inc., 285 W. Colorado St., Pasa-dena 1, Calif.
HELIPOT CORP., 1011 Mission St., S. Pasadena, Calif. SEE ADV. PG. 25.
Technology Instrument Corp., 1058 Main St., Waltham 54, Mass.

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Linear Precision Wire Wound

Chicago 7, Ill. Wirt Co., 5221 Greene St., Phila., Pa.

Pasadena.

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Pa.

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## POTENTIOMETERS

#### **POTENTIOMETERS**—Portable Instrument

Bristol Co., The Waterbury 91, Conn.

- Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Carter Radio Div. Precision Parts Co., 213
- Carter Radio Div. Precision Parts Co., 213 Institute Place, Chicago 10, Ill. CENTRALAB, Div. Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.

ELECTRO-TECH EQUIPMENT CO., 117 Lafayette

- St., New York 13, N. Y. SEE ADV. PG. 181. Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.
- Foxboro Co., The, Foxboro, Mass. Geophysical Instrument Co., 1820 N. Nash St.,

- Arlington, Va. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn. Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa. Shallcross Mfg. Co., 10 Jackson Ave., Colling-dale, Pa.
- Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa. WESTON ELECTRICAL INSTRUMENT CORP.,
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- Wheelco Instruments Corp., 847 W. Harrison
- St., Chicago 7, Ill. Winslow Co., Inc., The, 9 Liberty St., New-ark 5, N. J.

#### **POTS**—Soldering

Acme Electric Heating Co., 1217 Washington

- Acme Electric Heating Co., 1217 Washington St., Boston, Mass. ELECTRIC SOLDERING IRON CO., W. Elm St., Deep River, Conn. SEE ADV. PG. 30. Lectrohm, Inc., 5939 Archer Ave., Chicago 38,
- III.
- Sta-Warm Electric Co., Ravenna, Ohio VULCAN ELECTRIC CO., 88 Holten St., Dan-vers, Mass. SEE ADV. PG. 88. Waage Electric Inc., 54 Park Place, New York 7, N. Y.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### POTS AND TANKS—Heating

- Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
  Aeroil Products Co., Inc., Wesley St., South Hackensack, N. J.
  Lukens Steel Co. and Divisions, By-Products Steel Co. & Lukenweld, 447 Lukens Bldg., Coatesville, Pa.
  Sta-Warm Electric Co., Ravenna, Ohio
  VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. SEE ADV. PG. 88.
  Waage Electric Inc., 54 Park Pl., New York 7, N. Y.

## **POWDERS**—Magnetic

- Plastic Metals Div., The National Radiator Co., 169 Bridge St., Johnstown, Pa.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C.2, England.
  WILLIAMS & CO., C. K., 2001 Lynch Ave., East St. Louis, Mo. SEE ADV. PG. 32.

#### **POWDERS**—Polishing

- Linick Chemical Co., 29 E. Madison Street,
- Chicago 2, Ill. WILLIAMS & CO., C. K., 2001 Lynch Ave., East St. Louis, Mo. SEE ADV. PG. 32.

## POWER PACKS

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- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Maryland American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif. AMERICAN TELEVISION & RADIO CO. 200 F.
- AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. SEE ADV. PG.
- Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.

- Arlington Electric Products, Inc., 500 W. 52nd New York 19, N.
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Bright Star Battery Co., 200 Crooks Ave., Clif-
- N
- ton, N. J.
  CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
  Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
  CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV. PC. 87
- PG 87
- Electricoil Transformer Co., 421 Canal St., New York 13. N. Y Electro Products Labs., Inc., 549 W. Randolph
- Electro Products Labs., Inc., 343 W. Rahdopn St., Chicago 6, Ill. Electronic Batteries Inc., Bush Terminal Bldg., No. 4, 28-34 35th St., Brooklyn 32, N. Y. Electronic Controls Co. of New York, 3124 Avenue I, Brooklyn 10, N. Y. Electronic Labs. Inc., 24 W. 24th St., Indian-coolic 4, Indian-
- apolis 4, Indiana Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- ESPY ELECTRONIC CORP., DAWKINS, 11747
- ESPY ELECTRONIC CORP., DAWKINS, 11/4/ W. Pico Blvd., Los Angeles 34, Calif. SEE ADV. PG. 89.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  General Transformer Corp. 4321 N. Knox Ave.
- General Transformer Corp., 4321 N. Knox Ave.,

- Chicago 41, III. Heath Co., Benton Harbor, Mich. Inductive Equipment Co., Gettysburg, Pa. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Maguire Industries Inc., Electronics Dept.,
- Bridgeport, Con. MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- Mellaphone Corp., Rochester 2, N. Y. Millen Mfg. Co., James, 150 Exchange St., Mal-Mass. den.
- den, Mass. MODEL RECTIFIER CORP., 127 Atlantic Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 186. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Network Mfg. Corp., Bayonne, N. J. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radiart Corp., The, 3571 W. 62nd St., Cleve-land 2, Ohio Radio Sonic Corp., 186 Union Ave., New Ro-

- Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y. Smuckler & Co., Inc., A. F. 202 Tillary St., Brooklyn 1, N. Y. STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV.
- PG. 207.

Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Varo Mfg. Co., Inc., Box 638, Garland, Texas Vihrapower Co., James, 3224 W. Armitage Ave., Chicage III. Chicago, Ill.

### POWER SUPPLIES

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- Pa. Airpax Products Co., 1024 Green Mount Ave.,
- Baltimore 2, Md. American Communications Corp., 306 Broadway, New York 7, N. Y.
- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif.
- dale, Cahr. AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul, Minn, SEE ADV. PG. 192. Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
- Ampiner Corp. 6: Amoral Ampiner Corp. 4: Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Audio Equipment Sales, 153 W. 33rd St., New
- York 1, N. Y.

Bardwell & McAllister Inc., P. O. Box 1310, Hollywood, Calif. BARKER & WILLIAMSON, 235 Fairfield Ave.,

1949-1950 DIRECTORY of

- Upper Darby, Pa. SEE ADV. PG. 39. BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126. Both Co. Arthur E. 2007 F. A. 10. Yorn Booth Co., Ar Arthur E., 307 E. 3rd St., Los An-
- geles, Calif. C. B. Mfg. Co., 480 Broome St., New York 13,
- CENTURY GEOPHYSICAL CORP., Tulsa 3, Ok-
- CENTURY GEOFFISICAE CONT., Julia O, Ch. lahoma. SEE ADV. PG. 164.
   CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
   Cinema Engineering Co., 1510 W. Verdugo Ave., Bushes, Calif.

- Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
  Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
  Collins Radio Co., Cedar Rapids, Iowa
  Communication Measurements Lab., 120 Greenwich St., New York, N. Y.
  CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV. PG. 87 PG. 87.
- Development Engineering Co., Inc., The, 1818 Ashland St., Houston 8, Texas Electricoil Transformer Co., 421 Canal St., New
- York 13, N. Y. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
- Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill.

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St., St. Paul 1, Minn.

- St., Chicago 6, Ill.
  Electronic Controls Co. of New York, 3124 Avenue I, Brooklyn 10, N. Y.
  Electronic Labs., Inc., 24 W. 24th St., Indianapolis 4, Ind.
  Essex Electronics, Berkeley Heights, N. J.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
  ESPY ELECTRONIC CORP., DAWKINS, 11747 W. Pico Blvd., Los Angeles 34, Calif. SEE ADV. PG. 89.
  Fairchild Recording Equipment Corp., 154th St.
- PG. 89.
  Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86.
  Furst Electronics, 10A S. Jefferson St., Chicago 6 III

GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass. Hastings Instrument Co., Box 1275, Hampton,

Va.
Heath Co., Benton Harbor, Mich.
Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
Inductive Equipment Co., Gettysburg, Pa.
Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.
Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.

Kepco Labs, Inc., 149-14 41st Ave., Flushing,

LAMBDA ELECTRONICS CORP., 103-02 North-ern Blvd., Corona, N. Y. SEE ADV. PG. 177. Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.

Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.

Measurement Engineering Ltd., Arnprior, Onta-

Millen Mfg. Co., James, 150 Exchange St., Mal-

Minnesota Electronics Corp., The, 97 E. Fifth

MODEL RECTIFIER CORP., 127 Atlantic Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 186.

Monroe Coil Co., 1606 N. California St., Chi-

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.

Northeastern Engineering, Inc., Manchester,

Mellaphone Corp., Rochester 2, N. Y.

Network Mfg. Corp., Bayonne, N. J.

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- Power Equipment Co., 55 Antoinette St., Detroit 2, Mich.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
  Radiart Corp., The, 3571 W. 62nd St., Cleveland 2, Ohio
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts. Camden N. J. SEE ADV.

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
   RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
   Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y.
   Rowa Engineering Corp., 2422 N. Pulaski Rd.
- Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
- Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C. Scott Inc., Herman Hosmer, 385 Putnam Ave.,
- Cambridge 39, Mass. Servomechanisms, Inc., 142 Mineola Blvd., Mineola, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Colling-

- Shalfeross Mig. Co., 10 Jackson Ave., Colling-dale, Pa.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52
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- 52.
  Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
  Technical Materiel Corp., 453 W. 47th St., New York 19, N. Y.
  Telequip Radio Co., 1901 S. Washtenaw, Chicago, Ill.
  Teletronics Laboratory, Inc., 352 Maple Ave., Westbury, L. I., N. Y.
  Thermionic Engineering Corp., Pompton Plains, N. J.

- N
- Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, TH
- III.
   Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
   UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside
- Front Cover. Weltronic Co., 19500 West 8 Mile Rd., Detroit 19, Mich.

#### **POWER SUPPLIES**—Electronically Regulated

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Airlectron, P. O. Box 151, Caldwell, N. J. Alden Products Co., 117 N. Main St., Brocton 64,
- Mass. American British Technology Inc., 57 Park Ave., New York 16, N. Y.
- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-
- dale, Calif.

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
  Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG, 200.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
  BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126.
  BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179.
  CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
  Communication Measurements Lab. Inc., 120 Greenwich St., New York, N. Y.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  DeMornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.

- York 51, N. Y. Douglas Radio Labs., 40 Wayland St., Boston 25,
- Mass. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. Electronics Labs., Inc., 24 W. 24th St., Indian-

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- EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189.
   ESPY ELECTRONIC CORP., DAWKINS, 11747 W. Pico Blvd., Los Angeles 34, Calif. SEE ADV. PG. 89.
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- Furst Electronics, 10A S. Jefferson St., Chicago 6, Ill.
- Gates Radio Co., Quincy, Ill. Gaveco Labs., Inc., 2 East End Ave., New York
- 21, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
  Heath Co., Benton Harbor, Mich.
  HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
  Howard Co., The, 934 Drexel Rd., Drexel Hill, Pa.

Pa.

- Pa. Inductive Equipment Co., Gettysburg, Pa. INDUSTRIAL ELECTRONICS, INC., 2457 Wood-ward Ave., Detroit 1, Mich. SEE ADV. PG. 226. Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif. Industrial Instruments Inc., 17 Pollack Ave., Lorence City, 5, N, J
- Jersey City 5, N. J. Kepco Labs., Inc., 149-14 41st Ave., Flushing,
- N. Y.
   LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. SEE ADV. PG, 177.
   Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
   Loral Electronics Corp., 794 E. 140th St., New

- 29. Mass. Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Mellaphone Corp., Rochester 2, N. Y. Millen Mfg. Co., James, 150 Exchange St.,
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Moulic Specialties Co., 1005-1007 W. Washing-

- Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill.
  National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
  Network Mfg. Corp., Bayonne, N. J.
  North American Philips Co., 100 E. 42nd St., New York 17, N. Y.
  Northeastern Engineering, Inc., Manchester, N. H.
  Nuclear Instrument & Chemical Corp., 223 W.
  Erie St., Chicago 10, Ill.
  Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif.
  POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228.

- York 7, N. Y. SEE ADV. PG. 228. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
- SEE ADV. PG. 63. Power Equipment Co., 55 Antoinette St., De-troit 2, Mich. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Radar Engineers, 110 University St., Seattle 1, Wash
- Wash.
- RADIO CORP. OF AMERICA, RCA Victor Div Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SEE
- RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
- Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
- Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y.
- Ripley Co., Inc., P.O. Box 31, Middletown, Conn. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
- Servomechanisms, Inc., 142 Mineola Blvd., Mineola, N. Y.
- Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
- Sierra Electronic Corp., Belmont & San Carlos, Calif.

- Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  SORENSON & CO., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211.
  SPELLMAN TELEVISION INC., 2898 Jerome Ave., New York, N. Y. SEE ADV. PG. 58.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- 52.
- Technical Materiel Corp., The, 453 W. 47th St.,
- New York 19, N. Y. Teletronics Laboratory, Inc., 352 Maple Ave., Westbury, L. I., N. Y. Thermionic Engineering Corp., Pompton Plains,
- N. J.
- N. J. Thermo Labs., Inc., 355 W. 26th St., New York I, N. Y. Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
- Front Cover.
- Weltronic Co., 19500 West 8 Mile Rd., Detroit
- Weltronic Co., 19900 west 8 mile rd., Detroit 19, Mich.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  Weston Laboratories, Weston 93, Mass.
  Weymouth Instrument Co., 1440 Commercial St., East Wurmouth 80, Mass.
- East Weymouth 89, Mass.

## POWER SUPPLIES—High Voltage

Calif.

Ill.

29, Mass.

Millen

field N J

fax, N. S., Canada

Acro Products Co., 5330 Baltimore Ave., Phila.,

Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa. Pa.
American Electroneering Co., 2112 S. La Brea Avee, Los Angeles, Calif.
Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
Berkeley Scientific Co., 6th & Nevin, Richmond, Calif.

Cant.
BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG, 126.
CHATHAM ELECTRONICS CORP., 475 Wash-ington St., Newark 2, N. J. SEE ADV. PG. 28.
Collins Audio Products Co., P.O. Box 368, West-end M. J.

CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, Ill. SEE ADV, PG, 214. Cossor (Canada) Ltd., 301-303 Windsor St., Hali-

fax, N. S., Canada
Dumont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
Electroicoil Transformer Co., 421 Canal St., New York 13, N. Y.
Electronic Controls Co. of New York, 3124 Ave-nue I, Brooklyn 10, N. Y.
EPSY ELECTRONIC CORP., DAWKINS, 11747
W. Pico Blvd., Los Angeles 34, Calif. SEE ADV. PG. 89.
Essex Electronics, Berkeley Heights, N. J.
EFEDERAL TELEPHONE & RADIO CORP. 100

Essex Electronics, Berkeley Heights, N. J. **FEDERAL TELEPHONE & RADIO CORP.**, 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Furst Electronics, 10A S. Jefferson St., Chicago 6,

III.
Gates Radio Co., Quincy, III.
Gates Radio Co., Quincy, III.
GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif.
International Television Corp., 238 Willfam St., New York 7, N. Y.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
MacLeod & Hanopol, 10 Joiner St., Charlestown 29, Mass.

Mfg. Co., James, 150 Exchange St., en, Mass.

D-109

Millen Mtg. Co., James, 150 Exchange St., Malden, Mass.
MODEL RECTIFIER CORP., 127 Atlantic Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 186.
North American Philips Co., 100 E. 42nd St., New York 17, N. Y.

## **POWER SUPPLIES**

Northeastern Engineering, Inc., Manchester, N. H. Nuclear Instrument & Chemical Corp., 223 W.

- N. H.
  Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
  POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Sierra Electronic Corp., Belmont & San Carlos, Calif.

- Calif.
- Snaider Television Corp., 540 Bushwick Ave.,
- Shalter Television Cop., 540 Businets Tree, Brooklyn 6, N. Y.
   SPELLMAN TELEVISION, INC., 2898 Jerome Ave., New York, N. Y. SEE ADV. PG. 58.
   SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 59
- 52

- 52.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  Teletronics Laboratory, Inc., 352 Maple Ave., Westbury, L. I., N. Y.
  Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.

#### **POWER SUPPLIES—Voltage** Regulated

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Airpax Products Co., 1024 Greenmount Ave.,
- Airpax Products Co., 1024 Greenhount Ave., Baltimore 2, Md. Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y. American Communications Corp., 306 Broadway, New York 7, N. Y.

- New York 7, N. I. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glendale, Calif. Arlington Electric Products, Inc., 500 W. 52nd

- Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
  BENDIX AVIATION CORP., Red Bank Div., Red Bank, N. J. SEE ADV. PGS. 22, 23.
  Booth Co., Arthur E., 307 E. 3rd St., Los An-geles, Calif.
  CHATHAM ELECTRONICS CORP., 475 Wash-
- CHATHAM ELECTRONICS CORP., 475 Wash-ington St., Newark 2, N. J. SEE ADV. PG. 28. Collins Audio Products Co., P. O. Box 368, Westfield, N. J. Communication Measurements Lab. Inc., 120
- Greenwich St., New York, N. Y. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Douglas Radio Labs., 40 Wayland St., Boston 25, Mass.

- Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Electricoil Transformer Co., 421 Canal St., New
- Electro Iransformer Co., 421 Canal St., New York 13, N. Y. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. Electro Products Labs., Inc., 549 W. Randolph
- Electro Froducts Labs., Inc., 549 W. Randolph St., Chicago 6, Ill.
   ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- Electronic Labs., Inc., 24 W. 24th St., Indianapolis 4, Ind. ELECTRONIC MEASUREMENTS CO., Red Bank,

- ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
   EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189.
   IEPSY ELECTRONIC CORP., DAWKINS, 11747 W. Pico Blvd., Los Angeles 34, Calif. SEE ADV. PG. 89.
   Furst Fleatennics, 104 S. Laffactor Control
- Furst Electronics, 10A S. Jefferson St., Chicago 6, Ill.
- Gates Radio Co., Quincy, Ill.

- Gaveco Labs., Inc., 2 East End Ave., New York
- 21, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schenectady 5, N. 1. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Heath Co., Benton Harbor, Mich. Industrial Electronics, Inc., 21 Henry St., De-troit 1, Mich. INDUSTRIAL ELECTRONICS, INC., 2457
- Woodward Ave., Detroit 1, Mich. SEE ADV. PG. 226.
- Industrial Instruments, Inc., 17 Pollack Ave.,
- Jersey City 5, N. J. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Loral Electronics Corp., 794 E. 140th St., New
- York 54, N. Y. MACDONALD & CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. SEE ADV. PG. 118. MacLeod & Hanopol, 10 Joiner St., Charlestown
- 29, Mass.
- Mellaphone Corp., Rochester 2, N. Y. Millen Mfg. Co., James, 150 Exchange St., Mal-
- Millen Mfg. Co., James, 150 Exchange St., Mal-den, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. National Electrical Machine Shops, Inc., 919 Jessup-Blair Dr., Silver Spring, Md. Network Mfg. Corp., Bayonne, N. J. Northeastern Engineering, Inc., Manchester, N H
- N. H.

- N. H.
  Power Equipment Co., 55 Antoinette St., Detroit 2, Mich.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.

- Radio Sonte Corp., 1.
  chelle, N. Y.
  Radio Television Institute, Inc., 480 Lexington Ave., New York 17, N. Y.
  Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y.
  Statistical Structure Inc., 142 Mineola Blvd., Servomechanisms, Inc., 142 Mineola Blvd., Mineola, N. Y.
- Sierra Electronic Corp., Belmont & San Carlos,
- Calif

- Calif. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211. SPELLMAN TELEVISION INC., 2898 Jerome Ave., New York, N. Y. SEE ADV. PG. 58. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. 52
- Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
- New York 19, N. Y. Teletronics Laboratory, Inc., 352 Maple Ave., Westbury, L. I., N. Y. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y. Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, III
- TIL.
- III.
   Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
   UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Forth Court.
- Front Cover. Weltronic Co., 19500 West 8 Mile Rd., Detroit 19, Mich.
- Weston Laboratories, Weston 93, Mass. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

## PRE-AMPLIFIERS for COMMUNICATION RECEIVERS

- American Communications Corp., 306 Broadway,
- American Communications Corp., 306 Broadway, New York 7, N. Y. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Crystal Devices Co., Inc., 50 Mill Rd., Freeport, N. Y.
- Ckstein Radio & Television Co., LeRoy, Minn. Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.

Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y. Kinsey Radio Mfg. Co., 5807 Oak St., Omaha 7,

1949-1950 DIRECTORY of

- Nebraska
- Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Mobile Communications Co., 110 W. Ocean Blvd.,
- Mobile Communications Co., 110 W. Ocean Blvd., Long Beach 2, Calif.
  NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.
  Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Mfg. Engineers Inc., 300-306 1st Ave., Peoria 6, Ill.
  Weston Laboratories, Weston 93, Mass.

- Weston Laboratories, Weston 93, Mass.

## PRE-SELECTORS

- American Radio Co., 611 E. Garfield Ave., Glen-
- American Radio Co., 611 E. Garneid Ave., Grandale, Calif.
  Babcock Radio Engineering Inc., 6164 Sepulveda Blvd., Van Nuys, Calif.
  Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.
  Measurement Engineering Ltd., Arnprior, Ontario, Concide.
- Canada
- NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radio Mfg. Engineers Inc., 300-306 1st Ave., Paperia 6 10
- Radio Mfg. En Peoria 6, Ill.
- W Inductor Co., 1056 N. Wood St., Chicago, Ill. S-W

#### PRESSES—Hydraulic Molding

(See Circuits)

PROBES

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York, N. Y.

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Hydraulic Press Mfg. Co., Mt. Gilead, Ohio PRINTED OR STAMPED CIRCUITS

Aerolite Electronic Hardware Corp., 24 Cliff St.,

Jersey City, N. J. Alden Products Co., 117 No. Main St., Brockton

Douglas Radio Labs, 40 Wayland St., Boston 25,

Douglas Radio Labs, 40 Wayland St., Boston 25, Mass.
Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
ELECTRONIC DESIGNS, INC., Irvington, N. Y. SEE ADV. PG. 230.
ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 233.
Heath Co., Benton Harbor, Mich. Industrial Products Co., Danbury, Conn.
INSULINE CORP. OF AMERICA, 30-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
Keystone Electronics Co., 50-52 Franklin St.,

Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y. Radiation Counter Labs., Inc., 1844 W. 21st St.,

Radiation Counter Lass, Inc., 1944 W. 21st St., Chicago 8, Ill.
 RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
 Reiner Electronics Co., 152 W. 25th St., New York, N. Y.

PRODUCTION TUBE TESTING EQUIP-

BUCK ENGINEERING CO., INC., 37-41 Marcy St., Freehold, N. J. SEE ADV. PG. 224. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hickok Electrical Instrument Co., 10514 Dupont

Hickok Electrical Instrument Co., 10314 Dapart Ave., Cleveland, Ohio KAHLE ENGINEERING CO., 1307 7th St., North Bergen, N. J. SEE ADV. PG. 152. Lyman Electronic Corp., 12 Cass St., Spring-field, Mass.

MacLeod & Hanopol, 10 Joiner St., Charlestown

Precision Resistor Co., 334 Badger Ave., Newark

8, N. J. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

Radio adio Sonic Corp., 186 Union Ave., Rochelle, N. Y. New

Reiner Electronics Co., 152 W. 25th St., New York, N. Y. Sierra Electronic Corp., Belmont & San Carlos,

WESTON ELECTRICAL INSTRUMENT CORP.,

618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## **PROTECTIVE SEALERS**

See Insulating Compounds

## **PSYCHOGALVANOMETERS**

Electro-Medical Lab. Inc., Holliston, Mass. ton St., Bloomington, Ill.

#### PUBLIC ADDRESS SYSTEMS

See Sound Systems, Complete

## PULLERS-Radio Tube

General Cement Mfg. Co., 919 Taylor Ave.,

Rockford, Ill. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.

80. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Kellems Co., Saugatuck, Conn. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

#### PULLEYS-Dial

Aermotive Equipment Corp., 1632-8 Central St.,

- Kansas City 10, Mo. Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington, Del.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill. INSULINE CORP OF AMERICA, 36-02 35th
- ISULINE CORP OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- La Magna Mfg. Co., Inc., East Rutherford, N. J. Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill.

Chicago 39, 11. Searle Aero Industries, Inc., Orange, Calif. Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. United Carr Fastener Corp., Cambridge 42, Mass.

#### PUNCHES—Metal

General Cement Mfg. Co., 919 Taylor Ave., Rock-

ford, Ill. Greene Mfg. Corp., G. G., Warren, Pa. Greene Mfg. Corp., 3136 12th St., Rockford, Ill. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

- HATDO BROS., Flainfield, N. J. SEE ADV. Fd. 209.
  Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80 80
- Oneil-Irwin Mfg. Co., 316 8th Ave., Lake City, Minn. Parker-Kalon Corp., 200 Varick St., New York
- 14, N. Y. Radiad Service, 720 W. Schubert Ave., Chicago
- Searle Aero Industries, Inc., Orange, Calif. Wiedemann Machine Co., 4272 Wissahickon Ave., Philadelphia 32, Pa.

#### PUSHBUTTONS

- Catalin Corp. of America, 1 Park Ave., New York 16, N. Y. Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill. Clark Controller Co., 1146 E. 152nd St., Cleve-and 10 Obio
- and 10, Ohio utler-Hammer, Inc., 315 No. 12th St., Mil-
- Cutler-Hammer, In waukee 1, Wis.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

- Emeloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J. side 5, N. J. Federal Electric Products Co., 50 Paris St.,
- Newark, N. J.
- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. WARD LEONARD ELECTRIC CO., 31 South St.,
- Mt. Vernon, N. Y. SEE ADV. PG. 151. Kilburn Glass Co., Inc., J. R., 22 S. Worces-ter St., Chartley, Mass. Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1,
- Ohio
- Molded Insulation Co., Aircraft Control Div., 335 Price St., Phila. Pa.
- Multi-Products Tool Co., 123 Sussex Ave., Newark 4, N. J. Murdock Mfg. Co., Wm. J., Chelsea, Mass. R. B. M. Div., Essex Wire Corp., Logansport,
- Ind
- Warrick Co., Chas. F., 16251 Hamilton Ave., Detroit 3, Mich. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,
- 67

## PYROMETERS AND POTENTIOMETER PYROMETERS

- Assembly Products, Inc., Chagrin Falls 6, Ohio Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio Bristol Co., The, Waterbury 91, Conn.
- Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles 15, Calif. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette
- ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. Elematic Equipment Corp., 6046 S. Wentworth Ave., Chicago 21, Ill. Foxboro Co., The, Foxboro, Mass. Gordon Co., Claud S., 3000 S. Wallace St., Chi-cago 16, Ill.

- cago 16, III.
  Illinois Testing Labs. Inc., 420 N. La Salle St., Chicago 10, III.
  J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.
  Leeds & Northrup Co., 4970 Stenton Ave., Dilli 44 De. Phila. 44, Pa.
- Lewis Engineering Co., 52 Rubber Ave., Nauga-
- tuck, Conn. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.

Meters, Inc., 515 Weshleid Divd., Indianpoins 20, Ind.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
Nurnberg Thermometer Co., Inc., 4 Corey St., Boston 32, Mass.
Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
Rubicon Co., 3751 Ridge Ave., Phila., Pa.
Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.

Chicago 7, Ill. Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

#### QUARTZ-Raw

- American Gem & Pearl Co., 6 W. 48th St., New York 19, N. Y. Breon Laboratories, 1520 Evergreen Rd., Wil-
- liamsport, Pa. allons Labs., 5066 Santa Monica Blvd., Los Dallons Labs., 5 Angeles, Calif.
- Angeles, Calif. Diamond Drill Carbon Co., 53-63 Park Row, New York 7, N. Y. Knights Co., James, 131 S. Wells St., Sandwich,
- Monitor Products Co., 915 Fremont Ave., So. Pasadena, Calif.
- Murray American Corp., 95 Summit Ave., Sum-mit, N. J.

## QUARTZ-Unfinished Crystals

BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. SEE ADV. PG. 91. Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.

- CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175. Commercial Equipment Co., 112 W. 18th St.,
- Kansas City 8, Mo. Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Eidson Electronic Co., 1802 N. Third St., Tem-
- ple, Texas HUNT CORP., THE, 455 Lincoln St., Carlisle, Pa. SEE ADV. PG. 56.
- Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Knights Co., James, 131 S. Wells St., Sand-wich, Ill. Miller, August E., 9226 Hudson Blvd., North
- Bergen, N. J. Monitor Products Co., 915 Fremont Ave., So.
- Pasadena, Calif. Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn 13, N. Y.
- Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y. REEVES-HOFFMAN CORP., 321 Cherry St., Car-lisle, Pa. SEE ADV. PG. 104. Scientific Radio Products Co., 738 W. Broadway,

Council Bluffs, Iowa Standard Piezo Co., 127 Cedar St., Carlisle, Pa. Valpey Crystals, Highland St., Holliston, Mass.

#### RACKS-Relay

Canada

York 7, N. Y.

- Altec Lansing Corp., 161 Avenue of the Ameri-cas, New York 13, N. Y. ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.
- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Bardwell & McAllister, Inc., P. O. Box 1310,
- Bartowen & McAnster, Inc., F. O. Box 1510, Hollywood, Calif.
   BUD RADIO INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
   Cinema Engineering Co., 1510 W. Verdugo Ave., Burberg, Celif.
- Burbank, Calif. Collins Radio Co., Cedar Rapids, Iowa Communication Equipment & Engrg. Co., 5646 W. Race St., Chicago 44, Ill.

Communication Equipment of Energy Corr, Series, W. Race St., Chicago 44, Ill.
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Falstrom Co., 44 Falstrom Court, Passaic, N. J.
FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Gates Radio Co., Quincy, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.
Johnson Co., E. F., Waseca, Minn.
KARP METAL PRODUCTS CO., INC., 215 63rd St., Brooklyn 20, N. Y. SEE ADV. PG. 50.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Measurement Engineering Ltd., Arnprior, Ont., Canada

Multi-Products Tool Co., 123 Sussex Ave., Newark 4, N. J. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.

48, Mass. SEE ADV. PGS. 105-108. Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. Par-Metal Products Corp., 32-62 49th St., Long Island City 3, N. Y. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. L., N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Exercise Corpers Str. Compared N. J. SEE ADV.

RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Robinson Aviation, Inc., Teterboro, N. J.
Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
WALTER CO., S. 1400 Atlantic Ave., Brooklyn

WALTER CO., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. SEE ADV. PG. 173.

Western Electric Co., Inc., 195 Broadway, New

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, L. I., N. Y.
ARMA CORP., 254-36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220.

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RADAR NAVIGATIONAL DEVICES

## **RADAR SYSTEMS AND EQUIPMENT**

# 1949-1950 DIRECTORY of

- Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
- Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Dalmo Victor Co., San Carlos, Calif.
- De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.

- Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y. Electronic Associates, Inc., Long Branch, N. J. Electronic Engineering Co., 616 G St., San Diego,
- Calif. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.
- Hastings Instrument Co., Box 1275, Hampton, Va.

- Va.
   Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
   PGS. 197, Inside Back and Back Covers.
   Radio Sonic Corp., 186 Union Ave., New Rochelle, N. V.
- Y. N

- N. Y. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y. Submarine Signal Div., Raytheon Mfg. Co., Waltham, Mass. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave. New York 18. N. Y. SEF ADV. PCS 5th Ave., New York 18, N. Y. SEE ADV. PGS.
- 240-244.
- Z40-244. Telemark, Inc., 79 Prospect St., Stamford, Conn. Television Equipment Corp., 238 William St., New York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box. 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## RADAR SYSTEMS AND EQUIPMENT-Aircraft Landing

- Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.

- Rd., Mineola, N. Y.
  American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. Y. SEE ADV. PGS. 129, 131, 133, 135.
  Gilfillan Bros., Inc., 1815 Venice Blvd., Los
- Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif. Hastings Instrument Co., Box 1275, Hampton,

Va. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Racon Electric Co., 52 E. 19th St., New York 3, N. Y.

- N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill. Television Equipment Corp., 238 William St., New York 7, N. Y.

## RADAR SYSTEMS AND EQUIPMENT-Altimeters

- De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Bowe Engineering Corp. 2422 N. Pulaski Bd.
- Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.

## RADAR SYSTEMS AND EQUIPMENT-Receivers

- Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
  Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.

- Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Crystal Research Labs., Inc., 29 Allyn St.,

- Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn. De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y. Electronic Associates Inc., Long Branch, N. J. Eltron, Inc., 407 N. Jackson St., Jackson, Mich. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif. Hallicrafters Co., 4401 W. Fifth Ave., Chicago
- 24. III. Hammarlund Mfg. Co., 460 W. 34th St., New

- Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
  Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
  Melpar, Inc., 452 Swann Ave., Alexandria, Va.
  National-Simplex-Bludworth, Inc., Bludworth Marine Div., 92 Gold St., New York 7, N. Y.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Sonic Corp., 186 Union Ave., New Rochelle,

- Radio Sonic Corp., 186 Union Ave., New Rochelle,
- N. Y. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
- JOTK, N. Y.
   Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N. Y.
   SPERRY GYROSCOPE CO., Div., of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Fels. 240-244.
  Televiso Products, Inc., 7466 W. Irving Park Rd., Chicago 34, Ill.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.

## RADAR SYSTEMS AND EQUIPMENT-Trainers

- ARMA CORP., 254-36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220. Bendix Radio Div., Bendix Aviation Corp., Bal-timore 4, Md. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Melpar, Inc., 452 Swann Ave., Alexandria, Va. Microwave Equipment Co., North Caldwell, N. J. Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y. Reeves Instrument Corp., 215 E. 91st St., New
- Reeves Instrument Corp., 215 E. 91st St., New

- Reeves Instrument Corp., 210 E. SIST St., New York, N. Y.
  Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
  Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y.
  Television Equipment Corp., 238 William St., New York 7, N. Y.
  Television Products, Inc., 7466 W. Irving Park Rd., Chicago 34, Ill.
  Transmitter Equipment Co., Inc., 345 Hudson
- Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.

## RADAR SYSTEMS AND EQUIPMENT-**Transmitters**

- Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
   Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
- Dendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.
  Electronic Associates, Inc., Long Branch, N. J.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif. Hallicrafters Co., 4401 W. Fifth Ave., Chicago

- 24, Ill. Hammarlund Mfg. Co., 460 W. 34th St., New
- York 1, N. Y.
- York 1, N. Y. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Melpar, Inc., 452 Swann Ave., Alexandria, Va. Microwave Equipment Co., North Caldwell, N. J. National-Simplex-Bludworth. Inc., Bludworth Ma-rine Div., 92 Gold St., New York 7, N. Y. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa
- Pa.
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. FEDERAL TELEPHONE & RADIO CORP., 100
- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
  Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.

- Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
  Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
  Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y.
  SPERRY GYROSCOPE CO., Div., of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- Submarine Signal Div., Raytheon Mfg. Co., Wal-
- Submarine Signal Div., Raytheon Mfg. Co., Wal-tham, Mass.SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Television Equipment Corp., 238 William St., New York 7, N. Y. Televiso Products, Inc., 7466 W. Irving Park Rd., Chicago 34, Ill.
- Rd., Chicago 34, 111. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

## **RADIOACTIVE ISOTOPES**

See Isotopes

Canada

RATIOMETERS

tuck, Conn.

Sensitive

REACTORS

#### RADIOSONDES-Electrical Measurement Type

Alden Products Co., 117 No. Main St., Brockton 64, Mass. ton 64, Mass. Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md. Measurement Engineering Ltd., Arnprior, Ont., Canada

Canada NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Network Mfg. Corp., Bayonne, N. J. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.

SEE ADV. PG. 63.
Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y.

Edison, Inc., Thomas A., Instrument Div., W. Orange, N. J. Lewis Engineering Co., 52 Rubber Ave., Nauga-

Ave., Mt. Vernon, N. Y. WESTON ELECTRICAL INSTRUMENT CORP., 68 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

See Chokes and Coils, Choke

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Research Instrument Corp., 9 Elm

## **RECEIVERS**—Aircraft

- Aircraft Radio Corp., Boonton, N. J. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Bassett Inc., Rex, 307-11 N.W. 1st Ave., Lauder-
- dale, Fla.
- Belmont Radio Corp., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Ill. Bendix Radio Div., Bendix Aviation Corp., Balti-
- The second secon

- Communications Co. Inc., 300 Greco Ave., Colar Gables 34, Fla.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S. (Canada)
  Eckstein Radio & Television Co., LeRoy, Minn.
  Electronic Specialty Co., 3456 Glendale Blvd., Los Angeles, Calif.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  Erco Radio Labs., Inc., E. Stewart Ave., Garden Citv. N. Y.
- City, N. Y. FEDERAL TELEPHONE AND RADIO CORP.
- 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. LAVOIE LABORATORIES, Morganville, N. J.
- SEE ADV. PG. 182. Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids
- 2, Mich.
- Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
- Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.

- 51, Ill.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Development & Research Co., 26 Cornell-son Ave., Jersey City, N. J.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Ripley Co., Inc., P.O. Box 31, Middletown, Conn.
  Standard Telephones & Cables Ltd. Connaught
- Brooklyn I, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Telemark, Inc., 79 Prospect St., Stamford, Conn. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

## RECEIVERS-Automatic Radio Alarm

- Brelco Electronics Corp., 55 Vandam St., New
- Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Northeastern Engineering, Inc., Manchester, N. H. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Symphonic Radio & Electronic Corp., 292-8 Main St., Cambridge 42, Mass.

#### **RECEIVERS**—a-m/f-m Communication

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Bendix Radio Div., Bendix Aviation Corp., Balti-
- more 4, Md. Commercial Equipment Co., 112 W. 18th St.,
- Kansas City 8, Mo.

- Kansas City 8, Mo. Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. DeWald Radio Mfg. Corp., 35-15 37th Ave., Long Island City, N. Y. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Erco Radio Labs. Inc., E. Stewart Ave., Garden Citr. N. V.
- City, N. Y. Espey Mfg. Co., Inc., 528 E. 72nd St., New York,
- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.

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- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hallicrafters Co., 4401 W. Fifth Ave., Chicago
- 24, 111. Heath Co., Benton Harbor, Mich. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Kinsey Radio Mfg. Co., 5807 Oak St., Omaha 7,
- Nebraska Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
- Measurement Engineering Ltd., Arnprior, Ontario,
- Canada Co., James, 150 Exchange St.,
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Motorola, Inc., 4545 W. Augustus Blvd., Chicago 51, Ill.
- Philco Corp., Tioga & C Sts., Phila. 34, Pa. Radio Mfg. Engineers, Inc., 300-306 First St., Peoria 6, Ill.
- Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn I, N. Y. Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y.
- New York 19, N. Y. Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y.

## **RECEIVERS**—a-m Fixed Frequency

Air Associates, Inc., Teterboro, N. J.

- American Communications Corp., 306 Broadway, New York 7, N. Y.
   BARKER & WILLIAMSON, 235 Fairfield Ave.,
- DARNER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bassett, Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
  Belmont Radio Co., Div., Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Ill.
  Bendie, Bodie, Durge Darbie, Darbie,
- Bendix Radio Div., Bendix Aviation Corp., Bal-

- Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.
  Collins Radio Co., Cedar Rapids, Iowa
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chicago 36, Ill.
  Eckstein Radio & Television Co., LeRoy, Minn.
  Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
- Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
  EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189.
  Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- York, N. Y. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Garod Radio Corp., 70 Washington St., Brook-lyn 1, N. Y. Hallicrafters Co., 4401 W. Fifth Ave., Chicago

- 24, Ill. Islip Radio Mfg. Corp., Beech St., Islip, N. Y 2815 Middlefield Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Kinsey Radio Mfg. Co., 5807 Oak St., Omaha 7,
- Nebraska
- Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Link Radio Corp., 125 W. 17th St., New York,
- N. Y.
- Melpar, Inc., 452 Swann Ave., Alexandria, Va. Millen Mfg. Co., James, 150 Exchange St., Mal-den, Mass.
- Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
   NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
- National Electronics Labs., Inc., 200 King St.,
- Alexandria, Va. Northeastern Engineering, Inc., Manchester,
- N. H.
- N. H. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163. Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn.

- Smith-Meeker Engineering Co., Inc., 125 Barclay St., New York 7, N. Y.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
  Symphonic Radio & Electronic Corp., 292-8 Main St., Cambridge 42, Mass.
  Technical Materiel Corp., The, 473 W. 47th St., New York 19, N. Y.
  Transmitter Equipment Co., Inc., 345 Hudson

New York 19, N. Y. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Wilcox Electric Co., 1400 Chestnut St., Kan-sas City, Mo.

## **RECEIVERS**—Automobile

Automatic Radio Mfg. Co., Inc., 122 Brookline

- Ave., Boston, Mass. Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla. Bendix Radio Div., Bendix Aviation Corp., Bal-timore 4. Md

- Lauderdale, Fla.
  Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Delco Radio Div., General Motors Corp., Kokomo, Ind.
  Eckstein Radio & Television Co., LeRoy, Minn.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  International Detrola Corp., Detrola Radio Div., 1501 Beard Ave., Detroit, Mich.
  Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.
  Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Regal Electronics Corp., 603 W. 130th St., New York 27, N. Y.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Wells-Gardner & Co., 2701 N. Kildare Ave.,

- Wells-Gardner & Co., 2701 N. Kildare Ave.,

American Communications Corp., 306 Broadway,

New York 7, N. Y.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
G. V. Mfg. Corp., 1001 First Ave., Asbury Park, N. K.

LAVOIE LABORATORIES, Morganville, N. J.

LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182. Northeastern Engineering, Inc., Manchester, N.H. Regal Electronics Corp., 603 W. 130th St., New York 27, N. Y. Symphony Radio & Television Corp., 721 N. Martel Ave., Los Angeles 46, Calif. Tech-Master Products Co., 443-445 Broadway, New York 13, N.Y. Tradio, Inc., 1001 First Ave., Asbury Park, N. J.

Air Associates, Inc., Teterboro, N. J. American Radio Co., 611 E. Garfield Ave., Glen-

American Radio Co., 011 E. Garnero Aver, Greidale, Calif.
Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
Collins Radio Co., Cedar Rapids, Iowa
Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.

Kansas City 8, Mo. Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Eckstein Radio & Television Co., LeRoy, Minn. EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. Erco Radio Labs., Inc., E. Stewart Ave., Gar-den City, N. Y. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

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RECEIVERS—Communication and

Chicago, Ill.

Amateur

**RECEIVERS**—Coin Operated

## RECEIVERS

# 1949-1950 DIRECTORY of

- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Hallicrafters Co., 4401 W. Fifth Ave., Chicago
- 24, Ill. Hammarlund Mfg. Co., 460 W. 34th St., New
- York 1, N. Y. Harvey Wells Electronics Inc., North St., South-

bridge, Mass.

- Heath Co., Benton Harbor, Mich. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Kinsey Radio Mfg. Co., 5807 Oak St., Omaha 7, Napraeta
- Nebraska McMurdo Silver Co., 1240 Main St., Hartford
- 3, Conn. Measurement Engineering Ltd., Arnprior, Ont.,
- Canada
- Millen Mfg. Co., James, 150 Exchange St., Mal-den, Mass.
- den, Mass. Motorola, Inc., 4545 W. Augusta Blvd., Chi-cago 51, Ill. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio Mfg. Engineers, Inc., 300-306 First Ave., Peoria 6, Ill. Radio Specialty Mfg. Co., 2023 S. F. 6th Ave.

- Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Oregon Sargent-Rayment Co., The, 212 Ninth St., Oak-land 7, Calif.
- Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.
  Waterproof Electric Co., 72 E. Verdugo Ave., Buchael, Calif.

- Burbank, Calif. Weston Laboratories, Weston 93, Mass. Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

## **RECEIVERS**—Crystal Sets

- Air Champ Mfg. Co., 19 Fourth Ave., Brooklyn 17, N. Y. Carron Mfg. Co., 415 S. Aberdeen St., Chicago,
- τı
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. Ave., L PG. 80.
- Laurehk Radio Mfg. Co., 3931 Monroe Ave., Wayne, Mich. Taybern Equipment Co., 120 Greenwich St., New York 6, N. Y.
- Telequip Radio Co., 1901 S. Washtenaw, Chicago,

## **RECEIVERS**—Diversity Reception

- BARKER & WILLIAMSON, 235 Fairfield Ave.,
- Upper Darby, Pa. SEE ADV. PG. 39. Collins Radio Co., Cedar Rapids, Iowa Decimeter, Inc., 1430 Market St., Denver 2, Colo.
- Ellinwood Industries, 150 W. Slauson Ave., Los
- Angeles 3, Calif. Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

- York, N. Y. Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.

- PGS. 153-155.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

## RECEIVERS-f-m

D-114

- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y. American Radio Co., 611 E. Garfield Ave., Glen-
- dale. Calif.

- Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.
  Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md.
  Bogen Co., David, 663 Broadway, New York 12, N V
- Y
- BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179. Commercial Equipment Co., 112 W. 18th St.,
- Kansas City 8, Mo. mmunications Co., Inc., 300 Greco Ave.,
- Kansas City S, Mo.
  Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189.
  Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
  Erco Radio Labs., Inc., E. Stewart Ave., Garden Cite. N. Y.

- Erco Radio Labs., Inc., E. Stewart Ave., Galden City, N. Y.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York 19, N. Y.
  Fada Radio & Electric Co., Inc., 575 Main St., Belleville, N. J.
  Farnsworth Television & Radio Corp., Ft. Wayne, Ind.
- Ind.
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
- Garod Radio Corp., 70 Washington St., Brooklyn N. Y.
- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hallicrafters Co., 4401 W. Fifth Ave., Chicago
- 24, Ill. Harvey Radio Labs., Inc., 447 Concord Ave.,
- Cambridge, Mass. Harvey Wells Electronics Inc., North St., South-
- bridge, Mass. Heath Co., Benton Harbor, Mich. Inductograph Laboratory, Box 76, Brookfield, Conn
- Conn. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Kinsey Radio Mfg. Co., 5807 Oak St., Omaha 7,
- Nebraska La Magna Mfg. Co., Inc., East Rutherford, N. J. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Loral Electronics Corp., 794 E. 140th St., New

- Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
  Magnavox Co., The, Components Div., Fort Wayne 4, Indiana
  Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.
  Meissner Mfg. Div., Maguire Industries Inc., Mt. Carmel, Ill.
- Carmel, III. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Philco Corp., Tioga & C Sts., Phila. 34, Pa. Radio Engineering Labs., Inc., 35-54 36th St., Long Island City, N. Y. Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. CORDEV COPOSCOPE CO. Div. of The Sperry

- Brooklyn 1, N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS.
- Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  Standard Telephones & Cables Co., Connaught House, Aldwych, London, W. C. 2, England Symphony Radio & Television Corp., 721 N. Martel Ave., Los Angeles 16, Calif.
  Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y.
  Televista Corp. of America, 114 E. 16th St., New York 3, N. Y.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

## **RECEIVERS**—Fixed Frequency

- American Communications Corp., 306 Broadway, New York 7, N. Y.
  American Radio Co., 611 E. Garfield Ave., Glen-
- Ander Calif.
   Audar Inc., Argos, Indiana
   BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
   Bassett, Inc., Rex, 307-11 N.W. 1st Ave., Ft. Lauderdale, Fla.

Bendix Radio Div., Bendix Aviation Corp., Balti-

- more 4, Md. BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179. Collins Radio Co., Cedar Rapids, Iowa Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. 200 Commercial Complexity and Complexity and Complexity Network St. 200 Complexity and Complexity and Complexity and Complexity Complexity and Complexity and Complexity and Complexity and Complexity St. 200 Complexity and Complexity and
- Communications Co., Inc., 300 Greco Ave.. Coral

- Communications Co., Inc., 300 Greco Ave.. Coral Gables 34, Fla.
  Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
  Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chicago 36, Ill.
  Electronic Sound Engineering Co., 4344-46 W. Armitage Ave., Chicago 39, Ill.
  EL-TRONICS, INC., 2647 No. Howard St., Philadelphia 33, Pa. SEE ADV. PG. 189.
  Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
- City, N. Y. Garod Radio Corp., 70 Washington St., Brooklyn
- 1, N. Y. Hallicrafters Co., 4401 W. Fifth Ave., Chicago
- 24, III. Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y. Intervox Corp., 2701 California Ave., Seattle,
- Wash.
- Wasn. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Kinsey Radio Mfg. Co., 5807 Oak St., Omaha 7,
- Nebraska
- LaMagna Mfg. Co., Inc., East Rutherford, N. J. LAVOIE LABORATORIES, Morganville, N. J.
- SEE ADV. PG. 182. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Link Radio Corp., 125 W. 17th St., New York, N. Y.
- Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md. Measurement Engineering Ltd., Arnprior, Ontario,

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Mobile Communications Co., 110 W. Ocean Blvd., Long Beach 2, Calif. Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, III.

National Electronics Labs., Inc., 200 King St.,

National Electronics Labs., Inc., 200 King St., Alexandria, Va.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
Radio Development & Research Co., 26 Cornell-son Ave., Jersey City, N. J.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Ore.
Ripey Co., Inc., P.O. Box 31, Middletown, Conn.
Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y.
Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas

Post Oak Rd., Houston 19, Texas Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.

St., New YORK 14, N. Y. Webster Engineering Co., 105 Tenth St., N.E., Cedar Rapids, Iowa Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

Bendix Radio Div., Bendix Aviation Corp., Bal-

timore 4, Md. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass. Philco Corp., Tioga & C Sts., Phila. 34, Pa. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y. Radiomarine Corp. of America, 75 Varick St.,

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

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RECEIVERS-Loran

timore 4, Md.

Canada

Selectar Industries, Inc., 401 E. 138th St., New

**ELECTRONIC** and **ALLIED PRODUCTS** 

York 54, N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

#### **RECEIVERS**—Marine

- Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
  Erco Radio Labs., Inc., E. Stewart Ave., Gar-den City, N. Y. Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft.

- Erco Radio Labs., Inc., E. Stewart Inc., E. den City, N. Y. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Fisher Research Lab., 1961 University Ave.,
- Fisher Research Lab., 1961 University Ave., Palo Alto, Calif. Grav Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla. Hallicrafters Co., 4401 W. Fifth Ave., Chicago Mat. 2014.
- 24, Ill. Harvey Wells Electronics Inc., North St., South-
- Harvey Weis Electronics Inc., North St., South-bridge, Mass.
   Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y.
   Jefferson, Inc., Ray, 40 E. Merrick Rd., Free-port, N. Y.
- Jefferson-Travis Inc., 76 Ninth Ave., New York 11, N. Y. Kaar Engineering Co., 2815 Middlefield Rd.,
- Palo Alto, Calif. Palo Alto, Calif. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Marvland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.
- Measurement Engineering Ltd., Arnprior, Ont., Canada
- National-Simplex-Bludworth, Inc., Bludworth Marine Div., 92 Gold St., New York 7, N. Y. Northern Radio Co., 314 Bell St., Seattle 1,
- Northern Ratio Co., C. Wash. Radio Development and Research Co., 26 Cor-nellson Ave., Jersey City, N. J. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. Schester Industries, Inc., 401 E. 138th St., New
- Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52, 51
- Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **RECEIVERS**—Microwave

- Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y. Eltron, Inc., 407 N. Jackson Street, Jackson,
- Mich FEDERAL TELEPHONE AND RADIO CORP
- 100 Kingsland Rd., Clifton, N. J. SEE ADV PGS. 129, 131, 133, 135. Melpar, Inc., 452 Swann Ave., Alexandria, Va. Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, 111.

- 51, Ill.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Submarine Signal Div., Raytheon Mfg. Co., Wal-them Mass
- tham, Mass. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

## RECEIVERS-Panoramic

PANORAMIC RADIO CORP., 92 Gold Street, New York 7, N. Y. SEE ADV. PG. 213. Radio Sonic Corp., 186 Union Ave., New Ro-chelle, N. Y.

Telemark, Inc., 79 Prospect St., Stamford, Conn.

## **RECEIVERS**—Portable & Mobile

- American Electroneering Co., 2112 S. La Brea

- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Ill.
  Bendix Radio Div., Bendix Aviation Corp., Bal-timore 4, Md.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
- Gables 34, Fla. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Doolittle Radio Inc., 7421 S. Loomis Blvd., Chicago 36, Ill.
- Eckstein Radio & Television Co., LeRoy, Minn. EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
- Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y. Erco Radio Labs., Inc., E. Stewart Ave., Garden
- City, N. Y. FEDERAL TELEPHONE AND RADIO CORP.,
- 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24 JU
- 24, Ill.
- 24, 111. Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass. Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Link Radio Corp., 125 W. 17th St., New York, N V
- N. Y. Measurement Engineering Ltd., Arnprior, Ont.,
- Canada Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
- National Electronics Labs., Inc., 200 King St.,

- National Electronics Labs., Inc., 200 King St., Alexandria, Va.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Radio Development & Research Co., 26 Cornellson Ave., Jersey City, N. J.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo. City, Mo.

#### **RECEIVERS**—Radio Direction Finder

- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Bendix Radio Div., Bendix Aviation Corp., Balti-
- Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
  Grady Instrument Co., 689 Belmont St., Bel-

- mont 78, Mass. Hose-McCann, Telephone Co., Inc., 25th St., & 3rd Ave., Brooklyn 32, N. Y. Intervox Corp., 2701 California Ave., Seattle,
- Wash.
- Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
- Jefferson, Inc., Ray, 40 E. Merrick Rd., Free-port, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich
- Mich.

- Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Measurement Engineering Ltd., Arnprior, Ontario, Canada
- National-Simplex-Bludworth, Inc., Bludworth Marine Div., 92 Gold St., New York 7, N. Y. Northern Radio Co., 314 Bell St., Seattle 1, Wash

- Wash.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE
  ADV. PGS. 197, Inside Back and Back Covers.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Radio Sonic Corp. 186 Union Ave. New Rochelle. York 11, N. Y. SEE ADV. PGS. 162, 163. Radio Sonic Corp., 186 Union Ave., New Rochelle,
- N. Y.

- N. Y. Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y. Snuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Submarine Signal Div., Raytheon Mfg. Co., Waltham Mase Waltham, Mass.

## **RECEIVERS**—Railroad

**RECEIVERS**—Television

more 4, Md.

- Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
- Communications Co., Inc., 300 Greco Ave., Coral

- Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
  Dormitzer Electric & Mfg. Corp., 782 Commonwealth Ave., Boston 15, Mass.
  Farmers' Engineering Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, 111.
  Rosen Engineering Products, Inc., Raymond, 32nd & Walnut St., Phila. 4, Pa.
  Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y.
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  West Coast Electronics Co., 1601 S. Burlington
- West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 39, Pa. SEE ADV. PGS. 66, 67.

Air-King Products Co., Inc., 170 53rd St., Brooklyn, N. Y.
Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
Automatic Radio Mfg. Co., Inc., 122 Brookline Aven Boston Mass.

Automatic Hadio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass. Bace Television Corp., Green & Leuning Sts., So. Hackensack, N. J. Belmont Radio Co., Div., Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Ill. Bendix Radio Div., Bendix Aviation Corp., Balti-more 4 Md

Bowers Battery & Spark Plug Co., Reading, Pa. Brunswick Radio & Television Div., Radio & Television, Inc., 244 Madison Ave., New York,

Diamstein Radio 244 Madison Ave., New York, N. Y.
Cortlev Television Corp., 15 W. 27th St., New York 1, N. Y.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
Crosley Div., Avco Mfg. Corp., 1329 Arlington St., Cincinnati 25, Ohio
DeWald Radio Mfg. Corp., 35-15 37th Ave., Long Island City, N. Y.
Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Espey Mfg. Co., Inc., 528 East 72 St., New York, N. Y.
Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
Feiler Engineering Co., 945 W. George St., Chi-

Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill. Fisher Radio Corporation, 41 E. 47th St., New York, N. Y.

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## RECEIVERS

#### Five Star Radio Co., 416 Broadway, Cambridge, Mass. Garod Radio Corp., 70 Washington St., Brook-

- Garoa Radio Corp., 70 Washington St., Brook-lyn 1, N. Y.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, 70
- T11
- Ill. Heath Co., Benton Harbor, Mich. Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J. International Television Corp., 238 William St., New York 7, N. Y. Kingston Radio Co., Inc., Kokomo, Ind. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. Magnavox Co., The. Components Div., Ft. Wayne

- Magnavox Co., The, Components Div., Ft. Wayne 4, Ind.
- Major Television Corp., 19 W. 44th St., New
- York, N. Y. Meck Industries, John, Liberty at Pennsylvania,
- Plymouth, Ind. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
- Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
- ATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
   Nielson Television Corp., Newton Rd., Norwalk,
- Conn.
- Philco Corp., Tioga & C Sts., Phila. 34, Pa. Pilot Radio Corp., 37-06 36th St., L. I. City, N. Y.
- N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Remington Radio Corp., 80 Main St., White Plains, N. Y. Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chicago 40, Ill. Sentinel Radio Corp., 2100 Dempster St., Evans-ton. Ul

- ton, Ill. Shevers Inc., Harold, 33 W. 46th St., New York
- 19. N. Y Sightmaster Corp., 220 Fifth Ave., New York,
- N. Y. Snaider Television Corp., 540 Bushwick Ave., Brooklyn 6, N. Y. Standard Arcturus Corp., 54 Clark St., Newark
- Brooklyn 6, N. Y.
  Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.
  Starrett Television Mfg. Corp., 601 W. 26th St., New York, N. Y.
  Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill.
  Stromberg-Carlson Co., Rochester, N. Y.
  Symphony Radio & Television Corp., 721 N.
  Martel Ave., Los Angeles 46, Calif.
  Taybern Equipment Co., 120 Greenwich St., New York 6, N. Y.
  Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y.
  Telequip Radio Corp., 540 W. 58th St., New York 19, N. Y.
  Television Equipment Corp., 238 William St., New York 7, N. Y.
  Television Equipment Corp., 340 W. Fath St., New York 7, N. Y.
  Television Labs., Inc., 542 N. Parkside Ave., Chicago 44, Ill.
  U. S. Television Mfg. Corp., 3 W. 61st St., New York 23 N. Y.

- U. S. Television Mfg. Corp., 3 W. 61st St., New York 23, N. Y. Videraft Television Corp., 780 E. 137th St., Bronx, N. Y.
- Videodyne, Inc., 33 Jefferson St., Stamford,
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Wilcox-Gay Corp., Charlotte, Mich.

## **RECEIVERS**—uhf

- Air Associates, Inc., Teterboro, N. J. Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla. Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md.

- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Decimeter, Inc., 1430 Market St., Denver 2, Colo. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.

- Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chicago 36, Ill. EL-TRONICS, INC., 2647 No. Howard St., Phila.
- FEDERAL TELEPHONE & RADIO CORP., 100
   Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
   Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, 10
- III.
- <sup>111.</sup> Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Link Radio Corp., 125 W. 17th St., New York, N. Y.
- Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md. McMurdo Silver Co., 1240 Main St., Hartford 48, Mass.
- Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51 111
- NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
- National Electronics Labs., Inc., 200 King St.,
- National Electronics Labs., Inc., 200 King St., Alexandria, Va. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio Development and Research Co., 26 Cornell-son Ave., Jersey City, N. J. Radio Sonic Corp., 186 Union Ave., New Rochelle, NY
- N. Y. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Telemark, Inc., 79 Prospect St., Stamford, Conn. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Videodyne, Inc., 33 Jefferson St., Stamford, Conn.

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- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Bassett Inc., Rex., 307-11 N. W. 1st Ave., Ft.
- Balsett Inc., Rex., 50711 N. W. 18t Ave., Ft. Lauderdale, Fla.
  Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Ill.
  Bendix Radio Div., Bendix Aviation Corp., Balti-trans. A Mala
- more 4, Md. Collins Radio Co., Cedar Rapids, Iowa Communications Co. Inc., 300 Greco Ave., Coral
- Gables 34, Fla. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Doolittle Radio, Inc., 7421 S. Loomis Bldg., Chi-
- Cago 36, Ill.
  EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa., SEE ADV. PG. 189.
  Erco Radio Labs. Inc., E. Stewart Ave., Garden City, N. Y.
- Farnsworth Television & Radio Corp., Ft. Wayne, Ind
- Ind. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24,
- **I**II.
- Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y. Harvey Wells Electronics Inc., North St., South-
- Harvey Wells Electronics Inc., North St., South-bridge, Mass.
  Islip Radio Mfg. Corp., Beech St., Islip, N. Y.
  Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.
  Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
  Link Radio Corp., 125 W. 17th St., New York, N. Y.

- N. I.
   McMurdo Silver Co., Inc., 1240 Main St., Hartford 3, Conn.
   Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.
   Melpar, Inc., 452 Swann Ave., Alexandria, Va.
   Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, 111.

- 51, Ill.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  National Electronics Labs., Inc., 200 King St., Alexandria, Va.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Pioneer Electric & Research Corp., The, 7212 Circle Ave., Forest Park, Ill.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radio Development and Research Co., 26 Cornellson Ave., Jersey City, N. J.

Radio Mfg. Engineers, Inc., 300-306 1st Ave., Peoria 6, Ill.
RADIO RECEPTOR CO., 251 W. 19th St., New York, N. Y. SEE ADV. PGS. 162, 163.
Radio Sonic Corp., 186 Union Ave., New Rochelle, N V

1949-1950 DIRECTORY of

- N. Y.
- N. Y.
  Remington Radio Corp., 80 Main St., White Plains, N. Y.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
- Shockler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
- 51, 52.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Telemark, Inc., 79 Prospect St., Stamford, Conn.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  Videodyne, Inc., 33 Jefferson St., Stamford, Conn.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  Wilcox Electroic Co., 1400 Chestnut St., Kansas City, Mo.

- - City, Mo.

## **RECEIVERS, HOME**

a-m/f-m/t-v phono, Console
 Recorder and Phonograph combination

24. Built-in wall type Admiral Corp., 3800 Cortland St., Chicago 47, Ill. 2-3-4-5-8-9-11-12-14

Aim Industries, 41 Union Square, New York 3, N. Y., 23
 Air-King Products Co., Inc., 170-53rd St., Brook-lyn, N. Y. 1-2-3-4-5-6-7-8-11-15-17-18-19-20 21-22-23

lyn, N. Y. 1-2-3-4-5-6-7-8-11-15-17-18-19-20 21-22-23
Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y. 14-24
American Communications Corp., 306 Broadway, New York 7, N. Y., 2-5-24
American Radio Co., 611 E. Garfield Ave., Gleng dale, Calif. 9
Andrea Radio Corp., 2701 Bridge Plaza, North, Long Island City, N. Y. 2-4-5-11-21-23
Audar Inc., Argos, Indiana 1-4-23
Audio Industries, Michigan City, Ind. 23
Autorat Radio Co., 3855 N. Hamilton Ave., Chi-cago, Ill. 2-4-5
Automatic Radio Mfg. Co., Inc., 122 Brookkine Ave., Boston, Mass. 2-3-4-5-6-8-9-14-23
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, Ill. 4-5-6-7:11-15-16-17-22
Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md. 1-3-4-5-7-8-11-21-5-17-20-22
Brociner Electronics Lab., 1546 Second Ave., New York 28, N. Y. 7
Brunswick Radio & Television Div., Radio & Tele-vision, Inc., 244 Madison Ave., New York, N. Y. 8-15-21
Collins Audio Products Co., P. O. Box 368, West-field, N. J. 14

1. a-m phono, Console 2. a-m phono, Table 3. a-m Console

7. a-m/f-m phono, Console 8. a-m/f-m phono, Table 9. a-m/f-m Console

4. a-m Portable 5. a-m Table 6. a-m Vest Pocket

10. a-m/f-m Portable 11. 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

field, N. J. 14

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- Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y. 9-15-16-17-18-19-20-21-22 Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. 6
- Kansas City 8, Mo. 6 Concord Radio Corp., 901 W. Jackson Blvd., Chi-

cago 7, Ill. 5 Conn Ltd., C. G. Electronics Div., Elkhart, Ind. 23

- Z3
   Coronet Radio & Television Corp., 500 W. 52nd
   St., New York 19, N. Y. 2.5-6.23
   Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada 1-3-5-15-17
- Crosley Div., Avco Mfg. Corp., 1329 Arlington St., Cincinnati 25, Ohio 2:4-5:8-11 Delco Radio Div., General Motors Corp., Kokomo, Ind. 1:2:4-5:7-8:11:22
- Ind. 1-2-4-5-7-8-11-22 DeWald Radio Mfg. Corp., 35-15 37th Ave., Long Island City, N. Y. 2-3-4-24 DuMont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J. 15-16-17-18-19-20-21-22-24 Eckstein Radio & Television Co., LeRoy, Minn. 5, 11
- 5-11
- b-14
   Electronic Labs., Inc., 24 W. 24th St., Indianapolis 4, Ind. 2-4-5-9-11
   EL-TRONICS, INC., 2647 No. Howard St., Philadelphia 33, Pa. 3-8-9. SEE ADV. PG. 189, Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y. 1-2-4-5-7-11-14-15-16-17-18-19-22
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y. 1-2-3-4-5-7-8-9-10-11-23 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J. 3-4-7-8-9-11-14-15-17-18-20-
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- 22
  Feiler Engineering Co., 945 W. George St., Chi-cago 14, 111, 19
  Fisher Radio Corp., 41 E. 47th St., New York, N. Y. 7.15-17-22
  Five Star Radio Co., 416 Broadway, Cambridge, Mass. 2-5-8-9-14-23
  Flurch Wall Badia Co. 9 W. Park St. Nouvel 2
- Mass. 2-5-8-9-14-23 Flush Wall Radio Co., 9 W. Park St., Newark 2,
- N. J. 24
   Freed Radio Corp., 200 Hudson St., New York, N. Y. 7-11-12-15-20-22
   Garod Radio Corp., 70 Washington St., Brooklyn 1, N. Y. 2-3-4-5-6-7-8-9-10-11-15-16-17-18-19-20-21-22-23
- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. 1-2-4-5-7-11-15-17-22. SEE ADV. PGS. 5-18.
- General Television and Radio Corp., 2701 N. Leh-mann St., Chicago 14, Ill. 4-5-14 Gilner Mfg. Co., 21 E. 34th St., Steger, Ill.
- Gilner Mf 2-4-5-8
- 2-4-5-8
  Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill. 2-4-5-7-8-9-10-11-15-16-17-20-22
  Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif. 2-3-4-5-8-9-10-11-12-13-14-23
  Hollywood Radio Cabinet Co., 924 N. Formosa Ave., Hollywood, Calif. 1-2-4-5-6
  Industrial Television Inc., 359 Lexington Ave., Clifton, N. J. 15-17-20-22
- International Detrola Corp., Detrola Radio Div., 1501 Beard Ave., Detroit, Mich. 2-3-4-5-8-9-10
- International Television Corp., 238 William St., New York 7, N. Y. 15-17-20
- Kingston Radio Co., Inc., Kokomo, Ind. 1-2-3-5-7-8-9-11-15-17-18-19-20-21-22
- La Magna Mfg. Co., Inc., East Rutherford, N. J. 2-4-5-24
- Laurehk Radio Mfg. Co., 3931 Monroe Ave., Wayne, Michigan 5-6
- M. P. Concert Installations, Fairfield 10, Conn. 2-3-5-8-9-24
- Magnavox Co., The, Components Div., Fort Wayne 4, Indiana. 2-3-5-8-9-11-12-14-23
- Maguire Industries Inc., Electronics Dept., Bridgeport, Conn. 2-5-8-11-14
- Measurement Engineering Ltd., Arnprior, Ontario, Canada 1-3-8-9-12-24
- Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind. 2-5-11-15-17 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. 4-5-9-23
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. 23
- Midwest Radio Corp., 909 Broadway, Cincinnati 2, Ohio 3-4-5-8-9-21
- Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn. 7-24

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- Molded Insulation Co., Aircraft Control Div., 335
  E. Price St., Phila., Pa. 5
  Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill. 2.3-45-8-9-10-11-12-13-14-21-23
  NATIONAL COMPANY, INC., 61 Sherman St., Malden 48, Mass. 15-17. SEE ADV. PGS. 105-108.
- Nielsen Television Corp., Newton Rd., Norwalk, Conn. 15-22 oblitt Sparks Industries, Columbus, Ohio 5-11-15-17 Noblitt
- Olyunpic Radio & Television Co., 34-01 38th Ave., Long Island City, N. Y. 1-3-4-5-7-8-9-11-12-14-15-17-18-20-22
- 14-15-17-18-20-22 Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J. 2-3-5 Philco Corp., Tioga & C Streets, Phila. 34, Pa. 1-2-3-4-5-7-11-15-17-22 Pilot Radio Corp., 37-06 36th St., L. I. City, N. Y. 15-16-17-18-19-20-21-22 RADIO CORP. OF AMERICA, RCA Victor Div., Event & Conner Sts. Camden N. J. 1-2-4-5.

- RADIO CURP. OF AMERICA, RUA Victor Div., Front & Cooper Sts., Camden, N. J. 1-2.4-5-7-11-14-15-17-20-21-22-24. SEE ADV. PGS. 197, Inside Back and Back Covers.
   Ray-Dyne Mfg. Corp., 141 W. 24th St., New York 11, N. Y. 1-2-3-4-5-6
   Regal Electronics Corp., 603 W. 130th St., New York 27, N. Y. 2-3-4-5-8-9-10-11-12-13-14-23
- 23
- Remington Radio Corp., 80 Main St., White Remington Radio Corp., 80 Main St., White Plains, N. Y. 18-19
  Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. 1-2-4-5-7-15-20-22
  Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chicago 40, Ill. 2-3-7-17-22
  Sentinel Radio Corp., 2100 Dempster St., Evans-ton, Ill. 4-5-6-7-8-9-11-15-16-17-20-21-22
  Setchell Carlson, 2233 University Ave., St. Paul, Minn. 2-4-5-14
  Shevers Inc., Harold, 33 W. 46th St., New York

- Setchell Carlson, 2233 University Ave., St. Paul, Minn. 2-4-5-14
  Shevers Inc., Harold, 33 W. 46th St., New York 19, N. Y. 7-22
  Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. 6-23
  Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y. 24
  Snaider Television Corp., 540 Bushwick Ave., Brooklyn 6, N. Y. 18-24
  Starrett Television Mfg. Corp., 601 W. 26th St., New York, N. Y. 1-7-8-9-15-17-20-21-22
  Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey P'kwy., Chicago 14, Ill. 1-2-3-4-5-7-11-14-15-17-18-19-20-22
  Stromberg-Carlson Co., Rochester, N. Y. 2-4-5-8-11-15-17-18-19
  Symphonic Radio & Electronic Corp., 292-8 Main

- 5-8-11-15-17-18-19
  Symphonic Radio & Electronic Corp., 292-8 Main St., Cambridge 42, Mass. 1-22
  Symphony Radio & Television Corp., 721 N. Martel Ave., Los Angeles 46, Calif. 1-2-4-5-6-7-8-12-14-23-24

- 6-7-8-12-14-23-24
  Taybern Equipment Co., 120 Greenwich St., New York 6, N. Y. 15-17-20-21-22
  Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y. 2-4.5
  Tele King Corp., 601 W. 26th St., New York 1, N. Y. 15-17
  Tele-Tone Radio Co., 540 W. 58th St., New York 19, N. Y. 2-4-5-11
  Televista Corp. of America, 114 E. 16th St., New York 3, N. Y. 4-5-6-11-15-17-20-21-22
  TELvision Labs., Inc., 542 N. Parkside Ave., Chicago 44, Ill. 17
  Thompson & Associates. John F., 7210 S. Vates
- Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill. 8-9-12
- Trav-Ler Radio Corp., 571 W. Jackson Blvd., Chicago, Ill. 2-4-5-15
- U. S. Television Mfg. Corp., 3 W. 61st St., New York 23, N. Y. 15-17-21
- Vacolite Co., 3001-3003 N. Henderson, Dallas, Texas 6
- Videodyne, Inc., 33 Jefferson St., Stamford, Conn. 15-16-17-18-19
- Watterson Radio Mfg. Co., P. O. Box 840, Dallas, Texas 2-3-4-5
- Wells-Gardner & Co., 2701 N. Kildare Ave., Chi-cago, Ill. 2-3-4-5-8-9-11-15-17-20-22
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. 2-3-4-5-8-9-11. SEE ADV. PGS. 66, 67.
- Wilcox-Gay Corp., Charlotte, Mich. 2-7-8-10-15-2.3
- Zenith Radio Corp., 6001 Dickens Ave., Chicago 39, Ill. 2-3-4-5-7-11-14-15-17-22

# **RECORDERS**—Blood Pressure

 SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.
 Technitrol Engineering Co., 3212 Market St., Phila., Pa.

# **RECORDERS**—Density

See Recorders, Specific Gravity

# RECORDERS-Dielectric Constant

Paterson Co., C. J., 3947 Broadway, Kansas City,

Mo. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

# **RECORDERS**—Electronic Office Recorders & Playbacks

- Air-King Products Co., Inc., 170 53rd St., Brook-lyn, N. Y.
- Iyn, N. Y. AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y. Edison Inc., Thomas A., 51 Lakeside Ave., West Orange, N. J. Electronice Contention of the Ave.
- Electronics Contracting Co., 122 Chambers St., New York 7, N. Y.
- Ellinwood Industries, 150 W. Slauson Ave., Los
- Angeles 3, Calif. Gray Mfg. Co., 16 Arbor St., Hartford, Conn. GRAY RESEARCH & DEVELOPMENT CO., 16 Arbor St., Hartford 1, Conn. SEE ADV. PG.
- 187. Hollywood Radio Cabinet Co., 924 N. Formosa
- Ave, Hollywood Calif. Ave, Hollywood, Calif. LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182. Miles Reproducer Co., Inc., 812 Broadway, New
- York 3, N. Y. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Soundscriber Corp., 146 Munson St., New Haven 4, Conn. 4, Conn.
  Speak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York, N. Y.
  Wagner Recorder Mfg. Corp., 292 Madison Ave., New York 17, N. Y.
  Webster Engineering Co., 105 Tenth St., N. E., Cedar Rapids, Iowa
  Wilcox-Gay, Corp. Charlette Mich

Wilcox-Gay Corp., Charlotte, Mich.

**Recorders and Indicators** 

Mass.

44, Pa.

64, Mass.

N. Y.

Rd., Roslyn, Pa.

**RECORDERS**—Facsimile

RECORDERS-Electronic Rotary Stylus

National-Simplex-Bludworth, Inc., Bludworth Marine Div., 92 Gold St., New York 7, N. Y. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.

**RECORDERS** — Electronic Self-Balancing

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland

Bailey Meter Co., 10, Ohio Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.

Mass. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. Foxboro Co., The, Foxboro, Mass. Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44 Pa.

Minneapolis-Honeywell Regulator Co., 2753

Fourth Ave., S., Minneapolis, Minn. Research Electronic Labs., 2459 Susquehanna

Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton

Bunnell & Co., J. H., 215 Fulton St., New York,

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# RECORDERS

- Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y. Finch Telecommunications Inc., Passaic, N. J. McElroy Mfg. Corp., Littleton, Mass. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio Inventions, Inc., 155 Perry St., New York

- Radio Inventions, Inc., 155 Perly St., New York 14, N. Y. Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y. Times Facsimilie Corp., 229 W. 43rd St., New
- York, N. Y. Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.

# **RECORDERS**—Film

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  Berndt-Bach, Inc., 7377 Beverly Blvd., Los An-geles 36, Calif.
  ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
  Hart & Co., Inc., Frederick, 839 Main Ave., Poughkeepsie, N. Y.
  Maurer Inc., J. A., 37.01 31st St., Long Island City, N. Y.
  Miles Reproducer Co., Inc., 812 Broadway, New
- City, N. Y. Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PG. 197, Inside Back and Back Covers. SOS Cinema Supply Co., 602 W. 52nd St., New York 19, N. Y. Stephens Mir. Comp. 8538 Warner Drive. Culture
- Stephens Mfg. Corp., 8538 Warner Drive, Culver
- City, Calif. Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# **RECORDERS**—Film Thickness

ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.

# **RECORDERS**—Fluid Conductivity

- Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.

# **RECORDERS**—Fluid Flow

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Ohio Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Phila. 44, Pa. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.

- 44, Pa.
- Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

## **RECORDERS**—Frequency

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- Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Leeds & Northrup Co., 4970 Stenton Ave., Phila-
- delphia 44, Pa.
- deipnia 44, Fa. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Sound Apparatus Co., Stirling, N. J. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **RECORDERS**—Humidity

- American Instrument Co., 8030 Georgia Ave., American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
  ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
  Bristol Co., The, Waterbury 91, Conn.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Foxboro Co., The, Foxboro, Mass.
  Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
  Leeds & Northrup, Co. 4970 Stenton, Ave.

- Baltimore 4, Md. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa. Minneapolis-Honeywell Regulator Co., 2735 Fourth Ave., S., Minneapolis, Minn. Weksler Thermometer Co., 52 W. Houston St., New York 12, N. Y.

## **RECORDERS**—Illumination

Ripley Co., Inc., P. O. Box 31, Middletown, Conn.

#### **RECORDERS**—Liquid Level

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Bailey Meter Co., 1044 Ivanhoe Road, Cleveland
- 10. Ohio Brown Instrument Co., Wayne & Roberts Aves.,
- Phila. 44, Pa. Esterline-Angus Co., Inc., P. O. Box 596, Indian-
- Esterime-Angus Co., Inc., F. O. Box 300, Indian apolis, Ind. Foxboro Co., The, Foxboro, Mass. Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md. Gorrell & Gorrell, Haworth, N. J.
- Gorrell & Gorrell, Haworth, N. J.
  Leupold & Stevens Instruments, 4445 N. E.
  Glisan St., Portland 13, Ore.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Servo-Tek Products Co., 4 Godwin Ave., Paterson, N. J.

# **RECORDERS**—Magnetic Tape

- Alden Products Co., 117 No. Main St., Brockton 64, Mass. Amplex Electric Corp., 1155 Howard Ave., San
- Carlos, Calif. Anuplifier Corp. of America, 396 Broadway, New York 13, N. Y.

- York 13, N. Y.
  Arcturus Engineering Corp., 1755 Glendale Blvd., Los Angeles 26, Calif.
  Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  Audio Industries, Michigan City, Ind.
  AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
  Caltron Co., 1406 S. Hobart Blvd., Los Angeles
- Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6. Calif.
- 6, Calif.
  Cinema Engrg. Co., 1510 W. Verdugo Ave., Burbank, Calif.
  Dalmo Victor Co., San Carlos, Calif.
  Dormitzer Electric & Mfg. Corp., 782 Commonwealth Ave., Boston 15, Mass.
  Electronic Supply Co., 207 Main St., Worcester, Mass

- Mass. Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y. Gates Radio Co., Quincy, III. Gorrell & Gorrell, Haworth, N. J. Hart & Co., Inc., Frederick, 839 Main Ave., Poughkeepsie, N. Y. Lansing Engrg. Co., Electronics Div., 735 E. Kalamazoo St., Lansing 12, Mich. Magnecord, Inc., 360 N. Michigan Ave., Chicago 1 III Mass.

- 1, Ill.
- Magnetic Recorders Co., 7120 Melrose St., Los
- Angeles, Calif. Magnograph Corp., 5800 W. 3rd St., Los Angeles 36, Calif.
- McElroy Mfg. Corp., Littleton, Mass. Miles Reproducer Co., Inc., 812 Broadway, New
- Miles Reproducer Co., Inc., 312 Diodaway, Iten York 3, N. Y.
   Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
   Nelson Specialty Corp., San Leandro, Calif.
   PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41.

RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Development & Research Co., 26 Cornell-son Ave., Jersey City, N. J. Rangertone, Inc., 73 Winthrop St., Newark 4,

1949-1950 DIRECTORY of

- N. J. Rek-O-Kut Co., Inc., 38-01 Queens Blvd., L. I. City, N. Y. Rowe Industries, 1702 Wayne St., Toledo 9, Ohio Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. Technical Materiel Corp., The, 453 W. 47th St., New York 19 N. Y.
- New York 19, N. Y. Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 39, Ill.
- Webster Electric Co., 1900 Clark St., Racine,
- Wis. Webster Engineering Co., 105 Tenth St., N. E.,
- Cedar Rapids, Iowa Wilcox-Gay Corp., Charlotte, Mich.

#### **RECORDERS**—Materials Thickness

ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Foxboro Co., The, Foxboro, Mass.

#### **RECORDERS**—Mechanical

**RECORDERS**—Moisture

Calif.

Arlington, Va.

RECORDERS—Oxygen

delphia 44, Pa.

RECORDERS-PH

Phila. 44, Pa.

- Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.
  Autocall Co., The, Shelby, Ohio
  Bristol Co., The, Waterbury 91, Conn.
  Electric Tachometer Corp., 2218 Vine St., Philadelphia 3, Pa.

- LIECTRO TACOMMETER COPP., 2218 VINE St., Phila-delphia 3, Pa. ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. Gorrell & Gorrell, Haworth, N. J. Leupold & Stevens Instruments, 4445 N.E. Glisan
- Leupold & Stevens Instruments, 4445 N.E. Glisan St., Portland 13, Ore.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N.Y.
  RAHM INSTRUMENTS, INC., 12 West Broadway, New York 7, N. Y. SEE ADV. PG. 222.
  Servo-Tek Products Co., 4 Godwin Ave., Pater-son, N. J.

American Instrument Co., 8030 Georgia Ave.,

American Instrument Co., \$030 Georgia Ave., Silver Spring, Md.
ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y.
Foxboro Co., The, Foxboro, Mass.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.

Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Berkeley Scientific Co., 6th & Nevin, Richmond,

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Geophysical Instrument Co., 1820 N. Nash St.,

National Technical Lab., 820 Mission St., S. Pasadena, Calif.

rasadena, Calit.
Nuclear Instrument & Chemical Corp., 223 W.
Erie St., Chicago 10, Ill.
Radioactive Products, Inc., 3201 E. Woodbridge St., Detroit 7, Mich.

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland

10, Ohio Leeds & Northrup Co., 4970 Stenton Ave., Phila-

Bailey Meter Co., 1044 Ivanhoe Road, Cleveland

Brown Instrument Co., Wayne & Roberts Aves.,

10, Ohio Bristol Co., The, Waterbury 91, Conn.

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**RECORDERS**—Nuclear Radiation

- Elm Laboratories, 18 South Broadway, Dobbs
- Ferry, N. Y. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila.
- 44, Pa. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn. Minnesota Electronics Corp., 97 E. Fifth St., St.
- Paul 1, Minn. National Technical Lab., 820 Mission St., S.
- Pasadena, Calif.

### **RECORDERS**—Potentiometer

- Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio Bristol Co., The, Waterbury 91, Conn.
- Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila-delphia 44, Pa.
- Kinneapolis-Honeywell Regulator Fourth Ave., Minneapolis, Minn. Sound Apparatus Co., Stirling, N. J. Cn., 2753
- Thwing-Albert Instrument Co., 5351 Pulaski Ave.,
- Phila. 44, Pa.

#### **RECORDERS**—Power Level

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

#### **RECORDERS**—Pressure

- Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Ohio Bristol Co., The, Waterbury 91, Conn.
- Brown Instrument Co., Wayne & Roberts Aves.,
- Phila. 44, Pa.
  Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill.
  Esterline-Angus Co., Inc., P. O. Box 596, Indian-
- apolis, Ind. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila.
- 44, Pa. Manning, Maxwell & Moore, Inc., 11 Elias St.,
- Maning, Maxwell & Moore, Inc., 11 Elias St., Bridgeport 2, Conn. SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30. Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J. Technitrol Engineering Co., 3212 Market St., Phila Pa

- Weksler Thermometer Co., 52 W. Houston St., New York 12, N. Y.

# **RECORDERS**—Smoke and Combustion

- Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland Bailey Meter Co., 1044 Ivannoe Rd., Cleveland 10, Ohio Bristol Co., The, Waterbury 91, Conn. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
- Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. Leeds & Northrup Co., 4970 Stenton Ave., Phila.
- 44, Pa.
- Photobell Co., 116 Nassau St., New York 7, N. Y. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Thompson & Associates, John E., 7210 S. Yates
- Ave., Chicago 49, Ill.

# **RECORDERS**—Sound Level

AY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. KAY ELECTRIC CO., Sound Apparatus Co., Stirling, N. J.

#### **RECORDERS**—Sound and Phonograph

- Allied Recording Products Co., 21-09 43rd Ave., Long Island City 1, N. Y.
  Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y.
  Audak Co., 500 Fifth Ave., New York, N. Y.
  Audar, Inc., Argos, Ind.
  Audat Guetaria Withing City, Ind.

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Audio Industries, Michigan City, Ind.

- Bell Sound Systems, Inc., 555 Marion Rd., Col-umbus 7, Ohio Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Burbank, Calif. Conn Ltd., C. G., Electronics Div., Elkhart, Ind. Cook Laboratories, 139 Gordon Blvd., Floral
- Park, N. Y.
- Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y. Ellinwood Industries, 150 W. Slauson, Los An-
- geles 3, Calif.
- Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y. Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.

- Belleville, N. J. Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y. Gates Radio Co., Quincy, Ill. Gray Mfg. Co., 16 Arbor St., Hartford, Conn. **GRAY RESEARCH & DEVELOPMENT CO.**, 16 Arbor St., Hartford 1, Conn. SEE ADV. PG. 187 187.
- Hart & Co., Inc., Frederick, 839 Main Ave., Poughkeepsie, N. Y. Magnavox Co., The, Components Div., Ft. Wayne
- 4. Ind. Meck Industries, John, Liberty at Pa., Plymouth,
- Ind. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, III.
- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Mirror Record Corp., 1133 Broadway, New York
- Mirror Record Corp., 1135 Broadway, New York
   10, N. Y.
   Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
   PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41.
- Rek-O-Kut Co., Inc., 38-01 Queens Blvd., Long Island City, N. Y. Scully Machine Co., 62 Walter St., Bridgeport, Conn.
- Conn. Simpson Mfg. Co., Inc., Mark, 32-28 49th St., L. I. City 3, N. Y. Speak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York, N. Y. Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
- Symphony Radio & Television Corp., 230 S.
   Spring St., Los Angeles 12, Calif.
   Wagner Electric Corp., 292 Madison Ave., New York 17, N. Y.
   Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 20
- Chicago 39, Ill. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Western Sound & Electric Labs., Inc., 805 S.

Western Sound & Electric Labs, Inc., 805 S.
Fifth St., Milwaukee 4, Wis.
Wilcox-Gay Corp., Charlotte, Mich.
Zephyr Products Co., 160 E. 116th St., New York 29, N. Y.

# **RECORDERS**—Specific Gravity

- Brown Instrument Co., Wayne & Roberts Aves.,
- Phila. 44, Pa. Foxboro Co., The, Foxboro, Mass. Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.

#### **RECORDERS**—Strain

- BRUSH DEVELOPMENT CO., 3405 Perkins Åve., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169, Cole Instrument Co., 1320 S. Grand Ave., Los

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Foxboro Co., The, Foxboro, Mass. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo. Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila. 44, Pa.

# RECORDERS—Tape

- Eckert-Mauchly Computer Corp., 3747 Ridge Ave., Philadelphia 32, Pa. Gorrell & Gorrell, Haworth, N. J. McElroy Mfg. Corp., Littleton, Mass. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

## **RECORDERS**—Telemetering

- Bailey Meter Co., 1044 Ivanhoe Road, Cleveland Bailey Meter Co., 1044 Ivalline Hoad, of Co. 10, Ohio
  Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
  Bristol Co., The, Waterbury 91, Conn.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Esterline-Angus Co., Inc., P. O. Box 596, Indiananolis, Ind.

- Leeds & N 44, Pa. Northrup Co., 4970 Stenton Ave., Phila.
- Leupold & Stevens Instruments, 4445 N. E.
- Glisan St., Portland 13, Ore. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.

#### **RECORDERS**—Telephone Recording Equipment

- BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
- DECOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. SEE ADV. PG. 176.
- Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y. Gray Mfg. Co., 16 Arbor St., Hartford, Conn. GRAY RESEARCH & DEVELOPMENT CO., 16 Arbor St., Hartford 1, Conn. SEE ADV. PG. 187.
- Hart & Co., Inc., Frederick, 839 Main Ave., Poughkeepsie, N. Y.
  Mid-American Sales Co., 315-17-19 N. Cardinal Ave., St. Louis 3, Mo.
  Miles Reproducer Co., Inc., 812 Broadway, New York 2, N. Y.
- York 3, N. Y. Peirce Wire Recorder Corp., 1328 Sherman Ave.,
- Evanston, Ill.
- Radio Inventions, Inc., 155 Perry St., New York 14, N. Y. Soundscriber Corp., 146 Munson St., New Haven 4. Conn.

4, Conn. Speak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Wagner Recorder Mfg. Corp., 292 Madison Ave., New York 17, N. Y.

Whe-Gro Co., 315-17-19 N. Cardinal Ave., St. Louis 3, Mo. Wilcox-Gay Corp., Charlotte, Mich.

Bailey Meter Co., 1044 Ivanhoe Road, Cleveland

10, Ohio Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves.,

Phila. 44, Pa. Cole Instrument Co., 1320 S. Grand Ave., Los

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.

Foxboro Co., The, Foxboro, Mass. Friez Instrument Div., Bendix Aviation Corp.,

Baltimore 4, Md.
Leuds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
Leupold & Stevens Instruments, 4445 N. E. Glisan St., Portland 13, Ore.
Manning, Maxwell & Moore, Inc., 11 Elias St., Bridgeport 2, Conn.
Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila. 44, Pa.
Weksler Thermometer Co., 52 W. Houston St., New York 12, N. Y.
Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.

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**RECORDERS**—Temperature

Baltimore 4. Md.

Chicago 7, Ill.

# RECORDERS

### **RECORDERS**—Timing

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton
- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Engineering Lab., Inc., 602 E. 4th St., Tulsa 3,
- Okla.
- Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind. Foxboro Co., The, Foxboro, Mass. Gorrell & Gorrell, Haworth, N. J.

- Gorrell & Gorrell, Haworth, N. J.
  Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
  Haydon Co., The, A. W., 111 W. Main St., Waterbury 32, Conn.
  Weksler Thermometer Corp., 52 W. Houston St.,
- New York 12, N. Y.

#### **RECORDERS**—Torque

Ruge-DeForest, Inc., 76 Massachusetts Ave., Cambridge 39, Mass.

#### **RECORDERS**—Vacuum

Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Robert Aves.,

- Brown instrument Co., Hugha C. Brown instrument Co., Phila. 44, Pa.
  Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd., W., Rochester, N. Y.
  Esterline-Angus Co., Inc., P. O. Box 596, In-
- dianapolis, Ind.

- dianapolis, Ind.
  Foxboro Co., The, Foxboro, Mass.
  Fredericks Co., Geo. E., Bethayres, Pa.
  Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
  Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.
  Weksler Thermometer Co., 52 W. Houston St., New York 12, N. Y.

# **RECORDERS**—Weight

- Chattillon & Sons, John, 93 Cliff St., New York 7, N. Y. Foxboro Co., The, Foxboro, Mass. Servo-Tek Products Co., 4 Godwin Ave., Pater-son, N. J.

## **RECORDERS**----Wire

- Air-King Products Co., Inc., 170 53rd St., Brooklyn, N. Y. Allied Radio Corp., 833 W. Jackson Blvd., Chi-

- Allied Radio Corp., 833 W. Jackson Bivd., Unicago 7, Ill.
  Audar Inc., Argos, Indiana
  Aurex Corp., 1117 N. Franklin St., Chicago, Ill.
  AVIOMETER DIV. of Roamwell Corp., 662 Pacific
  St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
  Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41. Ill.
- Chicago 41, Ill. Electronic Products Co., 443 Greenwich St., New
- York, N. Y. Hoffman Radio Corp., 3716 S. Hill St., Los An-
- geles 7, Calif. Lear, Inc., 110 Ionia Ave., NW, Grand Rapids 2,
- Mich. Magnecord, Inc., 360 N. Michigan Ave., Chicago
- 1, Ill.
- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. Mirror Record Corp., 1133 Broadway, New York 10, N. Y.
- Molded Insulation Co., Aircraft Control Div., 335
   E. Price St., Phila., Pa.
   Peirce Wire Recorder Corp., 1328 Sherman Ave.,

- Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Illinois
  Process & Instruments 60 Greenpoint Ave., Brooklyn 22, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Recordisc Corp., 395 Broadway, New York, N. Y.
  Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
  Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.

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Symphony Radio & Television Corp., 721 N. Martel Ave., Los Angeles 46, Calif. Terminal Radio Corp., 85 Cortland St., New York

7. N. Y Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 39, Ill.

### **RECORDING HEADS**

See Heads, Recording

# **RECORDS**—Phonograph

- Aim Industries, 41 Union Sq., New York 3, N. Y.
  Bibletone Records, Inc., 354 Fourth Ave., New York 10, N. Y.
  Coda Record Co., 1291 Sixth Ave., New York 19,
- N.Y.
- Commodore Record Co., 289 Nepperhan Ave., Yonkers 2, N. Y. Decca Records, Inc., 50 West 57th St., New York
- 19, N. Y. Harmonia Records, 1328 Broadway, New York,
- N. Y.
- London Gramaphone Corp., 16 W. 22nd St., New York 10, N. Y. Pilot Radio Corp., 37-06 36th St., Long Island
- City, N. Y. Poinsettia Co., Inc., 95 Cedar Ave., Pitman, N. J. Riggs & Jeffreys, Inc., 140 Glenridge Ave., Mont-clair, N. J.

Tempo Record Co. of America, Hollywood, Calif.

## **RECTIFIERS**—Crystal

- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Kotron Rectifier Corp., A Standard Arcturus Affiliate, 54 Clark St., Newark 4, N. J. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240 244
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

**RECTIFIERS**—Copper Oxide, Copper Sulphide or Selenium

See RECTIFIERS-Metallic

#### **RECTIFIERS**—Metallic

- AMERICAN TELEVISION & RADIO CO., 300 E. AMERICAN TELEVISION & MADIO CO., 500 E. 4th St., St. Paul 1, Minn. SEE ADV. PG. 192.BRADLEY LABS., INC., 82 Meadow St., New Haven, Conn. SEE ADV. PG. 171.Clark Electronic Labs., Box 165, Palm Springs, Colif
- Calif.
- Conant Labs., 6500 O St., Lincoln 5, Nebr. DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y. Electrical Windings, Inc., 2015 N. Kolmar Ave.,

- Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
  Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
  Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
  ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 131.
  Electron Equipment Comp. 917. Martin
- Electron Equipment Corp., 917 Meridian Ave.,
- South Pasadena, Calif. Electronic Controls Co. of New York, 3124 Ave-nue I, Brooklyn 10, N. Y. Electronic Rectifier, Inc., 737 N. East St., Indian-
- apolis, Ind.
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- Sheridan Rd., North Chicago, Ill. SEE ADV. PG, 29. FANSTEEL FEDERAL TELEPHONE AND RADIO CORP.,
- 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Green Electric Co., W., 130 Cedar St., New York, N. Y.

- N. Y. Hercules Electric & Mfg. Co. Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y. Inductive Equipment Co., Gettysburg, Pa. Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif.

1949-1950 DIRECTORY of

- International Rectifier Corp., 6809 S. Victoria Ave., Los Angeles 43, Calif.
  Kotron Rectifier Corp., A Standard Arcturus Affiliate, 54 Clark St., Newark 4, N. J.
  MALLORY & CO., INC., P. R., 3029 E. Wash-ington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.

- ngton 71-74.
  McColpin-Christie Corp., 4922 S. Figueroa St., Los Angeles 37, Calif.
  Melco Products, Inc., 22 E. Hennepin Ave., Minneapolis 1, Minn.
  Mellaphone Corp., Rochester 2, N. Y.
  MODEL RECTIFIER CORP., 127 Atlantic Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 186.
  RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Rectifier Engineering Co., 1803 E. Seventh St., Los Angeles 21, Calif.
  Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y.
  Schauer Machine Co., Cincinnati 2, Ohio
  Sorgel Electric Co., 838 W. National Ave., Mil-waukee 4, Wis.
  Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.

- - Standard Arcturus Corp., Cr. Calle Lig.
     4, N. J.
     Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
     STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV.
  - PG. 207. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  - Ther Electric & Machine Works, 17 S. Jefferson
  - St., Chicago, III.
     VICKERS ELECTRIC DIV., Vickers, Inc., 1815 Locust St., St. Louis 3, Mo. SEE ADV. PG. 194
  - WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  - Xervac Instrument Co., 101 Vine St., Hartford 5, Conn.

#### **RECTIFIERS**—Tube Rectifying Units

American Communications Corp., 306 Broadway, New York 7, N. Y. Amperex Electronic Corp., 25 Washington St., Brooklyn 1, N. Y.

Amperex Electronic Corp., 20 Hashington 21, Brooklyn 1, N. Y.
 CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
 Columbus Electronics Corp., 229 S. Waverly St.,

Columbus Electronics Corp., 229 S. Waverly St., Yonkers, N. Y.
 Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
 Electro Products Labs., Inc., 549 W. Randolph

Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill.
Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Electronic Labs., Inc., 24 W. 24th St., In-dianapolis 4, Ind.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

GENERAL ELECTRIC CO., Schenectady 5, N. Y.

SEE ADV. PGS. 5-18.
Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
Industrial Electronics & Transformer Co., 1809
E. Slauson Ave., Los Angeles 11, Calif.
Langevin Mfg. Corp., 37 W. 65th St., New York
23. N. Y.

23, N. Y.
MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147.
McColpin-Christie Corp., 4922 S. Figueroa St., Los Angeles 37, Calif.
Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn.
Mellaphone Corp., Rochester 2, N. Y.
Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
Power Equipment Co. 55 Antoinette St. Detroit

Trenton 3, N. J. Power Equipment Co., 55 Antoinette St., Detroit 2, Mich. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE PGS. 197, Inside Back and Back Covers. Rectifier Engineering Co., 1803 E. Seventh St., Los Angeles 21, Calif.

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Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y. Sorgel Electric Co., 838 W. National Ave., Mil-

**ELECTRONIC** and **ALLIED PRODUCTS** 

waukee 4, Wis.

Special Chemicals Corp., 30 Irving Pl., New York 3, N. Y. Standard Arcturus Corp., 54 Clark St., Newark

- STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV. PG. 207.
- SYLVANIA ELECTRIC PRODUCTS INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Ther Electric & Machine Works, 17 S. Jefferson
- Transmitter Equipment Co., Inc., 345 Hudson St., Chicago, Ill.
   Transmitter Equipment Co., Inc., 345 Hudson Street, New York 14, N. Y.
   UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Errort Cover
- Front Cover. Weltronic Co., 19500 West 8 Mile Rd., Detroit
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,
- 67.

# REGISTERS-Impulse

Cyclotron Specialties Co., Moraga 8, Calif.

#### **REGULATORS**—Current

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
- Teterboro, N. J. Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. Electric Regulator Corp., 1938 Park Ave., New York 35, N. Y. Eclipse-Pioneer Div., Bendix Aviation Corp.,

- York 35, N. Y.
   ELECTRONIC TRANSFORMER CO., INC., 207
   W. 25th St., New York, N. Y. SEE ADV. PG. 200. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif. Power Equipment Co., 55 Antoinette St., De-troit 2, Mich. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Conner St. Camdon N. 1 SEE ADV.
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
   RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
   Sola Electric Co., 4633 W. 16th St., Chicago 50, WILL
- SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211. Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.
- Weltronic Co., 19500 West 8 Mile Rd., Detroit
- Mich
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# **REGULATORS**—Frequency

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
- Eurlington Instrument Co., Burlington, Iowa Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
- Leterboro, N. J.
  Electric Regulator Corp., 1938 Park Ave., New York 35, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gaveco Labs., Inc., 2 East End Ave., New York 21 N. Y.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- GENÉRAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197 Inside Back and Back Covers.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  ROBINETTE, CO., W. C., 802 Fair Oaks Ave., S. Pasadena, Calif. SEE ADV. PG. 204.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

- **REGULATORS**—Voltage Regulators and **Stabilizers**
- Aerolux Light Corp., 653 11th Ave., New York
- 19, N. Y. Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md.
- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif.
- AMERICAN TRANSFORMER CO., 178 Emmett

- AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116.
  Amplifier Corp of America, 396 Broadway, New York 13, N. Y.
  BENDIX AVIATION CORP., Red Bank Div., Red Bank, N. J. SEE ADV. PGS. 22, 23.
  Burlington Instrument Co., Burlington, Iowa
  CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28. 28
- Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y.
- Ivn 2, N. Y. Eclipse-Pioneer Div., Bendiv Aviation Corp., Teterboro, N. J.
- Electric Regulator Corp., 1938 Park Ave., New York 35, N. Y. Electro Engrg. Works, 6021 College Ave., Oak-
- Land 18, Calif.
   ELECTRONIC TRANSFORMER CO., INC., 207
   W. 25th St., New York, N. Y. SEE ADV. PG. 200.
- FDERAL TELEPHONE & RADIO CORP., 100
  Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Gates Radio Co., Quincy, III.
- Gaveco Labs., Inc., 2 East End Ave., New York

- 21, N. Y.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Hastings Instrument Co., Box 1275, Hampton, Va. Inductive Equipment Co., Gettysburg, Pa.
  Industrial Electronics & Transformer Co., 1809 E. Slauson Ave., Los Angeles 11, Calif.
  LAMBDA ELECTRONICS CORP., 103-02 North-ern Blvd., Corona, N. Y. SEE ADV. PG. 177.
  Power Equipment Co., 55 Antoinette St., De-troit 2, Mich.
  R. B. M. Div., Essex Wire Corp., Logansport, Ind.
- Ind
- Ind. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Reliance Instrument Co., 3027 W. Van Buren St., Chierce 12, JW.

- Chicago 12, III. Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y. Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, III.
- Sola Electric Co., 4633 W. 16th St., Chicago 50, III.
- III. SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211. SOS Cinema Supply Co., 602 W. 52nd St., New York 19, N. Y.
- Standard Arcturus Corp., 54 Clark St., Newark 4,
- N. J. SUPERIOR ELECTRIC CO., THE, 83 Laurel St., Bristol, Conn. SEE ADV. PGS. 142, 143. Teletronics Laboratory, Inc., 352 Maple Ave., Westbury, L. I., N. Y. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover
- VICKERS ELECTRIC DIV., Vickers, Inc., 1815 Locust St., St. Louis 3, Mo. SEE ADV. PG.
- 194. Weltronic Co., 19500 West 8 Mile Rd., Detroit 19,
- Mich
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

## NOTE:

# Throughout all relay listings:

(h) indicates hermetically sealed types

# **RELAYS**—Aircraft Type

ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.

RELAYS

- Second St., Los Angeles, Calif. SEE ADV. PG. 174. (h) Aircraft Radio Corp., Boonton, N. J. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, Ill. (h) Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. BENDIX AVIATION CORP., Red Bank Div., Red Bank, N. J. SEE ADV. PGS. 22, 23. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Cook Electric Co., 2700 Southport Ave., Chicago, Ill. (h)

- Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GUARDIAN ELECTRIC WFG. CO., 1621 W. Walnut St., Chicago 12, III. SEE ADV. PG. 60. Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio
- Kurman Electric Co., Inc., 35-18 37th St., L. I.,

- Kurman Electric Co., Inc., 35-18 37th St., L. I., City 1, N. Y.
  Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif.
  O'Connor & Co., John T., West Orange, N. J.
  PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, III. SEE ADV. PG. 164.
  POTTER & BRUMFIELD SALES CO., 549 W.
  Washington Blvd. Chinger 6, UK COP. 101. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42.
- SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h) SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
- Standard Electrical Products Co., Dayton 3, Ohio (h)
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Stevens-Arnold Inc., 22 Elkin St., S. Boston,
- Mass. (h) Struthers-Dunn, Inc., 150 N. 13th Street, Phila-
- delphia 7, Pa. (h) WARD LEONARD ELECTRIC CO., 31 South St.,
- Mt. Vernon, N. Y. SEE ADV. PG. 151

BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179. Cook Electric Co., 2700 Southport Ave., Chicago,

III. (h) EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189. Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y. GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60. Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.

ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35.

(h) Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Industrial Prods. Co., Danbury, Conn. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7, Pa. (h)

Assembly Products, Inc., Chagrin Falls 6, Ohio Edison Inc., Thomas A., Instrument Div., West Orange, N. J.
(h) Electric Design & Mfg. Corp., Burlington, Iowa Esterline-Angus Co., Inc., P.O. Box 596, Indianapolis, Ind.

(h)

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**RELAYS**—Capacitance Operated

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**RELAYS**—Coaxial

RELAYS-d'Arsonval

# 1949-1950 DIRECTORY of

- GENERAL ELECTRIC CO., Schenectady, N. Y. SEE ADV. PGS. 5-18. (h) Lewis Engineering Co., 52 Rubber Ave., Nauga-
- Lewis Engineering Co., our Rebott Inter, Jonas tuck, Conn. Triplett Electrical Instrument Co., 286 Harmon Road, Bluffton, Ohio WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 677
- WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

# **RELAYS**—Differential

- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h)
- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Automatic Switch Co., 391 Lakeside Ave.,

- Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. Barber-Colman Co., Rockford, Ill. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Cook Electric Co., 2700 Southport Ave., Chi-cago Ill (h)
- cago, 111. (h) Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, N. Y. Edison Inc., Thomas A., Instrument Div., West Orange. N. J. Eicher Bieren Co. Inc. 70 Caylon St. Boston 21.
- Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21,
- GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, Ill. SEE ADV. PG. 60. Hartman Electrical Mfg. Co., 175 N. Diamond

- Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio
  Kurman Electric Co., Inc., 35-18 37th St., L. I. City 1, N. Y.
  O'Connor & Co., John T., West Orange, N. J.
  SIGMA INSTRUMENTS, INC., 80 Cevlon St., Boston 22, Mass. SEE ADV. PG. 145. (h)
  SIGNAL ENGINEERING & MFG. Co., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
  Standard Electrical Products Co., Dayton 3, Ohio (h)
- Ohio
- Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7, Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# **RELAYS**—Electronic Current

- ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG. (h)
- 174. Aerolux Light Corp., 653 11th Ave., New York
- 19, N. Y. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h)
- American Instrument Co., 8030 Georgia Ave.,
- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
  American Relay & Controls, Inc., 4900 W. Flour-noy St., Chicago 44, Ill. (h)
  Automatic Electric Sales Co., 1033 W. Van Bu-ren St., Chicago 7, Ill.
  Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
  Barber-Colman Co., River & Loomis Sts., Rock-ford, Ill.

- ford, Ill. Central Scientific Co., 1700 Irving Park Road,
- Chicago 13, III. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, III. SEE ADV. PG. 123. (h) Cook Electric Co., 2700 Southport Ave., Chi-
- cago, Ill. (h) Corona Engineering Service, 94-52 Corona Ave.,

- Corona Engineering Service, 0402 Corona Inter, Elmhurst, N. Y.
   ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
   Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
   Fischer Scientific Co., 717 Forbes St., Pitts-burgh 19, Pa.
   Fischer-Pierce Co., Inc., 70 Ceylon St., Boston 21 Mass.
- 21, Mass. GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-
- nut St., Chicago 12, Ill. SEE ADV. PG. 60. Lumenite Electric Co., 407 So. Dearborn St., Chicago 5, Ill.
- Mack Electrical Devices Inc., 43 Glenside Ave. Wyncote, Pa.

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- Manning, Maxwell & Moore, Inc., 11 Ellas St., Bridgeport 2, Conn.
  Nurnberg Thermometer Co., Inc., 4 Corey St., Boston 32, Mass.
  O'Connor & Co., John T., West Orange, N. J.
  PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164.
  Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.

- SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th Street, New York, N. Y. SEE ADV. PG. 223.
- Standard Electrical Products Co., Dayton (h)Ohio Stevens-Arnold, Inc., 22 Elkins St., South Bos-
- ton, Mass. Struthers-Dunn, Inc., 150 N. 13th St., Phila
- delphia 7, Pa. Thermo Labs., Inc., 355 W. 26th St., New York Y. N.
- TUNG-SOL LAMP WORKS, INC., 95 Eighth Ave., Newark 4, N. J. SEE ADV. PG. 75.

# **RELAYS**—Frequency Selective

- Control Corp., 718 Central Ave., Minneapolis 14, Minn. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21,
- Mass. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Stevens-Arnold, Inc., 22 Elkins St., Boston, (h)
- Mass.
- Wallace & Tiernan Products, Inc., Belleville 9,
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## **RELAYS**—General Purpose

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. (h) ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.
- (h) 174
- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h)

- (h) American Relay & Controls, Inc., 4900 W. Flour-noy St., Chicago 44, Ill. (h) Autocall Co., The, Shelby, Ohio Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Automatic Signal Div., Eastern Industries, Inc., 100 Regent St., East Norwalk, Conn. Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. Bunnell & Co., J. H., 215 Fulton St., New York, N. Y.
- N. Y. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, 111. SEE ADV. PG. 123. (h) Clark Controller Co., 1146 E. 152nd St., Cleve-land 10, Ohio 2020 Southeast Ave. Chi-
- Cook Electric Co., 2700 Southport Ave., Chi-
- (h) Davis & Co., Dean W., Kentland, Ind.
   FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
   Fisher-Pierce Co., Inc., 70 Ceylon St., Boston
- 21, Mass. Gordon Specialties Co., 542 S. Dearborn St.,

- Gordon Specialties Co., 542 S. Dearborn St., Chicago 5, Ill.
  Grayhill, I N. Pulaski Rd., Chicago 24, Ill.
  GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, Ill. SEE ADV. PG. 60.
  Kurman Electric Co., 35-18 37th St., Long Island City 1, N. Y.
  Leach Relay Co., 5915 Avalon Blvd., Los An-geles 3, Calif.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
  North Electric Mfg. Co., 501 S. Market St., Galion. Ohio

- Galion, Ohio PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164. POTTER & BRUMFIELD SALES CO., 549 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42. R. B. M. Div., Essex Wire Corp., Logansport,
- Ind.

- SIGMA INSTRUMENTS, INC., 80 Ceylon So Boston 22, Mass. SEE ADV. PG. 145. (h Standard Electrical Products Co., Dayton (h) (h)Ohio
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Struthers-Dunn, Inc., 150 N. 13th St., Phila-
- delphia 7, Pa. (h) WARD LEONARD ELECTRIC CO., 31 South Street, Mt. Vernon, N. Y. SEE ADV. PG. 151.
- Warrick Co., Chas. F., 16251 Hamilton Ave., Detroit 3, Mich. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67
- WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

# **RELAYS**—*Impulse*

- ADVANCE ELECTRIC & RELAY CO., 1260 W. Second Street, Los Angeles, Calif. SEE ADV. (h)174
- PG. 174. (h) ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Autocall Co., The, Shelby, Ohio (h) Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, III. SEE ADV. PG. 123. (h) Cook Electric Co., 2700 Southport Ave., Chicago, III. (h)

- Cook Electric Co., 2700 Southport Ave., Chicago, III. (h) FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Gates Radio Co., Quincy, III. GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, III. SEE ADV. PG. 60. Kurman Electric Co., Inc., 35-18 37 St. Long Island City 1, N. Y. (h) O'Connor, John T. & Co., West Orange, N. J. Standard Electrical Products Co., Dayton 3, Ohio (h)
- Struthers-Dunn, Inc., 150 N. 13th St., Phila-
- delphia 7, Pa. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

# **RELAYS**—Industrial Control

174.

19. N. Y.

Automatic Swith Orange, N. J.

ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. (h) ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.

Aerolux Light Corp., 653 11th Ave., New York

19, N. Y. Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wisconsin ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h)

(h)
American Relay & Control, Inc., 4900 W. Flournoy
St., Chicago 44, Ill.
(h)
Autocall Co., The, Shelby, Ohio
Automatic Electric Sales Corp., 1033 W. Van
Buren St., Chicago 7, Ill.
Automatic Switch Co., 391 Lakeside Ave.,
Openne N. J.

Orange, N. J. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Clark Controller Co., 1146 E. 152nd St., Cleve-land 10. Obic

Clark Controller Co., 1140 E. 1951d St., Crete-land 10, Ohio
 Cutler-Hammer, Inc., 315 No. 12th St., Mil-waukee 1, Wisc.
 Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, New York
 Eclipse-Pioneer Div., Bendix Aviation Corp., Teterbore N J.

Teterboro, N. J. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.

Federal Electric Products Company, 50 Paris St.,

Newark, N. J.
FEDERAL TELEPHONE & RADIO CORP., 100
Kingsland Rd., Clifton, N. J. SEE ADV. PGS.
129, 131, 133, 135.

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(h)

General Controls Co., Glendale 1, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Leach Relay Co., 5915 Avalon Blvd., Los Angeles

3, Calif. Mack Electrical Devices Inc., 43 Glenside Ave. Wyncote, Pa. (h) Magnavox Co., The, Components Div., Fort Wayne 4, Ind.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn. Niagara Electron Laboratories, Andover, New

York.

Nurnberg Thermometer Co., Inc., 4 Corey St., Boston 32, Mass. O'Connor & Co., John T., West Orange, N. J. POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6, Ill. SEE ADV. DC. 42

PG. 42. PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164. R. B. M. Div., Essex Wire Corp., Logansport, (b)

Ind. (h)

Ohio (h)

Steel Co., Herman D., Lafayette Bldg., Phila 6, Pa. Struthers-Dunn, Inc., 150 N. 13th St., Phila-

delphia 7, Pa. (h) Thermo Labs., Inc., 355 W. 26th St., New York

1 N WARD LEONARD ELECTRIC CO., 31 South St.,

Mt. Vernon, N. Y. SEE ADV. PG. 151. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box

868, Pittsburgh, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP. 618 Frelinghuysen Ave., Newark 5, N. J. SEE

ADV. PG. 193.

# **RELAYS**—Instrument

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. American Instrument Co., 8030 Georgia Ave.,

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
American Relay & Controls Inc., 4900 W. Flournoy St., Chicago 44, Ill. (h)
Assembly Products, Inc., Chagrin Falls 6, Ohio Brown Instrument Co., Wayne & Roberts Ave., Philadelphia 44, Pa.
Bunnel & Co., J. H., 215 Fulton St., New York, N Y.

N. Y.

N. Y. Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, N. Y. Electric Design & Mfg. Corp., Burlington, Iowa Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Mack Electrical Devices Inc., 43 Glenside Ave., Wwncote, Pa. (h)

Wyncote, Pa. Manning, Maxwell & Moore, Inc., 11 Elias St.,

Bridgeport 2, Conn.

Nurnberg Thermometer Co., Inc., 4 Corey St., Boston 32 Mass.

PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, III, SEE ADV. PG. 164. POTTER & BRUMFIELD SALES CO., 549 W.

Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42.

PG. 42. Roller-Smith, Bethlehem, Pa. SIGMA INSTRUMENTS, INC., 80 Ceylon St. Boston 22, Mass. SEE ADV. PG. 145. (h) Standard Electrical Products Co., Dayton 3. (h)Ohio

Struthers-Dunn, Inc., 150 N. 13th St., Phila delphia 7, Pa. (h) Triplett Electrical Instrument Co., 286-Harmon

Rd., Blufton, Ohio

#### **RELAYS**—Keying and Break-In

ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG. (h)

I'4. (h)
 ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h)
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.

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 CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123.
 (h)

 Cook Electric Co., 2700 Southport Ave., Chi-chi (h)

cago, Ill. (h) Fisher-Pierce Co., Inc., 70 Ceylon St., Boston

Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21, Mass.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60.
Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. (h)
Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif.
PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164.
POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd. Chicago 6, Ill SEE ADV.

- Washington Blvd., Chicago 6, Ill. SEE ADV.
- PG. 42
- PG. 42. SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h) SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Standard Electrical Products Co., Dayton 3, Obj.
- Ohio
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Stevens-Arnold, Inc., 22 Elkins St., South Boston, Mass. (h)
- Struthers-Dunn, Inc., 150 N. 13th St., Phila-
- delphia 7, Pa. (h) WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. (h)

# **RELAYS**—Latching

- ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG. (h)
- 174. (h) ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) Autocall Co., The, Shelby, Ohio Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Clark Controller Co., 1146 E. 152nd St., Cleve-land 10, Ohio

- land 10, Ohio Control Corp., 718 Central Ave., Minneapolis
- 14, Minn. Cook Electric Co., 2700 Southport Ave., Chi-
- COOK Electric Co., 2700 Southport Ave., Chi-cago, Ill. (h) ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- Fisher-Pierce Co., Inc., 70 Ceylon St., Boston Mas GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-
- nut St., Chicago 12, III. SEE ADV. PG. 60. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. (h)
- Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif.
- Electric Mfg. Co., 501 S. Market St., North

- Galion, Ohio PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164. POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6, Ill. SEE ADV. DC 42 PG. 42
- RADIO CORP. OF AMERICA, RCA Victor Div Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
- R. B. M. Division, Essex Wire Corporation, L gansport. Ind. (h)
- gansport, Ind. (h) SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h) SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Standard Electrical Products Co., Dayton 3, Obio
- (h) Ohio Struthers-Dunn, Inc., 150 N. 13th St., Phila-
- delphia 7, Pa. (h) WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. (h)

#### **RELAYS**—Mercury

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) American Instrument Co., 8030 Georgia Ave., Silves Spring, Md Silver Spring, Md.

- Autocall Co., The, Shelby, Ohio Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
- Buren St., Chicago 7, Ill. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, N. Y. (h) Mack Electrical Devices Inc., 43 Glenside Ave., Wuncote Pa. (b)
- Wyncote, Pa. POTTER & BRUMFIELD SALES CO., 549 W Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42

SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Standard Electrical Products Co., Dayton 3,

- Ohio (h)
- (h) Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7, Pa. (h) Western Electric Co., Inc., 195 Broadway, New-York 7, N. Y.

## **RELAYS**—Multipole

ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG. 174. (h)

- 174. (h)
  ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h)
  American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, 111. (h)
  Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, 111.
  CLARE & CO., C. P., 4719 Sunnyside Ave., Chicago 30, 111. SEE ADV. PG. 123. (h)
  Clark Controller Co., 1146 E. 152nd St., Cleveland 10. Obio

Land 10, Ohio
 Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, N. Y.
 Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21 Marc.

Mass

- GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, Ill. SEE ADV. PG. 60. Leach Relay Co., 5915 Avalon Blvd., Los An-geles 3, Calif. PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164. POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6, Ill. SEE ADV.
- Washington Blvd., Chicago 6, Ill. SEE ADV.

PG. 42. B. M. Div., Essex Wire Corp., Logansport,

Ind. (h)
 Reister Mfg. Co., Hagerstown, Md.
 SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h)
 SIGNAL ENGINEERING & MFG. CO., 154-6 W.
 14th St., New York, N. Y. SEE ADV. PG. 223.
 Standard Electrical Products Co., Dayton 3, Objo

Stevens-Arnold Inc., 22 Elkins St., S. Boston,

(h) Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7 Pa

WARD LEONARD ELECTRIC CO., 31 South St.,

Mt. Vernon, N. Y. SEE ADV. PG. 151. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

ADAMS & WESTLAKE CO., Michigan St., Elk-hart Ind. SEE ADV. PGS. 76, 77. (h) ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.

Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis.

Allen-Bradley Co., 130 W. Greenica and waukee 4, Wis.
ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h)
American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, III. (h)
Assembly Products, Inc., Chagrin Falls 6, Ohio.
BENDIX AVIATION CORP., Red Bank Div., Red Bank, N. J. SEE ADV. PGS. 22, 23.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10. Ohio

land 10, Ohio Cook Electric Co., 2700 Southport Ave., Chi-(h)

Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee

**RELAYS**—Overload and Underload

(h)

D-123

Ohio

delphia

174.

cago, Ill.

1, Wis.

# RELAYS

# 1949-1950 DIRECTORY of

- Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. (h) Fisher-Pierce Co., Inc., 70 Ceylon St., Boston
- 21, Mass. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- GENÉRAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, Ill. SEE ADV. PG. 60. Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Leach Relay Co., 5915 Avalon Blvd., Los An-geles 3, Calif. Mack Electrical Devices, Inc., 43 Glensides Ave., Wwncote. Pa. (h)
- Mack Electrical Devices, Inc., 43 Glensides Ave., Wyncote, Pa.
  (h)
  SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145.
  (h)
  SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
  Spencer Thermostat Co., 34 Forest St., Attle-boro, Mass.
  Standard Electrical Products Co. Davton 3
- Standard Electrical Products Co., Dayton (h)Ohio
- Unio (h) Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7, Pa. (h) WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box S68, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# **RELAYS**—Photoelectric

- ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG. (h)
- 174. (h) Airleetron, P. O. Box 151, Caldwell, N. J. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. American Scientific Co., P. O. Box 1, High-bridge Station, New York 52, N. Y. Autotron Co., The, Danville, III. Cook Electric Co., 2700 Southport Ave., Chi-cago. III. (h)

- COOK Electric Co., 2700 Southport Ave., Chi-cago, Ill. (h) Eby, Inc., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- 181. Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. J. Electronic Products Co., St. Charles, Ill. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21 Mass

- Mass. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, Ill. SEE ADV. PG. 60. Lumenite Electric Co., 407 So. Dearborn St.,

- Lumenite Electric Co., 407 So. Dearborn St., Chicago 5, 111.
  Mettler Co., Lee B., 406 S. Main St., Los An-geles 13, Calif.
  O'Connor & Co., John T., West Orange, N. J.
  PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164.
  Photobell Co., 116 Nassau St., New York 7, N V
- POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6, Ill. SEE ADV.
- PG. 42. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Ripley Co., Inc., P. O. Box 31, Middletown,
- Special Products Co., Silver Spring, Md. Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.
- York 1, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## **RELAYS**—Plate Circuit

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. See ADV. PGS. 76, 77. ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.
- (h)
- 174. (h) ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, III. (h) Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, III. SEE ADV. PGS. 22, 23. Cook Electric Co., 2700 Southport Ave., Chicago, III. (h)
- 111
- Fickeral Instrument Corp., 14-02 Broadway, Long Island City 2, N. Y. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21,

- Mass. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, Ill. SEE ADV. PG. 60. Kurman Electric Co., Inc., 38-15 37th St., Long Island City 1, N. Y. Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3, Calif. POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42.

- PG. 42. R. B. M. Div., Essex Wire Corp., Logansport,
- Ind. (h) SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h) SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7, Pa. (h) Standard Electrical Products Co., Dayton
- (h) Ohio Stevens-Arnold Inc., 22 Elkins St., S. Boston,

- Mass. (h) WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193 ADV. PG. 193.

## **RELAYS**—Polarized

- RELAYS—Polarized Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Barber Colman Co., Rockford, Ill. Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. (h) Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21, Mass. (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h)

- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Hartman Electrical Mig. Co., 175 N. Diamond St., Manfield, Ohio Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. (h) Magnetic Devices, Inc., Frederick, Md. SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h) SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Standard Electrical Products Co., Dayton 3, Ohio (h) (h)
- Ohio Stevens Arnold, Inc., 22 Elkins St., South

- Stevens Arnold, Inc., 22 Eikins St., South Boston, Mass. (h) Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7, Pa. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## **RELAYS**—Power

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. See ADV. PGS. 76, 77. ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.
- 174.
- Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wisc.
- Naukee 4, Wisc. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) American Instrument Co., 8030 Georgia Ave.,
- American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, Ill. (h) Clark Controller Co., 1146 E. 152nd St., Cleve-land 10, Ohio
- Cook Electric Co., 2700 Southport Ave., Chicago, TH. Detect-O-Ray Co., 2622 N. Halsted St., Chicago
- Detect-O-Ray Co., 2622 N. Halsted St., Chicago 14, Ill. Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, N. Y. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.

- 181. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Mack Electrical Devices Inc., 43 Glenside Ave., Wyncote, Pa. (h) Magnetic Devices, Inc., 712 East St., Frederick,
- Md.
- PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164. POTTER & BRUMFIELD SALES CO., 549 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42.
- IGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Standard Electrical Products Co., Dayton 3,
- Ohio (h)

- Ohio
  (h)
  Struthers-Dunn, Inč., 150 N. 13th St., Phila-delphia 7, Pa.
  (h)
  WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.
  (h)
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

#### **RELAYS**—Rotary

- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) Autocall Co., The, Shelby, Ohio Automatic Electric Sales Corp., 1033 W. Van
- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
  CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Leland, Inc., G. H., 123 Webster St., Dayton 2, Obje Ohio
- Magnetic Devices, Inc., 712 East St., Frederick, Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. See ADV. PGS. 76, 77. ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG. 174. (h)

174. (h)
ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h)
American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, Ill. (h)
Autocall Co., The, Shelby, Ohio
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Barber Colman Co., Rockford, Ill.
CLARE & CO., C. P., 4719 Sunyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h)
Cook Electric Co., 2700 Southport Ave., Chicago, Ill. (h)

**RELAYS**—Sensitive Control

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- Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, N. Y. ert Engineering Ave., Hollis 7, N. Y. iison, Inc., Thomas A., Instrument Div., (h)
- Ave, Homs I, Lomas A., Instrument Div., Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. Diversion of the state of the s
- Fisher-Pierce Co., Inc., 70 Ceylon St., Boston
- 22, Mass. (h) General Controls Co., Glendale 1, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h)
- GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-
- Aut St., Chicago 12, Ill. SEC ADV. PG. 60. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. (h) Leach Relay Co., 5915 Avalon Blvd., Los An-geles 3, Calif. Lumenite Electric Co., 407 S. Dearborn St., Chicago III
- Chicago, Ill. Mack Electrical Devices Inc., 43 Glenside Ave.,
- Wyncote, Pa. (h) Magnetic Devices, Inc., 712 East St., Frederick, Md.
- Manning, Maxwell & Moore, Inc., 11 Elias St.,
- Manning, Maxwell & Moore, Inc., II Elias St., Bridgeport 2, Conn. Mellaphone Corp., Rochester 2, N. Y. PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164. POTTER & BRUMFIELD SALES CO., 549 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG . 42
- PG. 42. SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h) SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
- Standard Electrical Products Co., Dayton 3, (h)
- Ohio Struthers-Dunn, Inc., 150 N. 13th St., Phila-
- delphia 7, Pa. (h) Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.
- Thermo Labs., Inc., 950 II. Lota Leader York 1, N. Y. TUNG-SOL LAMP WORKS INC., 95 Eighth Ave., Newark 4, N. J. SEE ADV. PG. 75. WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. (h) WESTON ELECTRICAL INSTRUMENT CORP., Mt. Declinghuman Ave. Newark 5. N. J. SEE
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

## **RELAYS**—Sequence

- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Automatic Electric Sales Corp., 1033 W. Van
- Automatic Electric Sales Corp., 1038 W. Van Buren St., Chicago 7, 111.
   CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h)
   Clark Controller Co., 1146 E. 152nd St., Cleve-land 10, Ohio
   Carle Distric Co., 2500 Southerst Aug. Cl.
- Cook Electric Co., 2700 Southport Ave., Chi-(h)
- cago, III. (h)
  GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, III. SEE ADV. PG. 60.
  PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, III. SEE ADV. PG. 164.
  SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
  Struthers-Dunn, Inc., 150 N. 13th St., Philadel Content of the state of the stat
- P (h)
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# **RELAYS**—Shock-Resisting

- ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG. 174 (h)
- 174. (h) ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, III. (h) Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, III. SEE ADV. PG. 123. (h) Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 22, Mass.

- Mass.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18, (h)

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- GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-
- nut St., Chicago 12, Ill. SEE ADV. PG. 60. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Leach Relay Co., 5915 Avalon Blvd., Los An-rolas 2, Colit
- geles 3, Calif. Leland, Inc., G. H., 123 Webster St., Dayton
- 2, Ohio Magnetic Devices, Inc., 712 East St., Frederick,
- PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164. POTTER & BRUMFIELD SALES CO., 549 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42 SIGMA INSTRUMENTS, INC., 80 Ceylon St.,
- Boston 22, Mass. SEE ADV. PG. 145. (h). SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Stevens-Arnold Inc., 22 Elkins St., S. Boston, Mass. Mass.
- Struthers-Dunn, Inc., 150 N. 13th St., Phila-
- delphia 7, Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **RELAYS**—Snap-Action

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. (h) ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, III. "(h) Automatic Electric Sales Corp., 1033 W Van Buren St., Chicago 7, Ill. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Cook Electric Co., 2700 Southport Ave., Chi-cago, Ill.
- cago I11. (h)
- Cago, III. (h)
   GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60.
   Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
   Leach Relay Co., 5915 Avalon Blvd., Los Angeles 2, Colt
- 3, Calif.
- Leland Inc., G. H., 123 Webster St., Dayton 2, Ohio
- Mack Electrical Devices, Inc., 43 Glenside Ave., Wyncote, Pa. (h) McQuay-Norris Mfg. Co., 2320 Marconi Ave.,
- McGuay-Mortis Mrg. Co., 2020 Marcont Arc., St. Louis 10, Mo.
   PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164.
   POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6. Ill. SEE ADV.
- PG. 42. SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Stevens-Arnold, Inc., 22 Elkins St., South Boston, (h)
- Struthers-Dunn, Inc., 150 N. 13th St., Phila

delphia 7, Pa. (h) TUNG-SOL LAMP WORKS INC., 95 Eighth Ave., Newark 4, N. J. SEE ADV. PG. 75.

# RELAYS—Stepping

- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. Autocall Co., The, Shelby, Ohio Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Collins Radio Co., Cedar Rapids, Iowa Cook Electric Co., 2700 Southport Ave., Chicago, Ill. (h)
- (h)
- III.
   (h)
   FEDERAL TELEPHONE & RADIO CORP., 100
   Kingsland Rd., Clifton, N. J. SEE ADV. PGS.
   129, 131, 133, 135.
   GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, III. SEE ADV. PG. 60.
   Leland, Inc., G. H., 123 Webster St., Dayton 2, Objo
- Ohio
- Ohio North Electric Mfg. Co., 501 S. Market St., Galion, Ohio SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7. Pa
- delphia 7, Pa. (h)

# **RELAYS**—Telephone

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. (h) ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.
- (h)
- 174. (h) ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) American Relay & Controls, Inc., 4900 W. Flournoy St., Chicago 44, III. (h) Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III. (h) Bunnell & Co., J. H., 215 Fulton St., New York, N. Y.
- Υ.
- CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Control Corp., 718 Central Ave., Minneapolis 14, Minn
- Cook Electric Co., 2700 Southport Ave., Chi-
- Cook Electric Co., 2100 County (h) FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Schenectady 5, N. Y. CFF ADV. PGS. 5-18. (h)
- SEE ADV. PGS. 5-18. (h) GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-
- GUARDIAN ELECTRIC MFG. CU., 1621 W. Wat-nut St., Chicago 12, III. SEE ADV. PG. 60. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, III. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. (h) North Electric Mfg. Co., 501 S. Market St., Galion Obio.

- Galion, Ohio PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, III. SEE ADV. PG. 164. POTTER & BRUMFIELD SALES CO., 549 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42. R. B. M. Div., Essex Wire Corp., Logansport,
- Ind.
- SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223. Standard Electrical Products Co., Dayton 3. Ohio

(h)

Unio Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

# **RELAYS**—Temperature Compensated

- Fisher-Pierce Co., Inc., 70 Ceylon St., Boston
- 22. Mass. (h) Hartman Electrical Mfg. Co., 175 N. Diamond
- St., Mansfield, Ohio Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn. Mack Electrical Devices Inc., 43 Glenside Ave.,

Mack Electrical Devices Inc., 19 (h) Wyncote, Pa. (h)
SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h)
SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. (h)

ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. See ADV. PGS. 76, 77. ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG.

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) AMERICAN GAS ACCUMULATOR CO., 1029

196. American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. American Relay & Controls, Inc., 4900 W. Flour-noy St., Chicago 44, Ill. (h) AMPERITE CO., 561 Broadway, New York 12, N. Y. SEE ADV. PG. 90. (h) Autocall Co., The, Shelby, Ohio Automatic Electric Sales Co., 1033 W. Van Buren St., Chicago 7, Ill. Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Newark Ave., Elizabeth, N. J. SEE ADV. PG.

(h)

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**RELAYS**—Time Delay

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# RELAYS

- CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Clark Controller Co., 1146 E. 152nd St., Cleve-
- land, Ohio Cook Electric Co., 2700 Southport Ave., Chi Cook Electric Co., 2700 Southport Ave., Chicago, Ill. (h)
  CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99.
  Eagle Signal Corp., Moline, Ill.
  Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, N. Y.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. (h)
  Electric Auto-Lite Co., The, Toledo 1, Ohio
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  Fisher-Pierce Co., Inc., 70 Ceylon St., Boston

- Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 22. Mass.
- 22, Mass.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y.
  SEE ADV. PGS. 5-18. (h)
  GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60.
  Hartman Electrical Mfg. Co., 175 N. Diamond Ca. Magafeld Ohio.
- Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio
  Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
  HAYDON MFG. CO., INC., 584 E. Elm St., Tor-rington, Conn. SEE ADV. PGS. 68, 69.
  HEINEMANN ELECTRIC CO., 97 Plum St., Trenton 2, N. J. SEE ADV. PG. 37.
  Industrial Timer Corp., 115 Edison Pl., New-ark 5. N. J.

- Industrial Timer Corp., 115 Edison Pl., Newark 5, N. J.
  Kellogg Switchboard & Supply Co., 6650 S.
  Cicero Ave., Chicago 38, Ill.
  Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
  Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3, Calif.
  Lektra Labs., 30 E. 10th St., New York, N. Y.
  Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
  Mellaphone Corp., Rochester 2, N. Y.
  North Electric Mfg. Co., 501 S. Market St., Galion, Ohio

Galion, Ohio

- Galion, Ohio O'Connor & Co., John T., West Orange, N. J. Paragon Electric Co., Two Rivers, Wis. PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, III. SEE ADV. PG. 164. Reynolds Electric Co., 2650 W. Congress St., Chicago 12, III. Ripley Co., Inc., P. O. Box 31, Middletown, Conv.
- Ripley Co., Inc., P. O. Box 51, Multiclowi, Conn.
  SIGMA INSTRUMENTS, INC., 80 Ceylon St., Boston 22, Mass. SEE ADV. PG. 145. (h)
  SIGNAL ENGINEERING & MFG. CO., 154-6 W.
  14th St., New York, N. Y. SEE ADV. PG. 223.
  Spencer Thermostat Co., 34 Forest St., Attle-boro, Mass.
  Standard Electrical Products Co. Davton 3.
- Standard Electrical Products Co., Dayton
- Ohio
- Unio Struthers-Dunn, Inc., 150 N. 13th St., Phila-delphia 7, Pa. (h) Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y. Ulanet Co., George, 413 Market St., Newark 5,

- N. J. WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 102 ADV. PG. 193.

### **RELAYS**—Transfer

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. See ADV. PGS. 76, 77. ADVANCE ELECTRIC & RELAY CO., 1260 W. Second St., Los Angeles, Calif. SEE ADV. PG. (h)
- 174. (h) ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35. (h) American Relay & Controls, Inc., 4900 W. Flour-noy St., Chicago 44, Ill. (h) Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. Autocall Co., The, Shelby, Ohio 115.
- 115
- D-126

- Automatic Electric Sales Corp., 1033 W. Van Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123. (h) Cook Electric Co., 2700 Southport Ave., Chi-cago Ill.

- cago, Ill. GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60
- Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y

- Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
  Leach Relay Co., 5915 Avalon Blvd., Los An-geles 3, Calif.
  PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, Ill. SEE ADV. PG. 164.
  SIGNAL ENGINEERING & MFG. Co., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
  Standard Electrical Products Co., Dayton 3.
- Standard Electrical Products Co., Dayton (h)Ohio
- Stevens-Arnold Inc., 22 Elkins St., S. Boston, (h) Mass.
- Struthers-Dunn, Inc., 150 N. 13th St., Philadel
- phia 7, Pa. (h) WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. (h)

#### **RELAYS**—Vacuum Contact

- American Instrument Co., 8030 Georgia Ave.,
- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
  Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
  Ebert Engineering & Mfg. Co., 185-09 Jamaica Ave., Hollis 7, N. Y.
  Eitel-McCullough, Inc., San Bruno, Calif.
  Flowmeter Corp. of America, High Falls, N. Y.
  (b)
- (h)
- (h) JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158, 159.
- Mack Electrical Devices, Inc., 43 Glenside Ave., Wyncote, Pa. (h) Struthers-Dunn, Inc., 150 N. 13th St., Phila (h)
- delphia 7, Pa. (h) Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### **RELAYS**—Vibrating Reed Type

- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
  Biddle Co., James G., 1316 Arch St., Philadel-phia 7, Pa.
  Control Corp., 718 Central Ave., Minneapolis 14 Minn.
- 14, Minn.
- Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
   Motorola, Inc., 4545 W. Augusta Blvd., Chicago, 51, Ill.
- Stevens-Arnold, Inc., 22 Elkins St., South Bos-
- (h) ton, Mass.

# RESINS

See Insulating Compounds

#### RESISTANCE SPECIALTIES

- Acheson Colloids Corp., Port Huron, Mich. BALLANTINE LABS., INC., Boonton, N. J. SEE ADV. PG, 134.

- ADV. PG. 134.
  BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217.
  BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
  Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
  Carborundum Co., The, Globar Div., Niagara Falls, N. Y.
  CENTRALAB, Div., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27. 27.

- 27.
  Clarostat Mfg. Co., Inc., 130 Clinton St., Brooklyn 2, N. Y.
  Conant Labs., 6500 O St., Lincoln 5, Neb.
  Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio
  Daven Co., 191 Central Ave., Newark 4, N. J.
  ERIE RESISTOR CORP., 644 W. 12th St., Erie
  Pa. SEE ADV. PG. 109.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

HELIPOT CORP., 1011 Mission St., So. Pasadena,

- HELIPUT CORF., 1011 Anisola Co., Corr and C., Calif. SEE ADV. PG. 25. INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113. Keystone Carbon Co., Inc., Saint Marys, Pa. Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee 4. Wis

1949-1950 DIRECTORY of

- Milwaukee 4, Wis. Network Manufacturing Corp., Bayonne, N. J. Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio
- 11, Ohio OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201. Precision Resistor Co., 334 Badger Ave., New-ark 8, N. J. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Shallcross Mfg. Co., 10 Jackson Ave., Colling-dale Pa

- Shattoss Mar, Co., 10 Jackson Ave., Conng-dale, Pa.
  States Co., 19 New Park Ave., Hartford 6, Conn.
  WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### **RESISTOR BOARDS**

See Boards, Resistor

#### **RESISTORS**—Ceramic

**RESISTORS**—Fixed

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- BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212. Carborundum Co., The, Globar Div., Niagara Falls, N. Y.
- Falls, N. Y. Electrical Refractories Co., 50 Clark St., East
- Palestine, Ohio Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

Baltimore 4, Md. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113. Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee Resistor Co., 700 W. Virginia St.,

Milwaukee 4, Wis. WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. Wilkor Products, Inc., 3835 W. 150th St., Cleve-land 11, Ohio

Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass. Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis.

Atlas Resistor Co., 423 Broome St., New York, N. Y.

N. Y. Avia Products Co., 7266 Beverly Blvd., Los An-geles 36, Calif. Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon Carborundum Co., The, Globar Div., Niagara Falls, N. Y. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y. Consolidated Wire & Associated Companies, 1635

Consolidated Wire & Associated Companies, 1635

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Continental Carbon, Inc., 13900 Lorain Ave., Cleveland, Ohio
Daven Co., 191 Central Ave., Newark 4, N. J.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109.
Federal Instrument Corp., 14.02 Broadway, Long Island City 2, N. Y.
GENERAL ELECTRIC CO., Schenectady 5, N. Y.
SEE ADV. PGS. 5-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.

Hardwick, Hindle Inc., 49 Hermon St., Newark,

N. J. INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113. INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia S, Pa. SEE ADV. PGS. 20, 21. I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Car Divided bits 20, Pa. SEE ADV. PC. 229

St., Philadelphia 30, Pa. SEE ADV. PG. 229.
Kellogg Switchboard & Supply Co., 6650 S.
Cicero Ave., Chicago 38, Ill.
Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.

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- MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- Mepco Inc., 37 Madison Ave., Morristown, N. J. Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. Milwaukee Resistor Co., 700 W. Virginia St.,

Milwaukee 4, Wis. Mulwaukee 4, Wis. Muter Co., 1255 S. Michigan Ave., Chicago,

III.

Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio

- 11, Ohio
  OHMITE MFG. CO., 4835 W. Flournoy St., Chicago, Ill. SEE ADV. PG. 201.
  Precision Machine Works, Inc., 730 Lyndale Ave., N., Minneapolis 11, Minn.
  Precision Resistor Co., 334 Badger Ave., Newark 8, N. J.
  REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. SEE ADV. PG. 186.
  Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa. Schaefer Bros. Co., 1059 W. 11th St., Chicago, Ill.
- Ill. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.

- uale, ra. Speer Resistor Corp., St. Marys, Pa. Sprague Electric Co., North Adams, Mass. Stackpole Carbon Co., St. Marys, Pa. States Co., 19 New Park Ave., Hartford 6, Conn.
- Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
- Sticht Co., ntc., new York 7, N. Y.
  WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.
  Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

- York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WHITE DENTAL MFG. CO., S. S. Industrial Div., 10 E. 40th St., New York, N. Y. SEE ADV.
- PG. 191. Wilkor Products, Inc., 3835 W. 150th Cleveland 11, Ohio Wirt Co., 5221 Greene St., Philadelphia, Pa. Inc., 3835 W. 150th St.,

#### **RESISTORS**—Hermetically Sealed

- BOND ELECTRONICS CORP., 88 Franklin Pl., Summit, N. J. SEE ADV. PG. 212.
  Daven Co., 191 Central Ave., Newark 4, N. J.
  Federal Instrument Corp., 14-02 Broadway, Long Island City 2, N. Y.
  Giannini & Co., Inc., 285 W. Colorado St., Pasa-dena 1, Calif.
  INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113.
  INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 3, Pa. SEE ADV. PGS. 20, 21.
  OHMITE MFG. CO., 4835 W. Flournoy St., Chi-

- OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201. Precision Resistor Co., 334 Badger Ave., Newark
- 8, N. J. Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale. Pa.
- Gale, Pa. Sprague Electric Co., North Adams, Mass. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box
- 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## RESISTORS—High Megohm

- BOND ELECTRONICS CORP., 88 Franklin Pl., Summit, N. J. SEE ADV. PG. 212. Corning Glass Works, Corning, N. Y. Daven Co., 191 Central Ave., Newark 4, N. J. Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif. INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. SEE ADV. PGS. 20, 21.
- Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio
- Precision Resistor Co., 334 Badger Ave., Newark 8, N. J. Resistance Products Co., 714 Race St., Harris-
- burg, Pa.
- Shallcross Mfg. Co., 10 Jackson Ave., Colling-dale, Pa. Sprague Electric Co., North Adams, Mass.

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- VICTOREEN INSTRUMENT CO., 5806 Hough VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227.
   Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y.
   Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

- WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. SEE ADV. PG. 191.
- Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

#### **RESISTORS**—Precision Wire Wound

- Amalgamated Electronics, Clinton Corners, N. Y. Associated Research, Inc., 3758 W. Belmont,
- Associated Research, inc., 3738 W. Definition, Chicago 18, III.
   BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.
   Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
   Chingme Engineering Co., 1510 W. Verdugo Ave., Buybank Calif.

- Cinema Engineering Co., 1510 W. Verdüğö AVe., Burbank, Calif. Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y. Continental Carbon Inc., 13900 Lorain Ave., Cleveland 11, Ohio Daven Co., 191 Central Ave., Newark 4, N. J. Davie Fication Co. Cano Ciratdeau Mo.
- Davis Electric Co., Cape Girardeau, Mo. Federal Instrument Corp., 14-02 Broadway, Long
- Island City 2, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114-115.
  Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.
  INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG. 113.
  INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. SEE ADV. PGS. 20, 21.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.

- 44, Pa. Legri-S Co., Inc., 346 Amsterdam Ave., New York 25, N. Y. Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck, Conn.
- MARION ELECTRICAL INSTRUMENT CO., Man-chester, N. H. SEE ADV. PG. 79.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Mepco, Inc., 37 Madison Ave., Morristown, N. J. Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee 4, Wisc. Model Engineering & Mfg., Inc., Huntington,
- Ind.
- Ind. Network Manufacturing Corp., Bayonne, N. J. Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y. OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201. Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y. Resistance Products Co., 714 Race St., Harris-burg Pa

- burg, Pa. Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa. Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale, Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,
- WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- Wilkor Products, Inc., 3835 W. 150th St., Cleveland 11, Ohio
- Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.

## **RESISTORS**—Precision Wire Wound Potentiometer

Amalgamated Electronics, Clinton Corners, N. Y. Brown Engineering Co., 4635 S. E. Hawthorne Amaigamated Electronics, Children Cohlers, N. F.
 Brown Engineering Co., 4635 S. E. Hawthorne
 Blyd., Portland 15, Ore.
 CENTRALAB, Div., Globe Union Inc., 900 Keefe
 Ave., Milwaukee 1, Wisc. SEE ADV. PGS.

Ave., M 26, 27,

Cinema Engineering Co., 1510 W. Verdugo Ave.,

- Chiena Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y. Daven Co., 191 Central Ave., Newark 4, N. J. Daven Co., 191 Central Ave., Newark 4, N. J.
- Daven Co., 191 Central Ave., Newark 4, N. J.
  DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.
  Fairchild Camera & Instrument Corp., 88-06 Van Wyck Blvd., Jamaica 1, N. Y.
  Giannini & Co., Inc., 285 W. Colorado St., Pasadena 1, Calif.
  HELIPOT CORP., 1011 Mission St., So. Pasadena, Calif. SEE ADV. DC. OF

- Calif. SEE ADV. PG. 25. INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. SEE ADV. PGS.
- 20, 21
- Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill. Leeds & Northrup Co., 4970 Stenton Ave., Phila.
- 44, Pa. National Technical Lab., 820 Mission St., So.
- National Lecumcal Suc, Sec., Philadelphia, Pa. Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa. Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Technology Instrument Corp., 1058 Main St.,
- Waltham, Mass. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, .

## **RESISTORS**—Temperature Sensitive

- Carborundum Co., The, Globar Div., Niagara Falls, N. Y. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
- Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md. Keystone Carbon Company, Inc., St. Marys,
- Keystone Carb Pennsylvania Leeds & Northrup Co., 4970 Stenton Ave., Phila.

44, Pa. Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn. Ohio Carbon Co., 12508 Berea Rd., Cleveland 11,

Ohio
TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.
Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

Carborundum Co., The, Globar Div., Niagara Falls, N. Y.
GENERAL ELECTRIC CO., Schenectady 5, New York. SEE ADV. PGS. 5-18.
Ohio Carbon Co., 12508 Berea Rd., Cleveland 11 Ohio

Acme Electric Heating Co., 1217 Washington St., Boston, Mass. Atlas Resistor Co., 423 Broome St., New York,

AVIONETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.

206. BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212. Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon Carter Radio Div., Precision Parts Co., 213 Institute Pl., Chicago 10, Ill. Chicago Telephone Supply Corp., 1142 W. Beardsley Ave., Elkhart, Ind. Cima Corp., 91 Boylston St., Jamaica Plain 30, Mass.

Mass. Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.

Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y.

lyn 2, N. Y. Consolidated Wire & Associated Companies, 1635

S. Clinton St., Chicago 16, Ill. Continental Carbon, Inc., 13900 Lorain Ave.,

D-127

Cleveland, Ohio

**RESISTORS**—Voltage Sensitive

**RESISTORS**—Wire Wound

Ohio

11 Ohio

N. Y.

# RHEOSTATS

1949-1950 DIRECTORY of

- Cutler-Hammer, Inc., 315 No. 12th St., Mil-waukee 1, Wis. Davis Electric-Co., Cape Girardeau, Mo. ELECTRICAL REACTANCE CORP., Elm St., Franklinville, N. Y. SEE ADV. PGS. 82, 83. Elliot Mfg. Co., 218 Prospect Ave., Binghamton, N. Y.
- N. Y.
   Federal Instrument Corp., 14-02 Broadway, Long Island City 2, N. Y.
   GENERAL ELECTRIC CO., Schenectady 5, N. Y.
   SEE ADV. PCS. 5-18.
- Hardwick, Hindle Inc., 40 Hermon St., Newark,
- N J
- N. J. Houlihan Co., T. J., 2509-14 W. Lawrence Ave., Chicago 25, Ill. I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Philadelphia 30, Pa. SEE ADV. PGS. 48, 49. INSTRUMENT RESISTORS CO., 1036 Commerce
- Ave., Union, N. J. SEE ADV. PG. 113. INTERNATIONAL RESISTANCE CO., 401 N.
- Broad St., Phila. 8, Pa. SEE ADV. PGS. 20, 21.
- Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Lectrohm, Inc., 5939 Archer Ave., Chicago 38, University of the state of
- 111.
- Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
   MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis 6, Ind. SEE ADV. PGS.
- 71-74.
- Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee 4, Wis. Model Engineering & Mfg., Inc., Huntington,
- Ind. Muter Co., 1255 S. Michigan Ave., Chicago,
- 111.
- Ill. Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201. Precision Machine Works, Inc., 730 Lyndale Ave., No., Minneapolis 11, Minn. Precision Resistor Co., 334 Badger Ave., New-ark 8, N. J. Presto Electric Co., Inc., 4511 New York Ave.

- ark 8, N. J. Presto Electric Co., Inc., 4511 New York Ave., Union City, N. J. **REX RHEOSTAT CO.**, 3 Foxhurst Rd., Baldwin, N. Y. SEE ADV. PG. 186. Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa. Schaefer Bros. Co., 1059 W. 11th St., Chicago,
- IIL Shallcross Mfg. Co., 10 Jackson Ave., Colling-

- Shallcross Mig. Co., 10 Charles Co., 31 South St., dale, Pa. WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- ADV. PG. 193.
- Wilkor Products, Inc., 3835 W. 150th St., Cleve-land 11, Ohio Wirt Co., 5221 Greene St., Philadelphia, Pa.
- RHEOSTATS
- Acme Electric Heating Co., 1217 Washington Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
  Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis.
  Amalgamated Electronics, Clinton Corners, N. Y.
  BETA ELECTRONICS CO., 1762 Third Ave., New York 29, N. Y. SEE ADV. PG., 126.
  Biddle Co., James G., 1316 Arch St., Phila. 7 Pa.

- Biddle Co., James G., 1810 Alth St., Find. 7, Pa.
  Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
  CENTRALAB, Div., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
  Chicage Telephone Supply Corp., 1142 W. Beards-
- Chicago Telephone Supply Corp., 1142 W. Beards-

- Chicago Telephone Supply Corp., 1142 W. Beardsley Ave., Elkhart, Ind.
  Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio
  Clarostat Míg. Co., Inc., 130 Clinton St., Brooklyn 2, N. Y.
  Columbia Electric Míg. Co., 4519 Hamilton Ave. N.E., Cleveland 14, Ohio
  Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee 1, Wis.
  Daven Co. 191 Central Ave., Newark 4, N. J.
- waukee 1, Wis. Daven Co., 191 Central Ave., Newark 4, N. J.

- DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y. Eastern Specialty Co., Phila. 40, Pa. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- Gale Dorethea, 37-61 85th St., Jackson Heights,
- L. I., N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,
- 115. Hardwick, Hindle Inc., 40 Hermon St., New-
- ark, N. J.
  HELIPOT CORP., 1011 Mission St., S. Pasadena, Calif. SEE ADV. PG. 25.
  I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Philadelphia 30, Pa. SEE ADV. PGS. 48, 49.
- 43, 49.
  INTERNATIONAL RESISTANCE Co., 401 N. Broad St., Phila. 8, Pa. SEE ADV. PG. 113.
  MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.

- PGS. (1-14.
  Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
  NATIONAL CARBON CO., INC., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y. SEE ADV. PG. 57.
  OHMITE MANUFACTURING CO., 4835 W. Flournoy St., Chicago 44, Ill. SEE ADV.
  PG. 201
- PIG. 201.
  REX REHOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. SEE ADV. PG. 186.
  Rubicon Co., 3751 Ridge Ave., Phila., Pa.
  Schaefer Bros. Co., 1059 W. 11th St., Chicago, 10

- III. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Technology Instrument Corp., 1058 Main St., Waltham, Mass. Thuring Albert Instrument Co., 5351 Pulaski Ave.,

- Thimg-Albert Instrument Co., obst Future, Philadelphia 44, Pa.
   Trimm, Inc., 400 W. Lake St., Libertyville, Ill.
   WARD LEONARD ELECTRIC CO., 31 South St., Mount Vernon, N. Y. SEE ADV. PG. 151.

## **RHEOSTATS**—Slide Wire

- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass
- Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles 15, Calif. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- Hardwick, Hindle Inc., 40 Hermon St., Newark,
- HELIPOT CORP., 1011 Mission St., So. Pasadena, Calif. SEE ADV. PG. 25. Leeds & Northrup Co., 4970 Stenton Ave., Phila.

Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. SEE ADV. PG. 201.
REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. SEE ADV. PG. 186.
Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44. Pa.

- Philadelphia 44, Pa. Welwyn Electronic Components, Inc., 234 E. 46th St., New York 17, N. Y.

# **RINGS**—Carbon Packing

- Electro-Nite Carbon Co., 1133 E. Columbia Ave.,
- Phila. 25, Pa. GRAPHITE METALIZING CORP., 1041 Nepper han Ave., Yonkers 3, N. Y. SEE ADV. PG. 177

- 177.
  Pure Carbon Co., St. Marys, Pa.
  St. Mary's Carbon Co., State Rd., St. Marys, Pa.
  Speer Carbon Co., Lincoln Ave., St. Marys, Pa.
  Stackpole Carbon Co., St. Marys, Pa.
  WEBSTER SPRING CORP., 97 S. 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.

## **RINGS**—Collector

- Baker Co., Inc., 113 Astor St., Newark 5, N. J. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. MAKEPEACE CO., D. E., Attleboro, Mass. SEE
- ADV. PG. 84. Plastic Manufacturers, Inc., 280 Fairfield Ave.,
- Stamford, Conn. WEBSTER SPRING CORP., 97 S. 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.

## **RINGS—Oil Sealing**

- Auburn Mfg. Co., Middletown, Conn.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Phila. 44, Pa.
  Pure Carbon Co., St. Marys, Pa.
  Sealol Corp., 45 Willard St., Providence 5, R. I.
  WEBSTER SPRING CORP., 97 S. 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.

### **RINGS**—Retaining

RIVETS

N. Y.

Ohio

RUBBER

See Insulation Materials June, 1949 --- MID MONTH --- ELECTRONICS BUYERS' GUIDE

- RINGS—Retaining
  Auburn Mfg. Co., Middletown, Conn.
  Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
  Garrett Co., Inc., George K., 1421 Chestnut St., Philadelphia 2, Pa.
  Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
  National Lock Washer Co., 40 Hermon St., New-ark 5, N. J.
  Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa.
  Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Waldes Kohinoor Inc., Long Island City 1, N. Y.
  WEBSTER SPRING CORP., 97 S. 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232. Atlas Tack Corp., Pleasant St., Fairhaven, Mass. Autoscrew Co., 216-222 W. 18th St., New York,

Chase Brass & Copper Co., Inc., Waterbury 91,

Conn. Cherry Rivet Co., 231 Winston St., Los Angeles 13, Calif. Chicago Rivet & Machine Co., 9600 W. Jack-

son Blvd., Chicago, Ill. du Pont de Nemours & Co., Inc., E. I., Wilming-

ton 98, Del. Federal Screw Products Co., 224 W. Huron St.,

Chicago 10, Ill. General Cement Mfg. Co., 919 Taylor Ave.,

General Cement Mig. Co., 919 Taylor Ave., Rockford, Ill. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Harper Co., H. M., 2620 Fletcher St., Chicago 18, Ill.

Hassall Inc., John, Clay & Oakland Sts., Brooklyn

22, N. Y. Milford Rivet & Machine Co., Milford, Conn. National Screw & Mfg. Co., The, Cleveland 4,

Plume & Atwood Mfg. Co., Waterbury, Conn. Progressive Mfg. Co., 52 Norwood St., Torrington, Conn.

Conn. Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio Russell, Burdsall & Ward Bolt and Nut Co., Midland Ave., Port Chester, N. Y. Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif. Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill. Stimpson Co., Inc., Edwin B., 74 Franklin Ave.

b, III. Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y. Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, III. Tubular Rivet & Stud Co., Wallaston 70, Mass. Waterbury Companies, Inc., Waterbury 90, Conn.

See Insulation Materials

# SCALES—Oscilloscope

- Cossar (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada. Du Mont Labs., Inc., Allen B., 2 Main Ave.,
- Passaic, N. J. Feiler Engineering Co., 945 W. George St.,
- Feiler Engineering Co., 1970 Chicago 14, Ill. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Heath Co., Benton Harbor, Mich. Millen Mfg. Co., James, 150 Exchange St., Moldan Mass
- Millen Mig. co., Canton, Malden, Mass. Printloid Inc., 95 Mercer St., New York, N. Y. Sun Dial Corp., E. Passaic Ave., Caldwell Town-
- ship, N. J. WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. SEE ADV.

## SCANNERS — Reflected & Transmitted Light

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brock-
- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
   FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
   Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 22, Mass.

- Mass.
   McElroy Mfg. Corp., Littleton, Mass.
   O'Connor & Co., John T., West Orange, N. J.
   Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
   Radio Inventions Inc., 155 Perry St., New York
   M. V.
- Ripley Co., Inc., P. O. Box 31, Middletown, Conn. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# SCRAMBLERS—Speech

- Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
  Lynch Co., F. W., 151 2nd St., San Francisco, Calif.
- McMurdo Silver Co., Inc., 1240 Main St.,
- Hartford 3, Conn.

#### SCREWDRIVERS AND SMALL INSULATED TOOLS

See Tools

## SCREWS

- Aerolite Electronic Hardware Corp., 24 Cliff
- St., Jersey City, N. J. Alden Products Co., 117 No. Main St., Brockton 64, Mass. ALLEN MFG. CO., Hartford, Conn. SEE ADV.
- 209
- ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG. 32.
- Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa.
- Pa. American Screw Co., Providence, R. I. Automatic Metal Products Co., 315 Berry St., Brooklyn 1, N. Y. Autoscrew Co., 216-222 W. 18th St., New York, N. Y. Central Screw Co., 3501 Shields Ave., Chicago 9 III

- 9, Ill. Chandler Products Co., 1491 Chardon Rd., Cleveland, Ohio Chase Brass & Copper Co., Inc., Waterbury 91,
- Continental Screw Co., New Bedford, Mass. Corbin Screw Div., American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.

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- Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill. General Cement Mfg. Co., 919 Taylor Ave.,
- Rockford, Ill.

- Rockford, III. Harper Co., H. M., The, 2620 Fletcher St., Chicago 18, III. Heli-Coil Corporation, 47-23 35th St., Long Island City 1, N. Y. Hubbell Inc., Harvey, Bridgeport 2, Conn. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80 80.
- International Merit Products Corp., 254 W. 54th St., New York 19, N. Y. Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio.
- Locke Incorporated, P. O. Box 57, Baltimore
- 3, Md.
- o, Mu. Milford Rivet & Machine Co., Milford, Conn. National Screw & Mfg. Co., The, Cleveland 4, Ohio
- New England Screw Co., Keene, New Hampshire
- Engineering Co., 110 Pleasant St., Osgood Malden, Mass. Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago
- 50, Ill.
- Brogressive Mfg. Co., 52 Norwood St., Torrington, Conn.
  Russell, Burdsall & Ward Bolt & Nut Co., Midland Ave., Port Chester, N. Y.
  St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15 Mo.

- St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Scovill Mfg. Co., Waterville Screw Prods. Div., Waterbury, Conn.
  Shakeproof Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
  Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y.
  Southington Hardware Mfg. Co., Southington, Conn.
- Conn.

- Conn. Standard Pressed Steel Co., Jenkintown, Pa. Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill. Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, Ill. United Screw & Bolt Corp., 2513 W. Culler-ton St., Chicago 8, Ill. Vallorbs Jewel Co., Lancaster, Pa. Waltham Screw Co., 77 Rumford Ave., Waltham, Mass.
- Mass.

# SCREWS—Self-Tapping

- ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG. 32.

- PG. 32.
  American Screw Co., Providence, R. I.
  Central Screw Co., 3501 Shields Ave., Chicago 9, Ill.
  Continental Screw Co., New Bedford, Mass.
  Corbin Screw Div., Amer. Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.
  Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Illi Lamson & Sesions Co., 1971 W. 85th St.,
- Cleveland, Ohio Milford Rivet & Machine Co., Milford, Conn. National Screw & Mfg. Co., The, Cleveland 4,
- Ohio New England Screw Co., Keene, New Hamp-shire
- Parker-Kalon Corp., 200 Varick St., New York 14, N. Y. Pheol Mfg. Co., 5700 Roosevelt Rd., Chicago

- Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, III.
  Russell, Burdsall & Ward Bolt and Nut Co., Midland Ave., Port Chester, N. Y.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Cal.
  Scovill Mfg. Co., Waterville Screw Prods. Div., Waterbury, Conn.
  Shakeproof Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Southington Hardware Mfg. Co., Southington, Conn.

- Conn.

Sterling Bolt Co., 209 W. Jackson Blvd., Chi-

SEALS

- cago 6, Ill. Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, Ill. United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.

# SCREWS-Set

- ALLEN MFG. CO., Hartford, Conn. SEE ADV. G. 209.
- ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG. 32.
- Autoscrew Co., 216-222 W. 18th St., New York 11, N. Y. Bristol Co., The, Waterbury 91, Conn. Central Screw Co., 3501 Shields Ave., Chicago
- 9. Ill.
- 9, 11. Corbin Screw Div., American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn. Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill. General Cement Mfg. Co., 919 Taylor Ave., Rockford III
- Rockford, Ill.
- Harper Co., H. M., The, 2620 Fletcher St., Chicago 18, Ill.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Lamson & Sessions Co., 1971 W. 85th St., Cleve-land Obia.
- land, Ohio National Screw & Mfg. Co., The, Cleveland 4, land, Ohio
- New England Screw Co., Keene, New Hampshire Pheoli Mfg. Co., 5700 Roosevelt Rd., Chicago
- New England Screw Co., Keene, New Hampshire Pheoli Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
  Russell, Burdsall & Ward Bolt and Nut Co., Midland Ave., Port Chester, N. Y.
  St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Cal.
  Shakeproof Inc., Div. of Ill. Tool Wks. 2501 N. Keeler Ave., Chicago 39, Ill.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Standard Pressed Steel Co., Jenkintown, Pa.
  Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill.
  Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, Ill.
  United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
  Waltham Screw Co., 77 Rumford Ave., Waltham, Marc

Waltham Screw Co., 77 Rumford Ave., Waltham,

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Phila. 25, Pa.
NATIONAL CARBON CO., INC., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. SEE ADV. PG. 57.
Pure Carbon Co., St. Marys, Pa.
St. Mary's Carbon Co., State Road, St. Marys, Pa.

Fai.
 Sealol Corp., 45 Willard Ave., Providence 5, R. I.
 U. S. Graphite Co., Div. of The Wicks Corp., 1621 Holland Ave., Saginaw, Mich.

Fusite Corp., Carthage at Hannaford, Cincinnati

Electrical Industries, Inc., 42 Summer Ave., New

ELECTRO-SEAL CORP., 946 Lee St., Des Plaines, III. SEE ADV. PG. 90. FEDERAL TELEPHONE AND RADIO CORP., 100

Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Fredericks Co., Geo. E., Bethayres, Pa. General Ceramics & Steatite Corp., Keasbey,

Hermaseal Co., Inc., Riverside Dr., Elkhart, Ind. HERMETIC SEAL PRODUCTS CO., 29.37 South 6th St., Newark, N. J. SEE ADV. PG. 223. Locke Incorporated, P. O. Box 57, Baltimore 3,

Mykroy, Inc., Arlington Heights Airport, Arling-ton Heights, Ill.

Radio Development & Research Co., 26 Cornell-son Ave., Jersey City, N. J.

D-129

Corning Glass Works, Corning, N. Y.

Mass.

St. 1. Pa.

SEALS—Carbon

SEALS—Hermetic

12. Ohio

York.

N. J.

Md.

# SEALS

- STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa.
- STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.
  Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 3, Calif.
  United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England
  Vitroseal Corp., The, 918 Oak St., Wyoming, Cincinnati 15, Ohio
  Wheaton Co., T. C., Industrial Division, 220 G Street, Millville, N. J.

### SEALS-Metal-to-Glass

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. Allegheny Ludlum Steel Corp., Pittsburgh 22,
- Pa. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. CHATHAM ELECTRONICS CORP., 475 Washing-ton St., Newark 2, N. J. SEE ADV. PG. 28. Corning Glass Works, Corning, N. Y. ELECTRICAL INDUSTRIES, INC., 42 Summer Ave., Newark 4, N. J. SEE ADV. PG. 132. Electronic Products Co. 111 E. 3rd St., Mt.
- Electronic Products Co., 111 E. 3rd St., Mt. Vernon, N. Y. Fredericks Co., Geo. E., Bethayres, Pa.
- Fusite Corp., Carthage at Hannaford, Cincinnati 12, Ohio
- General Electronics, Inc., 101 Hazel St., Pater-son, N. J.
- Hermaseal Co., Inc., Riverside Drive, Elkhart, Ind.
- HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark, N. J. SEE ADV. PG. 223. Sheboygan X-Ray Co., 1135 Indiana St., Sheboy-
- Sheboygan X-Ray Co., 1135 Indiana St., Sheboygan, Wis.
  Sperti, Inc., Norwood Station, Cincinnati 12, Ohio
  STUPAKOFF CERAMIC & MFG. Co., Latrobe, Pa. SEE ADV. PG. 78.
  Titanium Alloy Mfg. Co., 111 Broadway, New York 6, N. Y.
  Triplett & Barton, Inc., 831 N. Lake St., Burbank, Calif.

- Dank, Cahr. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wheaton Co., T. C., Industrial Div., 220 G St., Millville, N. J.
- Xervac Instrument Co., 101 Vine St., Hartford 5, Conn.

## SEALS-Oil

- Armstrong Cork Co., Lancaster, Pa. Auburn Mfg. Co., Middletown, Conn. General Tire & Rubber Co., The, Silentbloc Div., Wabash, Indiana Sealol Corp., 45 Willard Ave., Providence 5, R. I.
- SELECTIVE CALLING APPARATUS
- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chi-
- cago 36, III. FEDERAL TELEPHONE AND RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEF. ADV. PGS. 129, 131, 133, 135.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
   Lick Badia Corp. 125 W. 17th St. New York
- Link Radio Corp., 125 W. 17th St., New York, N. Y.
- Motorola, Inc., 4545 W. Augusta Blvd., Chicago
- MOTOTOIA, INC., 2017 51, Ill. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
- Mass
- West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

## SERVOMECHANISMS

See Controls, Servo

#### SHAFTS

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. Beach Precision Parts Co., Boonton, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- D-130

- HAYDU BROS., Plainfield N. J. SEE ADV. PG. 209
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 88.
- SHAFTS—Flexible
- Breeze Corpns., 41 S. Sixth St., Newark 7, N. J. BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. Elliott Mfg. Co., 218 Prospect Ave., Binghamton,
- N. Y F. N

- N. Y. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG, 112. Johnson Co., E. F., Waseca, Minn. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
- 20, N. Y. STEWART MFG. CORP., F. W., 4311 Ravenswood Ave., Chicago 13, Ill. SEE ADV. PG. 172. Stow Mfg. Co., 445 State St., Binghamton, N. Y. Walker-Turner Co., Inc., 639 South Ave., Plain-
- field, N. J.
   WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. SEE ADV. PG. 191.

#### SHAPERS—Television Signal

- Telequip Radio Co., 1901 S. Washtenaw, Chicago,
- Television Equipment Corp., 238 William St., New York 7, N. Y.

## SHIELDING—Electrostatic

American Brass Company, Waterbury 88, Conn. Sisalkraft Co., The, 205 W. Wacker Drive, Chi-cago 6, Ill.

#### SHIELDING—Radio Ignition

- Alpha Wire Corp., 50 Howard St., New York 13, N. Y.
- American Brass Co., Waterbury 88, Conn. American Electric Cable Co., Holyoke, Mass. Breeze Corpns., Inc., 41 S. Sixth St., Newark, 7, N. J. Elliot Mfg. Co., 218 Prospect Ave., Binghamton,
- N. Y.
- Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif
- Call. Precision Tube Co., Inc., 3828 Terrace St., Phila-delphia 28, Pa. Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y.
- Searle Aero Industries, Inc., Orange, Calif.

## SHIELDING—Sheet or Screen

- Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa
- Sisalkraft Co., The, 205 W. Wacker Drive, Chicago 6, Ill.

#### SHIELDS—Capacitor

- Fishwick Radio Co., 423 Colorado Bldg., Washington, D. C. Paul & Beekman Inc., 1801 Cortland St., Phila.
- 40, Pa.

# SHIELDS-Cathode Ray Tube

- CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Heath Co., Benton Harbor, Mich. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass
- Mass
- WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Phila. 25, Pa. SEE ADV. PG. 146.

#### SHIELDS-Coil

- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Guthman, Inc., Edwin I., 15 S. Throop St., Chi-cago, Ill.
- cago, 111. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Miller Co., J. W., 5917 S. Main St., Los Angeles,

1949-1950 DIRECTORY of

- NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
   Paul & Beekman Inc., 1801 Cortland St., Phila.
- Paul & B 40, Pa. Worcester Pressed Aluminum Corp., 13-15 Hope
- Avenue, Worcester 3, Mass.

#### SHIELDS—Transformer

- Eastern Metals Industries, 250 W. 54th St., New
- Eastern Metals Industries, 200 W. Orth Sci. Ice. York 19, N. Y.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
  Paul & Beekman Inc., 1801 Cortland St., Phila-delphic 40. Pa
- delphia 40, Pa.
- Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 3, Calif. Worcester Pressed Aluminum Corp., 13-15 Hope Avenue, Worcester 3, Mass.

## SHIELDS-Tube

SHIFTER—Signal

24. III

Carmel, Il

SHUNTS—Meter

Mass.

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Aeronte Electronic Hardware Corp., 24 Chit St., Jersey City, N. J. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, III. SEE ADV. PG. 167. CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, III. SEE ADV. PG. 190. Eastern Metals Industries, 250 W. 54th St., New York 19, N. Y.
- Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.
- Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  Goat Co., Inc., Fred, 314 Dean St., Brooklyn, N. Y.
- N. Y. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PG. 105-108. Paul & Beekman Inc., 1801 Cortland St., Phila-delphia 40 Pa
- Paul & Beekman Inc., 1801 Cortland St., Phila-delphia 40, Pa.
  PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212.
  STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG, 188.
  Worcester Pressed Aluminum Corp., 13-15 Hope Avenue, Worcester 3, Mass.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24 UK

Measurement Engineering Ltd., Arnprior, Ontario,

Canada Meissner Mfg. Div., Maguire Industries, Inc., Mt.

Millen Mfg. Co., James, 150 Exchange St., Malden,

Associated Research, Inc., 3758 W. Belmont, Chicago 18, 111. BALLANTINE LABS. INC., Boonton, N. J. SEE ADV. PG. 134.

Bradshaw Instruments Co., 348 Livingston St.,

Bradshaw Instruments Co., 348 Livingston St., Brooklyn 17, N. Y.
Burlington Instrument Co., Burlington, Iowa Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181.
Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska
Sterline-Angus Co., Inc. P. O. Box 596 Indiana-

Esterline-Angus Co., Inc., P. O. Box 596, Indiana-

GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.

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Hickok Electrical Instrument Co., 10514 Dupont

Ave., Cleveland, Ohio INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. SEE ADV. PG, 113. Lewis Engineering Co., 52 Rubber Ave., Nauga-

tuck Conn MARION ELECTRICAL INSTRUMENT CO., Man-

chester, N. H. SEE ADV. PG. 79. Measurement Engineering Ltd., Arnprior, Ontario,

Canada Nilsson Electrical Lab. Inc., 103 Lafayette St., New York 13, N. Y.

- Sensitive Research Instrument Corporation, 9 Elm Ave., Mt. Vernon, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
- Simpson Electric Co., 5218 W. Kinzie Street, Chi-
- cago 44, Ill. Triplett Electric Instrument Co., 286 Harmon
- Triplett Electric Instrument Co., 286 Harmon Road, Bluffton, Ohio
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67,
   WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- SIGNAL SHIFTER

See Shifter, Signal

#### SILICON

See Metals

## SILICONE—Compounds

See Insulating Compounds

## SLEEVES—Antenna Copper Splicing

Buchanan Electrical Products Corp., 1290 Central Ave., Hillside, N. J. Hope Webbing Co., Providence 1, R. I. Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.

# SOCKETS—Battery

- Alden Products Co., 117 No. Main St., Brockton Mass
- 64, Mass.
  CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, 11, SEE ADV. PG. 190.
  Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  United Carr Fastener Corp., Cambridge 42, Mass.

#### SOCKETS—Crystal

- Alden Products Co., 117 No. Main St., Brock-Mass
- AMERICAN PHENOLIC CORP., 1830 S. 54th
- AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
  Eby, Inc., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.
  Franklin Mfg. Corp., A. W. 43-20 34th St., Long Island City, N. Y.
  Johnson Co., E. F., Waseca, Minn.
  Millen Mfg. Co., James, 150 Exchange St., Mal-den, Mass.

- den, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.

# SOCKETS—Dial and Pilot Light

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alden Products Co., 117 No. Main St., Brock-
- ton 64, Mass. DIAL LIGHT COMPANY OF AMERICA, INC., 900
- Broadway, New York 3, N. Y. SEE ADV. PG.
- 220.
  DRAKE MFG. CO., 1713 Hubbard St., Chicago, Ill. SEE ADV. PG. 58.
  Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  General Comput Mir. Co., 910 Taulos Ang. Back
- General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill.

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- Johnson Co., E. F., Waseca, Minn. Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa. Morse Co., Frank W., 1300 Soldiers Rd., Bos-ton 35, Mass.
- Rogan Bros., 2500 W. Irving Pk., Chicago 18,
- ĬĪI.
- III.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Ucinite Co., The, Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.

# SOCKETS-Microwave Tube

- Johnson Co., E. F., Waseca, Minn. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.

# SOCKETS-Miniature Sockets & Connectors

- Alden Products Co., 117 No. Main St., Brock-
- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG, 167.
  Buggie & Co., H. H. 2141 Madison Ave., Toledo 1, Ohio
  Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
  CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
  DIAL LIGHT CO. OF AMERICA, 900 Broadway, New York 3, N. Y. SEE ADV. PG. 220.
  Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.
  Electrical Insulation Co., Inc., 12 Vestry St. New

- Electrical Insulation Co., Inc., 12 Vestry St., New
- York, N. Y. Franklin Mig. Corp., A. W., 43-20 34th St., Long Island City, N. Y. General Cement Mig. Co., 919 Taylor Ave., Rockford, Ill.

- Rockford, III. General Electronics, Inc., 101 Hazel St., Pater-son, N. J. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Johnson Co., E. F., Waseca, Minn. Kulka Electric Mfg. Co. Inc., 30 South St., Mt. Vernon, N. Y. Marco Industries Co., 210 So. Clementine, Anaheim, Calif.
- Anaheim, Calif. Maritime Quality Hardware Co., Inc., Belfast,
- Methode Mfg. Corp., 1733 N. Milwaukee Ave., Chicago 47, Ill. Miller Mfg. Co., James, 150 Exchange St., Mal-

Miller Mig. Co., James, 150 Exchange St., Malden, Mass.
 Morse Co., Frank W., 1300 Soldiers Rd., Boston 35, Mass.
 NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
 Rogan Bros., 2500 W. Irving Pk., Chicago 18, III.

III. RUSSELL & STOLL CO., INC., 125 Barclay St., New York 7, N. Y. SEE ADV. PG. 225. Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

#### SOCKETS—Tube

- Alden Products Co., 117 No. Main St., Brockton

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
  CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
  Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
  Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.
  Eitel-McCullough, Inc., San Bruno, California
  Electrical Insulation Co., Inc., 12 Vestry St., New York, N. Y.
  Electro-Connector Corp., 110 W. Oxford St., Phila. 22, Pa.
- Phila. 22, Pa.

Electronic Mechanics, Inc., 70 Clifton Blvd.,

- Electronic Mechanics, Inc., 70 Chitton Biva., Clifton, N. J.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  General Electronics, Inc., 101 Hazel St., Pater-son, N. J.
- son, N. J. Howard Mfg., Corp., 1401 S. Main St., Council
- Howard Mig., Corp., 1401 S. Main St., Counch Bluffs, Iowa
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Johnson Co., E. F., Waseca, Minn.
  Methode Mig. Corp., 1733 N. Milwaukee Ave., Chicago 47, Ill.
  Millen Mfg. Co., James, 150 Exchange St., Mal-

- Millen Mfg. Co., James, 150 Exchange St., Mal-den, Mass.
- den, Mass. Mykroy, Inc., Arlington Heights Airport, Arling-ton Heights, Ill. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PG. 105-108, Network Mfg. Corp., Bayonne, N. J. Remler Co., Ltd., 2101 Bryant St., San Francis-co. 10. Calif.

SOLDER

Pa.

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SOLDER-Platinum

192.

- Network Mfg. Corp., Bayonne, N. J.
  Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
  Ucinite Co., The, Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  United Carr Fastener Corp., Cambridge 42, Mass.
  WATERMAN PRODUCTS CO., INC., 2445-63
  Emerald St., Phila. 25, Pa. SEE ADV. PG. 146.
  Yates Engineering Services, Box 67, Cranford, N. J.

Aluminum Co. of America, Gulf Bldg., Pittsburgh,

Alpha Metals, Inc., 363 Hudson Ave., Brook-lyn 1, N. Y.

Alpin J. N. Y.
 BRITISH INDUSTRIES CORF., 315 Broadway, New York 7, N. Y. SEE ADV. PG. 81.
 Chase Brass & Copper Co., Inc., Waterburg 91,

Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.

22, 111.
Dunton, M. W. Company, The, 670 Eddy Street, Providence, Rhode Island
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y.
Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa

Pa.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Glaser Lead Co., Inc., 31 Wycoff Ave., Brooklyn, N. Y.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa
KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 33, Ill. SEE ADV. PG. 150.
L & R Mfg. Co., 577 Elm St., Arlington, N. J.
MULTICORE SOLDERS LTD., Mellier House, Albemarte St. London, W. L. England, SEE ADV.

bemarle St., London, W. I. England. SEE ADV.

National Lead Co., 111 Broadway, New York 6,

National Lead Co., 111 Broadway, New 10TK 0, N. Y.
New York Solder Co., 684 E. 133rd St., New York 54, N. Y.
Ruby Chemical Co., 68 McDowell St., Colum-bus 1, Ohio
SOLDERING SPECIALTIES CO., Summit, N. J. SEE ADV. PG. 56.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
Tricon Mfg. Co., 8318 S. Racine Ave., Chicago, III.

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG.

Baker Co., Inc., 113 Astor St., Newark 5, N. J.
Cohn Corp., Sigmund, 44 Gold St., New York, N. Y.
Eastern Smelting & Refining Corp., 107-109 W.

Brookline St., Boston 18, Mass. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.

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SOLDER

1949-1950 DIRECTORY of

- Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill. MAKEPEACE CO., D. E., Attleboro, Mass. SEE
- ADV. PG. 84. EY CO., J. M., 179 Elm St., Hartford, Conn.
- ADV. PG. 84. NEY CO., J. M., 179 Elm St., Hartford, Conn. SEE ADV. PG. 56. SOLDERING SPECIALTIES CO., Summit, N. J. SEE ADV. PG. 58.
- Tricon Mfg. Co., 8318 S. Racine Ave., Chicago,
- III. Wildberg Bros., Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

# SOLDER—Rings and Preforms

Alpha Metals, Inc., 363 Hudson Ave., Brooklyn 1,

- AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.
- Division Lead Co., 836 W. Kinzie St., Chicago 22. Ill.
- Electronic Specialties Mfg. Co., 125 N. Main St.,
- Electronic Specialties Mig. Co., 125 N. Main St., Elkhart, Indiana Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn, N. Y.

- Goldsmith Bros. Smelting & Refining Co., 109
- Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill.
  KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 33, Ill. SEE ADV. PG. 150.
  Krieg & Co., Charles W., 52 Dickerson St., Newark, N. J.
  MAKEPEACE CO., D. E., Attleboro, Mass. SEE ADV. PG. 84
- ADV. PG. 84. National Lead Co., 111 Broadway, New York 6,
- SOLDERING SPECIALTIES CO., Summit, N. J. SEE ADV. PG. 58.
- Tricon Mfg. Co., 8318 S. Racine Ave., Chicago, Ilì.

## SOLDER—Silver

- AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.
- Baker Co., Inc., 113 Astor St., Newark 5, N. J. Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn. Division Lead Co., 836 W. Kinzie St., Chicago 22. Ill.
- 22, Ill.
  Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
  Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y.
  GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
  Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill.
- Wabash Ave., Chicago, III. HANDY & HARMAN, 82 Fulton St., New York 7, N. Y. SEE ADV. PG. 204. MAKEPEACE CO., D. E., Attleboro, Mass. SEE

- ADV. PG. 84. SOLDERING SPECIALTIES CO., Summit, N. J. SEE ADV. PG. 58. Tricon Mfg. Co., 8318 S. Racine Ave., Chicago,
- TH Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

#### SOLDERING GUNS

See Tools, Soldering Guns

## SOLDERING IRONS-Electric

See Irons, Electric Soldering

## SOLENOIDS

- Adel Precision Products Corp., 10777 Van Owen St., Burbank, Calif.
- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- Pa
- Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis. Automatic Electric Sales Corp., 1033 W. Van
- Buren St., Chicago 7, Ill.

- Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
- Bittermann Electric Co., Box 665, Canaan, Conn. Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
- Cannon Electric Development Co., 3209 Humboldt
- St., Los Angeles 31, Calif. Cook Electric Co., 2700 Southport Ave., Chicago, Ill.
- Cooper Co., Clark, 374 N. Market St., Palmyra, N. J. Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee
- 1, Wis.
- 1, WIS. Davis & Co., Dean W., Kentland, Ind. Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.
- Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, 111
- Foster Transformer Co., Inc., 3820 Colerain Ave.,
- Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
  General Controls Co., Gendale 1, Calif.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, Ill. SEE ADV. PG. 60.
  Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
  INSTRUMENT RESISTORS CO., 1036 Commerce Ave. Union N. J. SFE ADV. PG. 113.

- Ave., Union, N. J. SEE ADV. PG. 113. Kurman Electric Co., Inc., 35-18 37th St., L. I.
- City 1, N. Y. Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif. Leland, Inc., G. H., 123 Webster St., Dayton 2,
- Ohio McQuay-Norris Mfg. Co., 2320 Marconi Ave., St.
- Louis 10, Mo. Magnavox Co., The, Components Div., Fort Wayne 4, Indiana Magnetic Devices Corp., 232 Broad Ave., Palisades

- Wayne 4, Indiana
  Magnetic Devices Corp., 232 Broad Ave., Palisades Park, N. J.
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y.
  Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  PHILLIPS CONTROL CORP., 84 W. Jefferson St., Joliet, III. SEE ADV. PG. 164.
  PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130.
  Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y.
  R. B. M. Div., Essex Wire Corp., Logansport, Ind. Reister Mfg. Co., John A., 640 Broad St., Trenton 2, N. J.
  STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219.
  Struthers-Dunn, Inc., 150 N. 13th St., Phila. 7, Pa.
- Pa.
- Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

## SOLENOIDS—Rotary

- Cooper Co., Clark, 374 N. Market St., Palmyra, N. J. Foster Transformer Co., Inc., 3820 Colerain Ave.,
- Cincinnati 23, Ohio Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y. Leland, Inc., G. H., 123 Webster St., Dayton 2,
- Ohio Magnavox Co., The, Components Div., Fort Wayne Ind.
- Radio Condenser Co., Camden, N. J.

# SONIC LOCATING EQUIPMENT

- Arlington Electric Products, Inc., 500 W. 52nd
- Arinigton Leichte Fronders, Inc., 500 W. Dana St., New York 19, N. Y.
   Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, N. Hollywood, Calif.
   Crystal Research Labs., Inc., 29 Allyn St., Hart-Court Court Co
- ford, Conn.
- Edo Corp., College Point, Long Island, N. Y. Melpar, Inc., 452 Swann Ave., Alexandria, Va. Southwestern Industrial Electronic Co., 2831 Post
- Oak Rd., Houston 19, Texas Triplett & Barton, Inc., 831 N. Lake St., Burbank, Calif.

#### SORTERS—Electronic

See Controls-Counting & Sorting

## SOUND SYSTEMS—Complete

- Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, Ill.
- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y. American Communications Corp., 306 Broadway,
- New York 7, N. Y.
- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-dale, Calif.
- Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Audar Inc., Argos, Indiana
- Audio Equipment Co., Inc., 80-20 45th Ave., Elm-hurst, N. Y.
- nurst, N. Y.
  Bardwell & McAllister, Inc., P. O. Box 1310, Hollywood, Calif.
  Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio
- Bogen Co., David, 663 Broadway, New York 12, Ň. Y.
- N. Y. Boom Electric & Amplifier Co., 1227 W. Wash-ington Blvd., Chicago 7, Ill. Califone Corp., 1041 N. Sycamore Ave., Holly-
- Califone Corp., 1 wood 38, Calif.
- Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
- neld, N. J.
  Communication Equipment & Engineering Co., 5646 W. Race St., Chicago 44, Ill.
  Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.
  Continental Electronics, Ltd., 252 Norman Ave.,

Brooklyn 22, N. Y. Dilks Co., Seymour, Conn. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. Electronic Systems Co., 201 N. Wells St., Chicago

1, 11. Executone, Inc., 415 Lexington Ave., New York 17, N. Y. Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y. Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa. Gale Dorethea, 37-61 85th St., Jackson Heights, L. I., N. Y.

L. I., N. Y. Globe Phone Mfg. Co., 2 Linden St., Reading,

Mass.
Marsis Mfg. Co., 2422 W. Seventh St., Los Angeles 5, Calif.
Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y.
Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
Lincrophone Co., Inc., 226 Lansing St., Utica,

N. Y. Miles Reproducer Co., Inc., 812 Broadway, New

York, N. Y. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa. M. P. Concert Installations, Fairfield 10, Conn.

National Intercommunicating Systems, 1531 Devon

Ave., Chicago 26, 11. Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. Operadio Mig. Co., 135th & Indiana St., St. Checker III.

RADIO CORP. OF AMERICA, RCA Victor Div

Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio-Music Corp., Port Chester, N. Y. Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.

Rauland-Borg Corp., 4245 N. Knox Ave., Chicago 41, Ill. Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. Riggs & Jeffreys, Inc., 140 Glenridge Ave., Mont-

Riggs & Jenteys, Inc., Ave Conserved Clair, N. J. Rosen Engineering Products, Inc., Raymond, 32nd & Walnut St., Phila. 4, Pa. Rowe Industries, 1702 Wayne St., Toledo 9,

Schulmerich Electronics, Inc., Sellersville, Pa. Seeburgh Corp., J. P., 1500 N. Dayton Ave., Chi-cago 22, Ill.

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Charles, ाग

Ohio

- Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
  Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y.
  SOS Cinema Supply Corp., 602 W. 52 St., New York 19, N. Y.
  Speak-O Phone Recording & Equipment Co., 22

- Speak-O-Phone Recording & Equipment Co., 23
  W. 60th St., New York, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Stark Sound Engrg. Corp., 2131 Fairfield, Fort
- Wayne 7, Ind. Stromberg-Carlson, Rochester, N. Y. Television Projects, Inc., 3660 Coral Way, Miami
- 35, Fla. Terminal Radio Corp., 85 Cortland St., New York
- 7, N. Y. Webster Electric Co., 1900 Clark St., Racine, Wis. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Western Sound & Electric Labs., Inc., 805 S. 5th
- Street, Milwaukee 4, Wis.

## SOURCES-Alpha Ray

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schenectady D, N. Y. SEE ADV. PGS. 5-18. Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill. Television Equipment Corp., 238 William St., New York 7, N. Y. U. S. Radium Corp., 535 Pearl St., New York 7 N V

- 7, N. Y.

# **SPEAKERS**

#### See Loudspeakers

#### SPECTROMETERS-Mass

- Consolidated Engineering Corp., 620 N. Lake
- Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif.
  Distillation Products, Inc., Vacuum Equip. Div., 755 Ridge Rd. W., Rochester, N. Y.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St. Brooklyn 2, N. Y. SEE ADV. PG. 63.
  Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

# SPECTROMETERS and SPECTOGRAPHS

- Applied Research Laboratories, 4336 San Fer-
- Applied Research Laboratories, 4556 San Fernando Rd, Glendale 4, Calif.
   Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
   Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.
- Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
- Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y. Gaertner Scientific Corp., 1201 Wrightwood Ave.,
- Chicago 14, Ill. Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass
- Mass. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. National Technical Lab., 820 Mission St., S. Pasadena, Calif. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. Perkin-Elmer Corp., The, Glenbrook, Conn. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227.

# **SPECTROPHOTOMETERS**

- Applied Physics Corp., 40 South Oak Knoll Ave., Pasadena 1, Calif.
- Ave., Pasadena 1, Cant. Baird Associates, Inc., 33 University Rd., Cam-bridge 38, Mass. Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. Coleman Instruments, Inc., 318 Madison St., Mauwed III
- Maywood, Ill. Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.

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- Gaertner Scientific Corp., 1201 Wrightwood Ave., General Electric Co., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Jarrell-Ash Co., 165 Newbury St., Boston 16,
- Mass. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. National Technical Lab., 820 Mission St., South
- Pasadena, Calif.

# SPECTROSCOPIC SOURCE UNITS

- Baird Associates, Inc., 33 University Ave., Cambridge 38, Mass. Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. Jarrel-Ash Co., 165 Newberry St., Boston 16,
- Mass
- Mellaphone Corp., Rochester 2, N. Y. National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland, Ohio

#### SPEEDOMETERS—Electric

- Metron Instrument Co., 432 Lincoln St., Denver
- 9, Colo. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Rowe Engineering Corp., 2422 N. Pulaski Road,

#### SPRINGS

- Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill. American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Barnes-Gibson-Raymond Div. of Associated Spring Corm. 6100 Millor Avio. Detroit 11 Migh
- Corp., 6400 Miller Ave., Detroit 11, Mich. Chatillon & Sons, John, 93 Cliff St., New York
- 7, N. Y. Cuyahoga Spring Co., 10272 Berea Rd., Cleve-
- land, Ohio Dzus Fastener Co. Inc., Box 785, Babylon, N. Y. Elliot Mfg. Co., 218 Prospect Ave., Binghamton,
- Garrett Co., I Phila. 2, Pa. Inc., G. K., 1421 Chestnut St.,
- General Cement Mfg. Co., 919 Taylor Ave., Rock-
- General Cement Mig. Co., 919 Taylor Ave., Rock-ford, Ill. Gibson Co., Wm. D., Div. of Associated Spring Corp., 1800 Clybourn Ave., Chicago, Ill. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209.
- Hoffman Engineering Corp., Anoka, Minn. Hubbard Spring Co., M. D., Central Ave., Pontiac, Mich.

tiac, Mich.
Hunter Pressed Steel Co., Lansdale, Pa.
Hunter Spring Co., Langdale, Pa.
Instrument Specialties Co. Inc., 254 Bergen Blvd., Little Falls, N. J.
J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
Jones Spring Co., W. B., 124 E. 7th St., Cin-cinnati. Ohio

- Brooklyn, N. Y. SEE ADV. PG. 112.
  Jones Spring Co., W. B., 124 E. 7th St., Cincinnati, Ohio
  Manross & Sons, F. N., Div. of Associated Spring Corp., Bristol, Conn.
  Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.
  Peck Springs Co., 9 King St., Plainville, Conn.
  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
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  WEBSTER SPRING CORP., 97 S. 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.
  Wickwire Spencer Steel Div., The, Colorado Fuel and Iron Corp., The, 500 Fifth Avenue, New York 18, N. Y.

# SPRINGS-Antenna Tension

- Aeronautical Radio Mfg. Co., 155 First St., Mineola, N. Y.
  American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bidg., Cleveland 13, Ohio
  Barnes-Gibson-Raymond Div., Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
  Birnbach Radio Co. Inc., 145 Hudson St., New Varia N. Y.
- York, N. Y.

General Cement Mfg. Co., 919 Taylor Ave., Rock-

General Cement Mig. Co., 919 Taylor Ave., ROCK-ford, Ill.
 United Carr Fastener Corp., Cambridge 42, Mass.
 WEBSTER SPRING CORP., 97 S. 5th St., Brook-lyn 11, N. Y. SEE ADV. PGS. 229, 233.

# SPRINGS-Instrument Hairsprings

- American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Barnes-Gibson-Raymond Div., Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209 Manross & Son, F. N., Div. of Associated Spring Corp., Bristol, Conn.
- Precision Products Co., 26 Bedford St., Waltham Mass.

WEBSTER SPRING CORP., 97 S. 5th St., Brooklyn 11, N. Y. SEE ADV. PGS. 229, 233.

#### SPRINGS—Precision

- Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
- All Weather Springs, 140 Cedar St., New York 6, N. Y.
- b, N. H.
   c, N. H.
   American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio
   Barnes-Gibson-Raymond Div., Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
   Chatillon & Sons, John, 93 Cliff St., New York
   7 N V
- 7, N. Y. CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- INSTRUMENT SPECIALTIES CO. INC., 254 Ber-gen Blvd., Little Falls, N. J. SEE ADV. PG. 180. 180. LEWIS SPRING & MFG. CORP., 2646 North Ave., Chicago 47, Ill. SEE ADV. PG. 44. Manross & Sons, F. N., Div. of Associated Spring Corp., Bristol, Conn. WEBSTER SPRING CORP., 97 S. 5th St., Brook-

lyn 11, N. Y. SEE ADV. PGS. 229, 233.

CONDENSER PRODUCTS CO., 1375 N. Branch St., Chicago 22, Ill. SEE ADV. PG. 214. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114-115. Herlec Corp., The, 422 N. Fifth St., Milwaukee

J, WIS. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. MacLeod & Hanopol, 10 Joiner St., Charles-town 29, Mass.

Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, 11. UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225.

STANDARDS EQUIPMENT—Calibration Radio Frequency Labs., Inc., Boonton, New

SIANDARDS---Frequency
Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio
AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 19, N. Y. SEE ADV. PG. 216.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. SEE ADV. PG. 175.
Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
CONDENSER PRODUCTS CO., 1375 Branch St.,

Kansas City 8, Mo. CONDENSER PRODUCTS CO., 1375 Branch St.,

Chicago 22, Ill. ELECTRONICS MEASUREMENTS CO., Red Bank,

ELECTRONICS MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172.
EL-TRONICS, INC., 2647 No. Howard St., Phila., 33, Pa. SEE ADV. PG. 189.
FREED TRANSFORMER CO., 1736 Weirfield St., Brooklyn 27, N. Y. SEE ADV. PG. 53.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114-115.

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STANDARDS—Capacitance

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STANDARDS-Frequency

# 1949-1950 DIRECTORY of

# **STANDARDS**

- Hathaway Instrument Co., 1315 S. Clarkson St.,
- Denver 10, Colo. HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Knights Co., James, 131 S. Wells St., Sandwich,
- LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182. Measurement Engineering Ltd., Arnprior, On-
- tario, Canada Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Monitor Products Co., 815 Fremont Ave., So.
- aen, Mass.
  Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif.
  Norrinan Labs, Ernst, Williams Bay, Wis.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
  Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y.
  Premier Crystal Labs., Inc., 79-89 Seventh Ave., New York 11, N. Y.
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
  SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Thermionic Engineering Corp., Pompton Plains, N. J.
  Timer, Faceimile Corp., 229, W. 43rd St. New

- N. J.
- Times Facsimile Corp., 229 W. 43rd St., New
- Times Facsimile Corp., 225 W. 401d Co., 1104 York, N. Y.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

# STANDARDS-Gamma Ray

- ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill. U. S. Radium Corp., 535 Pearl St., New York 7,
- VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227.

## STANDARDS-Inductance

- GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114-115. Leeds & Northrup Co., 4970 Stenton Ave., Phila-
- delphia 44, Pa.
- Precise Mfg. Co., 24-34 New Chambers St., New York 7, N. Y. S-W Inductor Co., 1056 N. Wood St., Chicago,

# STANDARDS—Laboratory Time

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114-115. GIBBS DIV., George W. Borg Corp., Delavan, Wis. SEE ADV. PG. 95. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

- LAVOIE LABORATORIES, Morganville, N. J. SEE
- ADV. PG. 182. Norman Labs., Ernst, Williams' Bay, Wis. Standard Electric Time Co., The, 89 Logan St., Springfield, Mass.

#### STANDARDS—Resistance

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- Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
  Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, III.
  Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
  Sensitive Research Instrument Corporation, 9 Elm Avenue, Mount Vernon, N. Y.
  Shallcross Mfg. Co., 10 Jackson Ave., Colling-dale, Pa.

- dale, Pa.

## STANDS-Microphone

- American Microphone Co., 370 So. Fair Oaks Ave., Pasadena 1, Calif.
  AMPERITE CO., 561 Broadway, New York 12, N. Y. SEE ADV. PG. 90.
  Art Specialty Co., 3245 Lake St., Chicago, Ill.
  Astatic Corp., The, Conneaut, Ohio
  Atlas Sound Corp., 1443 39th St., Brooklyn 18, N Y

- AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. ELECTRO-VOICE, INC., Buchanan, Mich. SEE
- ADV. PG. 195.

- ADV. PG. 195.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
  Racon Electric Co., Inc., 52 East 19th St., New York 3, N. Y.
  Simpson Mfg. Co., Mark, 32-28 49th St., Long Island City 3, N. Y.
  Special Products Co., Silver Spring, Md.
  TURNER CO., THE, 909 17th Street, N.E., Cedar Rapids, Iowa. SEE ADV. PG. 96.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

## STANDS—Speaker

- Atlas Sound Corp., 1443 39th St., Brooklyn 18,
- N. Y. Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
- Racon Electric Co., 52 E. 19th St., New York 3, N. Y.

# STEATITE

See Insulation Materials

# STENCILS—Metal Marking

- Acromark Co., 9-13 Morrell St., Elizabeth 4, N J
- Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y. Luma Electric Equipment Co., P. O. Box 132,
- Luma Electric Equipment Co., 1. 6. Don 11. Toledo 1, Ohio Noble & Westbrook Mfg. Co., 27 Westbrook St., E. Hartford 8, Conn. Numberall Staup & Tool Co., Huguenot Park, Staten Island 12, N. Y.

# STETHOGRAPHS AND STETHOPHONES

- Edin Electronics Co., 207 Main St., Worcester, Mass.
- Trimm, Inc., 400 W. Lake St., Libertyville, Ill.

# STETHOSCOPES—Amplifying

- Edin Electronics Co., 207 Main St., Worcester, Mass.
- Mass. Electro-Medical Lab., Inc., Holliston, Mass. Electro-Physical Labs., Inc., 290-8 Dyckman St., New York 34, N. Y. Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn. Medical Electronics Co., P. O. Box 3541, Cleve-land 18, Ohio SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30. Webster Engineering Co., 105 Tenth St., N. E., Cedar Rapids, Iowa.

- Cedar Rapids, Iowa.

## STIMULATORS

- ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188.
  Electro-Medical Lab., Inc., Holliston, Mass.
  Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
  RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222.
  SANBORN CO., 39 Osborn St., Cambridge 39, Mass. SEE ADV. PG. 30.

#### STRAIN RELIEFS

Alden Products Co., 117 N. Main St., Brock

Anden Froducts Co., 117 N. Main St., Brockton, 64, Mass.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. SEE ADV. PG. 167.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, 111.

Brandywine Fibre Co., 15th & Poplar Sts., Wilmington, Del. General Cement Mfg. Co., 919 Taylor Ave.,

- Rockford, Ill. HEYMAN MFG. CO., 300 Michigan Ave., Kenil-worth, N. J. SEE ADV. PG. 222. Maritime Quality Hardware Co., Inc., Belfast,
- Maine WALKER CO., GEORGE, 118 Amsterdam Ave., Passaic, N. J. SEE ADV. PG. 186.

#### STRAPS—Leather

Auburn Mfg. Co., Middletown, Conn.

#### STRIPPERS—Wire

- Division Lead Co., 836 W. Kinzie St., Chicago 22, 111.
- Eraser Co., Inc., The, Industrial Products Div., 104 S. State St., Syracuse 2, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. Ideal Industries, Inc., Park & Borden Aves.,
- Sycamore, Ill. Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio Pyramid Products Co., 2224 S. State St., Chi-

- Cago, Ill.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, California
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

#### STROBOSCOPES

**STROBOTRONS** 

See Tubes

Calif.

Ind.

Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. 19, N. Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y. Conn Ltd., C. G., Electronics Div., Elkhart,

Electric Eye Equipment Co., 16 W. Fairchild St.,

Danville, 111. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
Lectronic Research Labs., 1021 Callowhill St., Phila. 23, Pa.
SYLVANIA ELECTRIC PRODUCTS INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

SUPPRESSORS-Auto Radio Ignition

Camburn, Inc., 32-40 57th St., Woodside, N. Y. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Continental Carbon, Inc., 13900 Lorain Ave.,

Cleveland 11, Ohio ERIE RESISTOR CORP., 644 W. 12th St., Erie,

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109.
Filtron Co., Inc., The, 38-25 Bell Blvd., Bay-side, L. I., N. Y.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. SEE ADV. PGS. 20, 21.

20, 21. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Miller Co., J. W., 5917 S. Main St., Los Angeles,

Calif. National Electronic Mfg. Co., 35-05 36th St., Long Island City 5, N. Y. Network Mfg. Corp., Bayonne, N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Wilkor Products, Inc., 3835 W. 150th St., Cleveland 11, Ohio Wirt Co., 5221 Green St., Philadelphia, Pa.

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# SUPPRESSORS—Fluorescent Light

- Filtron Co., Inc., The, 38-25 Bell Blvd., Bay-side, L. I., N. Y.
   INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. SEE ADV. PGS.
- 20, 21,
- 20, 21.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
  Network Manufacturing Corp., Bayonne, N. J.
  Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen N. J.
- Bergen, N. J.

# SUPPRESSORS---- Ionotron Static Eliminator

U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

# SUPPRESSORS-Noise

- Amplifier Corp. of America, 396 Broadway, New York, 13, N. Y.
   Coil Winders, Inc., 61 Bergen St., Brooklyn 2,
- N.Y

- N. Y. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. Fast & Co., John E., 3101 N. Pulaski Rd., Chicago 41, Ill. Filtron Co., Inc., The, 38-25 Bell Blvd., Bay-side, L. I., N. Y. Fisher Radio Corp., 41 E. 47th St., New York, N. Y.

- N. Y. FREED TRANSFORMER CO., 1736 Weirfield St., Brooklyn 27, N. Y. SEE ADV. PG. 53. General Cement Mfg. Co., 919 Taylor Ave., Rockford, III. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. SEE ADV. PGS. 20. 21.
- 20, 21.
   J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
   Miller Co., J. W., 5917 S. Main St., Los Angeles, Colif.
- Calif. Minnesota Electronics Corp., 97 E. Fifth St.,
- Minnesota Electronics Corp., 57 E. Then S., St. Paul 1, Minn. National Electronic Mfg. Co., 35-05 36th St., Long Island City 5, N. Y. Network Manufacturing Corp., Bayonne, N. J. Pyramid Electric Co., 155 Oxford St., Paterson, N. J.
- Pyramid Electric Co., 155 Oxford St., Paterson, N. J.
  Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
  Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J.
  SOMERSET LABORATORIES, INC., 1701 Pali-sades Ave., Union City, N. J. SEE ADV. PG. 157.
- 157
- Sprague Electric Co., North Adams, Mass. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

## SUPPRESSORS—Parasitic

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Carborundum Co., The, Globar Div., Niagara Falls, N. Y.
- Falls, N. Y.
   Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y.
   Coil Winders, Inc., 61 Bergen St., Brooklyn 2,
- Elliot Mfg. Co., 218 Prospect Ave., Binghamton,
- N. Y. ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. SEE ADV. PG. 109. INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. SEE ADV. PG.
- 113.
- Network Mfg. Corp., Bayonne, N. J. OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, 111. SEE ADV. PG. 201. Sprague Electric Co., North Adams, Mass.

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#### SURFACE ANALYZERS AND COMPARA-TORS

See Analyzers

# SUSPENSIONS—Speaker

Hawley Products Co., St. Charles, Ill. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

#### SWITCH PARTS

### Call Letter Tabs

- Cardy-Lundmark Co., 1801 W. Byron St., Chicago 13, Ill. Plastic Accessories, Inc., 460 Broome St., New
- York 13, N. Y. Plastic Fabricators Co., 440 Sansome St., San Jesup-Blair Dr., Silver Spring, Md.
- Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 3, Calif.
- Printloid, Inc., 95 Mercer St., New York 12, N.Y

#### Contacts

- Cleveland Tungsten, Inc., 10200 Meech Ave.,
- Cleveland, Ohio FANSTEEL METALLURGICAL CORP., Sheridan Rd., North Chicago, Ill. SEE ADV. PG.

- Sneridan Rd., North Chicago, H. SEE ADV. Fd. 29.
  GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
  Gibson Electric Co., 8350 Frankstown Ave., Pittsburgh 21, Pa.
  Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
  Greene Mfg. Corp., G. G., Warren, Pa.
  Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
  MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
  National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
  SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.
  United Carr Fastener Corp., Cambridge 42, Mass.
  Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

- cago 10. Ill.

## SWITCHBOARDS-Radio

- American Communications Corp., 306 Broadway, New York 7, N. Y. Continental Electronics, Ltd., 252 Norman Ave.,
- Continental Electronics, Etu., 202 Norman 113, Brooklyn 22, N. Y. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. RADIO CORP. OF AMERICA, RCA Victor Div.,

Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.

#### SWITCHES—Automatic

- Allen-Bradley Co., 136 W. Greenfield Ave., Mil-Allen-Bradley Co., 100 W. Greenheid Ave., Mar-waukee 4, Wis. Autocall Co., The, Shelby, Ohio Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. Cook Electric Co., 2700 Southport Ave., Chicago,

Ill

- Cooper Co., Clark, 374 N. Market St., Palmyra, N. J.
- N. J.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  General Controls Co., Glendale 1, Calif.
  Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
  Leland, Inc., G. H., 123 Webster St., Dayton 2, Okia
- Ohio
- Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn. Mercoid Corp., The, 4201 Belmont Ave., Chicago
- 41, Ill.

SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York, N. Y. SEE ADV. PG. 223.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 WARD LEONARD ELECTRIC CO., 31 South Street, Mt. Vernon, New York. SEE ADV. PG. 151

151.

# SWITCHES—Coaxial Cable

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217. Industrial Products Co., Danbury, Conn. Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.

- Lapp Insulator Co., Inc., 31 Gilbert St., Le Roy,
- Leland Inc., G. H., 123 Webster St., Dayton 2,
- Ohio Ohio RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Industries Inc., 401 E. 138th St., New
- Selectar Industries, Inc., 401 E. 138th St., New
- Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  SIGNAL ENGINEERING & MFG. CO., 154-6 W.
  14th St., New York, N. Y. SEE ADV. PG. 223.
  Weinschel Engineering Co., 123 William St., New York 7, N. Y.

#### SWITCHES----Control

Ohio

4. Ind.

Maine

SWITCHES—Decade

Pa.

Ark-Les Switch Corp., 55 Water St., Watertown Ark-les Switch Corp., 55 Water St., Watertown 72, Mass. AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Barber Colman Co., Rockford, Ill. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.

Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee

ELECTRO SWITCH CORP., 193 Broad St., Wey-mouth, Mass. SEE ADV. PG. 157. Federal Electric Products Co., 50 Paris St., New-

- ark, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. Hart Mfg. Co., 110 Bartholomew Ave., Hartford
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Leland, Inc., G. H., 123 Webster St., Dayton 2,

Magnavox Co., The Components Div., Fort Wayne

Maritime Quality Hardware Co., Inc., Belfast,

Maritime Quanty Hardware Co., Inc., Deffast, Maine
Micro Switch, Div. of First Industrial Corp., 7 Spring St., Freeport, Ill.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
National Electrical Machine Shops, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
Trumbull Electric Mfg. Co., Plainville, Conn.
Unimax Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York I, N. Y.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon Cinema Engineering Co., 1510 W. Verdugo Ave., Buchend, Colic

Burbank, Calif. Cole Instrument Co., 1320 S. Grand Ave., Los

Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Daven Co., 191 Central Ave., Newark 4, N. J.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114-115.
Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.
Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.

D-135

# SWITCHES

# 1949-1950 DIRECTORY of

Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

#### SWITCHES—Duplex

Shallcross Mfg. Co., 10 Jackson Ave., Colling-

dale, Pa. Unimax Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York 1, N. Y.

## SWITCHES-Electronic

- Du Mont Labs, Inc., Allen B., 2 Main Ave., Passaic, N. J. Eclipse-Pioneer Div., Bendix Aviation Corp.,
- Echpse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J. Elpar Co., 326 Cooper St., Camden, N. J. Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21,
- Mass. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- GENERAL ELECTRIC (CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Gray Mig. Co., 16 Arbor St., Hartford, Conn. Heath Co., Benton Harbor, Mich. Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. Lumenite Electric Co., 407 S. Dearborn St., Chi-
- cago 5, Ill. Measurement Engineering Ltd., Arnprior, Ontario,
- Canada O'Connor & Co., John T., West Orange, N. J. Photoswitch, Inc., 77 Broadway, Cambridge 42,
- Mass. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Racon Electric Co., 52 E. 19th St., New York 3,

- N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240, 244 240-244
- Thermo Labs., Inc., 355 W. 26th St., New York 1. N. Y.
- United Carr Fastener Corp., Cambridge 42, Mass.

#### SWITCHES—Float Type

- Alco Valve Co., 865 Kingsland, St. Louis 5, Mo. Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis.
- Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio
- Cutler-Hammer, Inc., 315 No. 12th St., Milwau-
- Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee 1, Wis.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Unimax Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York 1, N. Y.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## SWITCHES—Key

- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. Cinema Engineering Co., 1510 W. Verdugo Ave.,

- Cinema Engineering Co., 1510 W. Verdago Ave., Burbank, Calif.
   CLARE & CO., C. P., 4719 Sunnyside Ave., Chi-cago 30, Ill. SEE ADV. PG. 123.
   GENERAL ELECTRIC CO., Construction Materials Dept., Bridgeport 2, Conn. SEE ADV. PGS. 5.18 5-18.

- 5-18.
  5-18.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
  Mossman Inc., Donald P., 612 N. Michigan Ave., Chicago 11, Ill.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.

Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box

868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## SWITCHES-Knife

- Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
- Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y. Federal Electric Products Co., 50 Paris St.,
- Newark, N. J. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Gregory Mfg. Co., Inc., The, 67 Franklin St., New Haven 11, Conn.
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Phila. 30, Pa. SEE ADV. PGS. 48, 49.
  Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Trumbull Electric Mfg. Co., Plainville, Conn.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  Wood Electric Co., Inc., C. D., 70-17 83rd St., Glendale, L. I., N. Y.

#### SWITCHES—Lever

- Automatic Electric Sales Corp., 1033 W. Van
- Buren St., Chicago 7, Ill. CENTRALAB, DIV. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26 9'
- CLARE & CO., C. P., 4719 Sunnyside Ave., Chicago 30, Ill. SEE ADV. PG. 123.
   Cooper Co., Clark, 374 N. Market St., Palmyra,
- N. J. Elpar Co.
- Elpar Co., 326 Cooper St., Camden, N. J. FEDERAL ELECTRIC PRODUCTS CO., 50 Paris
- St., Newark, N. J. FEDERAL TELEPHONE AND RADIO CORP.,
- 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL CONTROL COMPANY, 1200 Soldiers Field Rd., Boston 34, Mass. SEE ADV. PG. 167. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GUARDIAN ELECTRIC MFG. CO., 1621 W. Wal-nut St., Chicago 12, III. SEE ADV. PG. 60. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. MALLORY & CO., INC., P. R., 3029 E. Washing-ton St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74.
- Mossman Inc., Donald P., 612 N. Michigan Ave., Chicago 22, 111.
  SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, 111. SEE ADV. PG. 231.

#### SWITCHES—Limit

- Acro Electric Co., 1316 Superior Ave., Cleveland, Ohio
- Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis. Automatic Electric Sales Corp., 1033 W. Van
- Buren St., Chicago 7, Ill. Clark Controller Co., 1146 E. 152nd St., Cleve-
- land 10, Ohio Cook Electric Co., 2700 Southport Ave., Chi-
- cago, Ill. oral Designs, P. O. Box 248, Forest Hills,
- Coral
- N. Y. Cutler-Hammer, Inc., 315 North 12th St., Mil-waukee 1, Wis. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. General Controls Co., Glendale 1, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
- Hetherington & Son, Inc., Robert, Sharon Hill,
- Pa. Mercoid Corp., The, 4201 Belmont Ave., Chicago
- 41, 11. Micro Switch, Div. of First Industrial Corp., 7 Spring St., Freeport, 11. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn. Mu Switch Div., The Chase Shawmut Co., 38
- Pequit St., Canton 31, Mass.

O'Connor, John T. & Co., West Orange, N. J. Unimax Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York 1, N. Y.

#### SWITCHES—Mercury

Aerolux Light Corp., 653 11th Ave., New York

19, N. Y. CHATHAM ELECTRONICS CORP., 475 Wash-ington St., Newark 2, N. J. SEE ADV. PG. 28. Durakool, Inc., 1010 N. Main St., Elkhart, Ind. Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J. GENERAL ELECTRIC CO., Construction Materials Durt. Bridgenet 2, Conn. SEE ADV. PGS. 5-18.

GENERAL ELECTRIC CO., Construction Materials Dept., Bridgeport 2, Conn. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Littelfuse, Inc., 4757 Ravenswood Ave., Chicago

- 40, Ill. Mack Electrical Devices, Inc., 43 Glenside Ave.,
- Wyncote, Pa. Wercoid Corp., The, 4201 Belmont Ave., Chicago 41, III.
- A. III.
  Minneapolis-Honeywell Regulator Co., 2753
  Fourth Ave., S., Minneapolis, Minn.
  Pass & Seymour, Inc., Solvay Station, Syracuse, N. Y.
  Rhodes Inc., M. H. 30 Bartholomew Ave., Hartford Comp.

Indices Inc., M. R. 30 Bartholomew Ave., Hart-ford, Conn. Shannon Luminous Materials Co., 7346 Santa Monica Blvd., Hollywood 46, Calif. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

SWITCHES-Precision Snap Action

land. Ohic

Pa.

Ill.

N. J.

Rockford, Ill.

Acro Electric Co., 1305 Superior Ave., Cleve-

AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Cook Electric Co., 2700 Southport Ave., Chicago,

Coral Designs, P. O. Box 248, Forest Hills,

ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. Federal Electric Products Co., 50 Paris St.,

Newark, N. J. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

SEE ADV. PGS. 5-18. GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill, ADV. PG. 60. Hetherington & Son Inc., Rohert, Sharon Hill,

Pa.
Micro Switch, Div. of First Industrial Corp., 7 Spring St., Freeport, Ill.
Mu Switch Div., The Chase Shawmut Co., 38 Pequit St., Canton 31, Mass.
Ucinite Co., The, Div., United Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
Unimax Switch Div. of W. L. Maxson, Corp., 460 W. 34th St., New York 1, N. Y.
United Carr Fastener Corp., Cambridge 42, Mass.

United Carr Fastener Corp., Cambridge 42, Mass.

Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis. Cook Electric Co., 2700 Southport Ave., Chicago,

Cooper Co., Clark, 374 N. Market St., Palmyra,

N. J.
 Coral Designs, P. O. Box 248, Forest Hills, N. Y.
 Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wis.
 Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.

General Cement Mfg. Co., 919 Taylor Ave.,

ROCKIOTA, III. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo. Mercoid Corp., The, 4201 Belmont Ave., Chicago

41, Ill. Mu Switch Div., The Chase Shawmut Co., 38

Mu Switch Div., The Chase Shawmut Co., 38 Pequit St., Canton 31, Mass. Unimax Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York 1, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.

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SWITCHES—Pressure Operated

1621 W.

# SWITCHES-Rotary and Band Change

Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis. Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
Autocall Co., The, Shelby, Ohio
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
BUD RADIO, INC., 2118 East 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19.
CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.

- 26, 27. Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Burbank, Calif. Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y. Cole Instrument Co., 1320 S. Grand Ave., Los

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.
  Daven Co., 191 Central Ave., Newark 4, N. J.
  Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
  Eastern Specialty Co., Philadelphia 40, Pa.
  ELECTRO SWITCH CORP., 193 Broad St., Wey-mouth 88, Mass. SEE ADV. PG. 157.
  General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
- ford, III. GENERAL CONTROL COMPANY, 1200 Soldiers Field Rd., Boston 34, Mass. SEE ADV. PG.
- GENERAL ELECTRIC CO., Construction Ma-terials Dept., Bridgeport 2, Conn. SEE ADV. PGS. 5-18.
- GENERAL RADIO CO., 175 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
- Grayhill, 1 N. Pulaski Rd., Chicago 24, Ill. Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
- Arlington Heights, III. J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Hts., Pa. JBT INSTRUMENTS INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Leland, Inc., G. H., 123 Webster St., Dayton 2 Obio.
- 2, Óhio Lewis Engineering Co., 52 Rubber Ave., Nauga-
- MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS.
- 71-74 Miller Co., J. W., 5917 S. Main St., Los Angeles,
- Calif Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago -III.
- 10, III. OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, III. SEE ADV. PG. 201. Roller-Smith, Bethlehem, Pa. Shallcross Mfg. Co., 10 Jackson Ave., Colling-

- Shallcross Mfg. Co., 10 Jackson Ave., Colung-dale, Pa.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Stackpole Carbon Co., St. Marys, Pa.
  SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.
  Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
  Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila. 44 Pa.
- Phila. 44, Pa.
  Ucinite Co., The, Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  U. S. Instrument Corp., 409 Broad Street, Summit, N. J.

# SWITCHES—Safety

- Cook Electric Co., 2700 Southport Ave., Chicago, TIL Cutler-Hammer, Inc., 315 No. 12th St., Milwau-
- kee 1. Wis Federal Electric Products Company, 50 Paris St.,
- Newark, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.

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- Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1. Conn.
- Hetherington & Son, Inc., Robert, Sharon Hill, Pa
- Kolton Electric Mfg. Co., 123 N. J. Railroad Ave.,

- Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J.
  Micro Switch, Div. of First Industrial Corp., 7 Spring St., Freeport, Ill.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Trumbull Electric Mfg. Co., Plainville, Conn.
  Unimax Switch Div. of W. L. Maxson Corp., 460 W-34th St., New York 1, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# SWITCHES-Slide

- CENTRALAB DIV., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.
- Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee Wis. 1.
- Dual-Remote Control Co., Garden City, Mich, Elpar Co., 326 Cooper St., Camden, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rockford. III
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
- Nuter Co., 1255 S. Michigan Ave., Chicago, Ill.
   Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, Ill.
- Smith, Inc., Herman H., 405-44th St., Brooklyn 20, N. Y.
- Stackpole Carbon Co., St. Marys, Pa. Wirt Co., 5221 Greene Street, Philadelphia, Pa.

# SWITCHES-Snap Action

- Acro Electric Co., 1316 Superior Ave., Cleveland, Ohio

- Ohio Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206. Chicago Telephone Supply Corp., 1142 W. Beards-ley Ave., Elkhart, Ind. Cook Electric Co., 2700 Southport Ave., Chicago, Ill
- Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee
- I, Wis. Elpar Co., 326 Cooper St., Camden, N. J. Federal Electric Products Company, 50 Paris St.,
- Newark, N. J. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford. Ill. GENERAL CONTROL COMPANY, 1200 Soldiers
- Field Rd., Boston 34, Mass. SEE ADV. PG.
- GENERAL ELECTRIC CO., Construction Ma-terials Dept., Bridgeport 2, Conn. SEE ADV.
- terials Dept., Bridgeport 2, Conn. SEE ADV. PGS. 5-18. Grayhill, 1 N. Pulaski Rd., Chicago 24, Ill. Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill. GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. SEE ADV. PG. 60. Hetherington & Son, Inc., Robert, Sharon Hill, Pa. Hubbell, Inc., Harvey, Bridgeport 2, Conn. McQuay-Notris Mfg. Co., 2320 Marconi Ave., St. Louis 10. Mo.

- Louis 10, Mo.
- Micro Switch, Div. of First Industrial Corp., 7 Spring St., Freeport, Ill. Minneapolis-Honeywell Regulator Co., 2753 Fourth
- Miniteapoils for regulator Co., 2103 Fourth Ave. S., Minneapolis, Minn.
  Mu Switch Div., The Chase Shawmut Co., 38 Pequit St., Canton 31, Mass.
  Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
  Serv-All Mfg. Co., 334 N. Bell Ave., Chicago 12, 11
- HI.

- III. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. Stackpole Carbon Co., St. Marys, Pa. Unimax Switch Corp., Div. of W. L. Maxson Corp., 460 W. 34th St., New York 1, N. Y. United Carr Fastener Corp., Cambridge 42, Mass. Wood Electric Co., Inc., C. D., 70-17 83rd St., Glendale, New York

# SWITCHES-Step Type

- Switteries—siep type
  Autocall Co., The, Shelby, Ohio
  Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
  AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  CENTRALAB DIV., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.
  CLARE & CO., C. P., 4719 Sunnyside Ave., Chicago 30, Ill. SEE ADV. PG. 123.
  Collins Radio Co., Cedar Rapids, Iowa Cook Electric Co., 2700 Southport Ave., Chicago, Ill.

- III. Daven Co., 191 Central Ave., Newark 4, N. J. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, III. SEE ADV. PG. 60. Industrial Timer Corp., 115 Edison Pl., Newark 5 N. J.
- Leland, Inc., G. H., 123 Webster St., Dayton 2, Ohio
- Minneapolis-Honeywell Regulator Co., 2753 Fourth
- Ave. S., Minneapolis, Minn. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Tech Laboratories, Inc., Bergen & Edsall Blvds.,

Palisades Park, N. J.

# SWITCHES-Tap

Angeles 15, Calif.

SWITCHES—Thermal

Pa

N.J.

Mansfield, Ohio

Bridgeport 2, Conn.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
CENTRALAB DIV., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26, 27.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15. Calif.

Angeles 15, Calif. Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J. Eastern Specialty Co., Philadelphia 40, Pa. Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J. ELECTRO SWITCH CORP., 193 Broad St., Wey-mouth 88, Mass. SEE ADV. PG, 157. Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill. J.B-LI, Instrument Co. Sycamora & Mill Bd. Cite

J-B-L Instrument Co., Sycamore & Mill Rd., Clif-ton Hts., Pa.

ton Hts., Pa. OHMITE MFG. CO., 4835 W. Flournoy St., Chi-cago 44, Ill. SEE ADV. PG. 201. Peerless X-Ray Labs. & Mfg. Corp., 467 10th Ave., New York 18, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa

Pa.
 SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

Aerolux Light Corp., 653 11th Ave., New York 19, N. Y.
AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
Burling Instrument Co., 253 Springfield Ave., Newark 3, N. J.
Cook Electric Co., 2700 Southport Ave., Chicago, III

Cooper Co., Clark, 374 N. Market St., Palmyra,

N. J. Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. Fenwal Inc., 43A Pleasant St., Ashland, Mass. GENERAL ELECTRIC CO., Construction Ma-terials Dept., Bridgeport 2, Conn. SEE ADV. PGS 5.18

PGS. 5-18, GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.

Hartman Electrical Mfg. Co., 175 N. Diamond St.,

Mack Electrical Devices Inc., 43 Glenside Ave., Wyncote, Pa. Manning, Maxwell & Moore, Inc., 11 Elias St.,

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# SWITCHES

1949-1950 DIRECTORY of

- Micro Switch, Div. of First Industrial Corp., 7 Spring St., Freeport, Ill. Standard Electrical Products Co., Dayton 3, Ohio Ulanet Co., George, 413 Market St., Newark 5,
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.

## SWITCHES-Time

- Autocall Co., The, Shelby, Ohio Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99.
- SEE ADV. PG. 99.
  Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
  HAYDON MEC. CO., INC., 564 D. Electron.

- HAYDON MFG. CO., INC., 584 E. Elm St., Tor-rington, Conn. SEE ADV. PGS. 68, 69. Industrial Timer Corp., 115 Edison Pl., Newark
- 5, N. J. Landis & Gyr, Inc., 104 Fifth Ave., New York 11, N. Y.
- Lumenite Electric Co., 407 S. Dearborn St., Chi-
- cago 5, Ill.
  MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV.
  PGS. 71-74.
  Control Loss Relief
- Maritime Quality Hardware Co., Inc., Belfast, Maine
- Mane Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn. Paragon Electric Co., Two Rivers, Wis. Reliance Automatic Lighting Co., 1927 Mead St.,
- Racine, Wis. Rhodes, Inc., M. H., 30 Bartholomew Ave., Hart-ford, Conn.
- Sangamo Electric Co., Springfield, Ill. Selectar Industries, Inc., 401 E. 138th St., New
- York 54, N. Y. Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N.Y. Trubbull Electric March 2010,
- N. Y. Trumbull Electric Mfg. Co., Plainville, Conn. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pitfsburgh 30, Pa. SEE ADV. PGS. 66, 67.
- Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

# SWITCHES-Toggle and Pushbutton

- Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis. Ark-Les Switch Corp., 55 Water St., Water-
- town 72, Mass.
- Birnbach Radio Co. Inc., 145 Hudson St., New
- Birnbach Radio Co. Inc., 145 Hudson St., New York, N. Y.
  BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG 19.
  Carter Radio Div., Precision Parts Co., 213 Institute Place, Chicago 10, III.
  CLARE & CO., C. P., 4719 Sunnyside Ave., Chicago 30, III. SEE ADV. PG. 123.
  Clark Controller Co., 1146 E. 152nd St., Cleveland 10. Ohio

- land 10. Ohio
- land 10, Ohio
  Cutler-Hammer Inc., 315 North 12th St., Milwaukee 1, Wis.
  Eagle Electric Mig. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
  Electric. Auto-Lite Co., The, Toledo 1, Ohio
  Elpar Co., 326 Cooper St., Camden, N. J.
  Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
  General Cement Mfg. Co., 919 Taylor Ave., Rock-

- General Cement Mfg. Co., 919 Taylor Ave., Rockford. Ill.
- GENERAL CONTROL COMPANY, 1200 Soldiers Field Rd., Boston 34, Mass. SEE ADV. PG. 161. GENERAL ELECTRIC CO., Construction Ma-terials Dept., Bridgeport, Conn. SEE ADV. PGS. 5-18.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Grayhill, 1 N. Pulaski Rd., Chicago 24, Ill.

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- Grigsby-Allison Co., Inc., 407 N. Salem Ave.,
- Arlington Heights, Ill. Hart Mfg. Co., 110 Bartholomew Ave., Hart-ford 1, Conn. Hetherington & Son, Inc., Robert, Sharon Hill,
- Pa. Howard Mfg. Corp., 1401 South Main St., Coun-
- cil Bluffs, Iowa Hubbell, Inc., Harvey, Bridgeport 2, Conn. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.

- 80.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y.
  MALLORY & CO., INC., P. R., 3029 E. Washington St., Indianapolis 6, Ind. SEE ADV. PGS. 71-74. 71-74.
- Maritime Quality Hardware Co. Inc., Belfast, Maine
- Maine Micro Switch Div., First Industrial Corp., 7 Spring St., Freeport, Ill. Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.

- Boston 30, Mass. Mossman Inc., Donald P., 612 N. Michigan Ave., Chicago 11, Ill. Murdock Mfg. Co., Wm. J., Chelsea, Mass. Muter Co., 1255 S. Michigan Ave., Chicago, Ill. Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, Ill
- 10, Ill.
- Pass & Seymour, Inc., Solvay Station, Syracuse, N. Y. Power Equipment Co., 55 Antoinette St., De-
- troit 2, Mich. . B. M. Div., Essex Wire Corp., Logansport, R.

- Ind.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Stackpole Carbon Co., St. Marys, Pa.
  SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.
  Trumbull Electric Mfg. Co., Plainville, Conn.
  Ucinite Co., The, Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  Wood Electric Co., Inc., C. D., 70.17 83rd St., Glendale, New York

#### SWITCHES-TR

- GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CU., Schenectady 5, N. 1. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Gorham Co., Bronze Div., Providence 7, R. I. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- cchnical Materiel Corporation, The, 453 West 47th Street, New York 19, N. Y. Technical

#### SWITCHES—Vacuum

- Aerolux Light Corp., 653 11th Ave., New York
- 19, N. Y. Cook Electric Co., 2700 Southport Ave., Chi-
- cago, Ill. Cutler-Hammer, Inc., 315 No. 12th St., Milwau-kee 1, Wis. Eitel-McCullough Inc., San Bruno, Calif.
- Kee 1, WIS. Eitel-McCullough Inc., San Bruno, Calif. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook,
- N. J. ADV. PG. 215. Mack Electrical Devices Inc., 43 Glenside Ave.,
- Wyncote, Pa. Minneapolis-Honeywell Regulator Co., 2753
- Fourth Ave. S., Minneapolis, Minn. Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse, N. Y.

# SYNCHRONIZERS-Electronic

Acme Telectronix Div., of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton 64, Mass.

ATOMIC INSTRUMENT CO., 160 Charles St.,

- Boston, Mass. SEE ADV. PG. 200. Burlington Instrument Co., Burlington, Iowa Control Corp., 718 Central Ave., Minneapolis
- 14, Minn. 14, Minn.
  DeMornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Electro Products Labs., Inc., 549 W. Randolph St., Chicago 6, Ill.
  Lyman Electronic Corp., 12 Cass St., Spring-field Mass

- held, Mass. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Sherron Electronics Co., 1201 Flushing Ave.,

Brooklyn 6, N. Y. Aircraft

# SYNCHRONIZERS-Electronic Magneto

- Aircraft Electronics Associates, Inc., 1031 New Britain Ave., Hartford 10, Conn. Lyman Electronic Corp., 12 Cass St., Spring-
- Mass. field,
- held, Mass. Scintilla-Magneto Div., Bendix Aviation Corp., Sidney, N. Y. SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. Corp., 51, 52.

# SYNCROSCOPES

Wash.

Mass.

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American Radio Co., 611 E. Garfield Ave., Glendale, Calif. Glendale, Calif. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Electronic Engineers, 1039 B Pacific St., Santa

Monica, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y.

SEE ADV. PGS. 5-18. KOLLSMAN INSTRUMENT DIV. of Square D Co., 80-08 45th Ave., Elmhurst, N. Y. SEE ADV. PG. 36. Millen Mfg. Co., James, 150 Exchange St., Mal-

den, Mass. POLARAD ELECTRONICS CO., 9 Ferry St., New York 7, N. Y. SEE ADV. PG. 228. Radar Engineers, 110 University St., Seattle 1,

Roller-Smith, Bethlehem, Pa. Sherron Electronics Co., 1201 Flushing Ave.. Brooklyn 6, N. Y. Brooklyn 6, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

PGS. 240-244. TEKTRONIX, INC., 712 S. E. Hawthorne Blvd., Portland 14, Ore. SEE ADV. PG. 32. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV PGS.

66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE AV. PG. 193.

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland

Bailey Meter Co., 1044 Ivaliloe Id., Cleveland 10, Ohio
Biddle Co., James G., 1316 Arch St., Philadel-phia 7, Pa.
Bristol Co., The, Waterbury 91, Conn.
Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
Edin Electronics Co., 207 Main St., Worcester,

Mass. Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio ELECTRIC INDICATOR CO., 21 Parker Ave., Stamford. Conn. SEE ADV. PG. 136. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. Electronic Supply Co., 207 Main St., Worces-ter Mass.

ter, Mass. Foxboro Co., The, Foxboro, Mass. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65. Ideal Industries, Inc., Park & Borden Avenues, Sycamore, Ill.

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TACHOMETERS-Electronic

- Jones Motorola Corp., 432 Fairfield Ave., Stamford, Conn. Pasurement Engineering Ltd., Arnprior, On-Measurement
- tario, Canada etron Instrument Co., 432 Lincoln St., Den-

- tario, Canada Metron Instrument Co., 432 Lincoln St., Den-ver 9, Colo. Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Reeves Instrument Corp., 215 E. 91st St., New Vark N. V.
- York, N. Y. Ripley Co. Inc., P. O. Box 31, Middletown, Conn.
- Sun Electric Corp., 6323 Avondale Ave., Chicago 31. Ill. Thermo Labs., Inc., 355 W. 26th St., New York
- N Y. WESTON ELECTRICAL INSTRUMENT CORP.
- CONFIDENTIAL INSTRUMENT CORP., 618 Frelinghuysen Avenue, Newark 5, N. J. SEE ADV. PG. 193.
   Zernickow Co., O., 15 Park Row, New York 7, N. Y.

# TAPE—Magnetic Recorder

- Ampex Electric Corp., 1155 Howard Ave., San Aniper Electric Corp., Carlos, Calif.
   Carlos, Calif.
   BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.
   Cinema Engineering Co., 1510 W. Verdugo Ave., Durbarb. Colif.
- Burbank, Calif. Communication Accessories Co., Box 345,
- Communication Accessories Co., Box 34b, 110th St. & Hillcrest Rd., Hickman Hills, Missouri Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. Eckert-Mauchly Computer Corp., 3747 Ridge Ave., Philadelphia 32, Pa. Fidelitone Corp., 1616 Devon Ave., Chicago 26, 10 110th

- III.
  INDIANA STEEL PRODUCTS CO., 6 N. Michigan Ave., Chicago 2, Ill. SEE ADV. PG. 198.
  Miles Reproducer Co., Inc., 812 Broadway, New York 3. N. Y.
  Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul, Minn.
  Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.
- N. J. Rowe Industries, 1702 Wayne St., Toledo 9, Ohio
- Webster Engineering Co., 105 Tenth St., N. E., Cedar Rapids, Iowa

## TAPES

See Insulation Parts

# TELEMETERING SYSTEMS-Electronic

- Airlectron, P. O. Box 151, Caldwell, N. J.
  Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass.
  Applied Science Corp., of Princeton, The, P. O. Box 44, Princeton, N. J.
  Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland
  Dia

- Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind. Hastings Instrument Co., Box 1275, Hampton,
- Va Leupold & Stevens Instruments, 4445 N. E.
- Glisan St. Portland 13, Ore. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. Lynch Co., F. W., 151 2nd St., San Francisco,
- Calif.
- Call, Melpar, Inc., 452 Swann Ave., Alexandria, Va.
   Miller Corp., M., 362 W. Colorado St., Pasadena, Calif.
   Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.

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- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Phila. 4, Pa.
  Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N. Y.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Techno-Scientific Co., 901 Nepperhan Ave., Yon-kers 3, N. Y.

- kers 3, N. Y. Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.
- 868, Pi 66, 67. Yardeny
- ardeny Laboratories, Inc., 105 Chambers Street, New York 7, N. Y.

# **TELEPHONES**—Handsets

- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
  AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
  Connecticut Telephone & Electric Div., Great American Industries, 70 Brittania St., Meri-don Comp.
- American industrics, 10 Co., 549 Brushton den, Conn. Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa. FEDERAL TELEPHONE AND RADIO CORP., FEDERAL TELEPHONE AND RADIO CORP.,
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, III. Murdock Mfg. Co., Wm. J., Chelsea, Mass. North Electric Mfg. Co., 501 S. Market St., Galion, Ohio

- Galion, Ohio Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
- To, Cant. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Stromberg-Carlson Co., Rochester, N. Y. Telephonics Corp., 350 W. 31st St., New York 1,
- N N. Y. **TURNER CO., THE, 909 17th Street, N. E.,** Cedar Rapids, Iowa. SEE ADV. PG. 96. U. S. Instrument Corp., 409 Broad St., Sum-
- mit, N. J.
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. Wheeler Insulated Wire Co., Inc., Waterbury 91,
- Conn.

# **TELEVISION SYSTEMS**—Industrial

- Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y. Coronet Radio & Television Corp., 500 West 52nd St., New York 19, N. Y. Douglas Radio Labs., 40 Wayland St., Boston
- 25, Mass.
- Zo, Mass.
   Electronic Apparatus, Inc., 186 Union Ave., New Rochelle, N. Y.
   Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
- Industrial Television Inc., 359 Lexington Ave.,
- Clifton, N. J. Intra Video Corp. of America, 851 Madison Ave.,
- New York 21, N. Y. La Magna Mfg. Co., East Rutherford, N. J. Magnavision, Inc., 1546 Second Ave., New York
- 28, N. Y.
- Multiple Television Mfg. Co., 987 Hegeman Ave.,
- Multiple Television Mfg. Co., 987 Hegeman Ave., Brooklyn S, N. Y.
  North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
  POLARAD ELECTRONICS CO., 9 Ferry St., New York, 7, N. Y. SEE ADV. PG. 228.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS 197 Inside Back card Back Covers
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Remington Rand, Inc., Systems Div., Vericon Dept., South Norwalk, Conn.
  Symphony Radio & Television Corp., 721 N. Martel Ave., Los Angeles 46, Calif.
  Taybern Equipment Co., 120 Greenwich St., New York 6, N. Y.

- Telequip Radio Co., 1901 S. Washtenaw, Chi-cago, Ill. Tele-Video Corp., 241 Fairfield Ave., Upper Dar-
- by, Pa. Television Equipment Corp., 238 William St.,
- New York 7, N. Y. TELvision Labs., Inc., 542 N. Parkside Ave., Chicago 44, 111. Television Projects, Inc., 3660 Coral Way, Miami
- 35, Fla.

#### **TERMINAL BLOCKS**

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Aircraft-Marine Products, Inc., 1523 N. Fourth
- St., Harrisburg, Pa. American Communications Corp., 306 Broadway,
- American Communications Corp., 306 Broadway, New York 7, N. Y.
  AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
  Autocall Co., The, Shelby, Ohio
  Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, III.
  Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J.
  Buchanan Electrical Products Corp., 1290 Central Ave., Hillside, N. J.

- Ave., Hillside, N. J. aggie & Co., H. H., 2141 Madison Ave., Toledo Buggie 1, Ohio Burke Electric Co., 12th & Cranberry Sts.,
- Erie, Pa.
- Life, ra.
   Burndy Engineering Co., Inc., 107 Bruckner
   Blvd., New York 54, N. Y.
   CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge, Mass. SEE ADV. PG.
  - 178.
- Cannon Electric Development Co., 3209 Hum-boldt St., Los Angeles 31, Calif. CENTRALAB DIV., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27. **CINCH MFG. CORP.**, 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. Cinema Engineering Co., 1510 W. Verdugo Ave.,

Coil Winders Inc., 61 Bergen St., Brooklyn 2, CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122.

cago, Ill. Curtis Development & Mfg. Co., 1 N. Craw-ford Ave., Chicago 24, Ill.

Electrical Insulation Co., Inc., 12 Vestry St.,

Electrical Insulation Co., Inc., 12 Vestry St., New York, N. Y. Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS, 129, 131, 133, 135.

Fornica Insulation Co., 4662 Spring Grove Ave., Cincinnati 32, Ohio Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rockford III

General Ceramics & Steatite Corp., Keasbey,

GENERAL ELECTRIC CO., Schenectady 5, N. Y.

SEE ADV. PGS. 5-18. Hart Mfg. Co., 110 Bartholomew Ave., Hartford

Insulation Mfg. Co., 11 New York Ave., Brooklyn,

Insulation Mile, Co., 11 New 1018 Ave., Dronkyn, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., L. I. City, N. Y. SEE ADV. PG. 80.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y.
Littelfuse, Inc., 4757 Ravenswood Ave., Chicago 40, III.

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Electric Co., 2700 Southport Ave., Chi-

Burbank, Calif.

Rockford, Ill.

1, Conn.

Cook

# **TERMINAL BOARDS**

1949-1950 DIRECTORY of

- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Micarta Fabricators, Inc., 5324 Ravenswood Ave.,
- Chicago 40, Ill. illen Mfg. Co., James, 150 Exchange St., Malden, Mass. Millen Miller Co., J. W., 5917 S. Main St., Los Angeles,
- Calif. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa. Multi-Products Tool Co., 123 Sussex Ave., Newark

- Multi-Products Tool Co., 123 Sussex Ave., Newark 4, N. J.
  Murdock Mfg. Co., Wm. J., Chelsea, Mass.
  NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. SEE ADV. PG. 31.
  Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y.
  Plastic Manufacturers Inc., 280 Fairfield Ave.,
- Stamford, Conn.
- Precision Metal Products Co., 342 Eastern Ave., Malden 48, Mass.
- Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Printloid Inc., 95 Mercer St., New York, N. Y. R. B. M. Div., Essex Wire Corp., Logansport, Ind Ind.
- Smith, Inc., Herman H., 405 44th St., Brooklyn 20. N. Y
- 20, N. Y. Standard Electrical Products Co., Dayton 3, Ohio Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England States Co., 19 New Park Ave., Hartford 6, Conn
- Conn. Taylor Fibre Co., Norristown, Pa. Ther Electric & Machine Works, 17 S. Jefferson St., Chicago, Ill. U. S. Instrument Corp., 409 Broad St., Sum-
- mit. N. J.
- mit, N. J. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# TERMINAL BOARDS

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. American Communications Corp., 306 Broadway,
- New York 7, N. Y. Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass. Austin Co., O., 335 Throop Ave., Brooklyn 21,

- N. Y. Autocall Co., The, Shelby, Ohio Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Buchanan Electrical Products Corp., 1290 Central Ave., Hillside, N. J. CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG. 178.
- CENTRALAB DIV., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
- CINCH MANUFACTURING CORP., 2335 W. Van Buren Street, Chicago 12, Ill. SEE ADV. PG. 190
- Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y. Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles 15, Calif. Collins Radio Co., Cedar Rapids, Iowa Cook Electric Co., 2700 Southport Ave., Chicago,
- III. Dietz Design & Mfg. Co., 5810 Park Ave., Kansas
- City 4, Mo. Eby, Inc., Hugh H., 4700 Stenton Ave., Philadel-phia 44, Pa. Electrical Insulation Co., Inc., 12 Vestry St., New

- Electrical Insulation Co., Inc., 12 Vesily Sci, Itch York 13, N. Y.
   Electronic Mechanics Inc., 70 Clifton Blvd., Clif-ton, N. J.
   Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
   Five Star Radio Co., 416 Broadway, Cambridge, Mase Mass.
- Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati 32, Ohio
- Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford. Ill. General Ceramics & Steatite Crop., Keasbey, N. J.

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- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
- Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.
- Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. Ave., L. PG. 80.
- Johnson Co., E. F., Waseca, Minn. JONES, HOWARD B., Div. Cinch Mig. Corp., 2460 W. George St., Chicago 18, Ill. SEE ADV. PG. 190.
- Joyner Corp., The, 462 N. Parkside Ave., Chi-cago 44, 111.
- cago 44, 111. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, 111. Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y. Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y. Kolton Electric Mfg. Co., 123 N. J. R. R. Ave., New 245 5. N. J.

- Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y. Newark 5, N. J.
- Masonite Corp., 111 W. Washington St., Chicago
- 2, Ill. Measurement Engincering Ltd., Arnprior, Ontario,
- Canada Micarta Fabricators, Inc., 5324 Ravenswood Ave.,
- Chicago 40, Ill. Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa. Multi-Products Tool Co., 123 Sussex Ave., Newark
- 4, N. J.

- N. J.
   Mykroy Inc., Arlington Heights Airport, Arlington Heights, Ill.
   NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
   NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
   Plastic Manufacturers Inc., 280 Fairfield Ave., Stomford Comp.

- bin, Der. SEE ADV. PG. 31.
  Plastic Manufacturers Inc., 280 Fairfield Ave., Stamford, Conn.
  Precision Metal Products Co., 342 Eastern Ave., Malden 48, Mass.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Printloid Inc., 95 Mercer St., New York, N. Y.
  Shefico Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Standard Electrical Products Co., Dayton 3, Ohio States Co., 19 New Park Ave., Hartford 6, Conn.
  Ucinite Co., The, Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
  United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
  Yates Engineering Services, Box 67, Cranford.
- Yates Engineering Services, Box 67, Cranford,

N. J.

#### TERMINAL STRIPS

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Aeronite Electronic Hatware Corp., 21 Chin Sty Jersey City, N. J. Aircraft-Marine Products, The, 1523 N. Fourth St., Harrisburg, Pa. Alden Products Co., 117 No. Main St., Brockton
- 64, Mass.
- American Communications Corp., 306 Broadway, New York 7, N. Y. AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
- AMERICAN PHENOLIC CORP., 1830 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
- 72, Mass. Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y. Autocall Co., The, Shelby, Ohio Birnbach Radio Co., Inc., 145 Hudson St., New
- York, N. Y. Brach Mfg. Corp., L. S., 200 Central Ave., Newark, N. J. Buchanan Electrical Products Corp., 1290 Central

- Burnaya Electrical Floaters Corp., 1200 Central Ave., Hillside, N. J.
   Burndy Engineering Co., Inc., 107 Bruckner Blvd., New York 54, N. Y.
   CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG. 1000 178.

Cannon Electric Development Co., 3209 Hum-

- Cannon Electric Development Co., 3205 Hum-boldt St., Los Angeles 31, Calif. CENTRALAB DIV., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc. SEE ADV. PGS. 26, 27.
- CINCH MFG. CORP., 2334 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. Coil Winders Inc., 61 Bergen St., Brooklyn 2,
- N. Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles 15, Calif. Cook Electric Co., 2700 Southport Ave., Chicago,
- Th.
- Eby, Inc., Hugh H., 4700 Stenton Ave., Philadel-phia 44, Pa. Electrical Insulation Co., Inc., 12 Vestry St., New
- York 13, N. Y. Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill. ago 10,
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Five Star Radio Co., 416 Broadway, Cambridge,
- Mass.
- Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati 32, Ohio Franklin Mg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
- General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill. General Ceramics & Steatite Corp., Keasbey, N. J.
- Greene Mfg. Corp., G. G., Warren, Pa. HERMETIC SEAL PRODS. CO., 29-37 South 6th St., Newark, N. J. SEE ADV. PG. 223. Insulation Mfg. Co., 11 New York Ave., Brooklyn,
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  S. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Johnson Co., E. F., Waseca, Minn.
  JONES, HOWARD B., Div., Cinch Mfg. Corp., 2460 W. George St., Chicago 18, Ill. SEE ADV. PG. 190.
  V. H. e. Guidebbeard & Supply Co. 6650 S. Cicreto.

ADV. PG. 190.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
Kolton Electric Mfg. Co., 123 N. J. R. R. Ave., Newark 5, N. J.
Littefluse. Inc., 4757 Ravenswood Ave., Chicago

Littelfuse, Inc., 4757 Ravenswood Ave., Chicago

Measurement Engineering Ltd., Arnprior, Ontario,

Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill. Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Miller Co., J. W., 5917 S. Main St., Los Angeles,

Calif.
Molded Insulation Co., Aircraft Control Div., 335
S. Price St., Phila., Pa.
Mykroy, Inc., Arlington Heights Airport, Arlington Heights, Ill.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. SEE ADV. PG. 31.
Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass
Panelyte Div., St. Regis Paper Co., 230 Park Ave.,

Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y. Penn-Union Electric Corp., 315 State Street,

Erie, Pa. Precision Fabricators, Inc., Roosevelt Rd., E.

Precision Metal Products Co., 342 Eastern Ave.,

Printloid Inc., 95 Mercer St., New York, N. Y. Sheffco Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J.

Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.

Standard Electrical Products Co., Dayton 3, Ohio Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2., England.

States Co., 19 New Park Ave., Hartford 6, Conn.

Ucinite Co., The, Div., United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. Waterbury Companies, Inc., Waterbury 90, Conn.

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Canada

Calif.

Rochester, N. Y

Malden 48, Mass.

West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
Wheaton Co., T. C., Industrial Div., 220 G St., Millville, N. J.

- Yates Engineering Services, Box 67, Cranford, N L

#### TERMINALS

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Aircraft-Marine Prods., Inc., 1523 No. 4th St.,
- Harrisburg, Pa.
- Harrisburg, Pa. Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass. Bead Chain Manufacturing Co., 110 Mountain Grove St., Bridgeport 5, Conn. Belden Mfg. Co., 4647 W. Van Buren St., Chi-cago 44, Ill. Buchanan Electrical Products Corp., 1290 Cen-tral Aug. Hillide N L

- Burndy Engineering Co., Inc., 107 Bruckner Blvd., New York 54, N. Y.
   CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG. 176
- 178
- 178.
  Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
  CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190.
  Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  Cook Electric Co., 2700 Southport Ave., Chicago III.

- Cook Electric Co., 2700 Southport Ave., Chi-cago, Ill. Dante Electric Mfg. Co., Bantam, Conn. Dietz Design & Mfg. Co., 5810 Park Ave., Kan-sas City 4, Mo. Eastern Specialty Co., Philadelphia 40, Pa. Eby, Inc., Hugh H., 4700 Stenton Ave., Phila. 44, Pa.

- 44, Pa.
  Electronic Mechanics, Inc., 70 Clifton Blvd., Clifton, N. J.
  Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
  Frankel Connector Co., 177 Hudson St., New York, N. Y.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
  General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

- General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
  Grannmes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa.
  Ilsco Copper Tube & Products Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio
  INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80 80.
- Johnson Co., E. F., Waseca, Minn

- Johnson Co., E. F., Waseca, Minn. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y. Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J. Littelfuse Inc., 4757 Ravenswood Ave., Chi-cago 40, Ill. McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo. Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
- Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill. Millen Mfg. Co., James, 150 Exchange St., Mal-
- Millen Mfg. Co., James, 150 Exchange SL, Maiden, Mass.
  Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  PATTON-MacGUYER CO., 17 Virginia Ave., Providence 5, R. I. SEE ADV. PG. 184.
  Precision Metal Products Co., 342 Eastern Ave., Malden 48. Mass.

- Precision Metal Products Co., 342 Eastern Ave., Malden 48, Mass.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Shakeproof Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
  Sheffco Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J.
  Sherman Mfg. Co., H. B., 22 Barney St., Bat-tle Creek, Mich.
  Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y.

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- STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.
  Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
  Technical Materiel Corporation, The, 453 West 47th Street, New York 19, N. Y.
  Thompson-Bremer & Co., 1640 W. Hubbard St., Chicago, Ill

- Chicago, Ill. Waterbury Companies, Inc., Waterbury 90,
- Conn. Whitaker Cable Corp., Kansas City 16, Mo.

# TERMINALS-Hermetically Sealed

- Bead Chain Manufacturing Co., 110 Mountain Grove St., Bridgeport 5, Conn. Cook Electric Co., 2700 Southport Ave., Chi-
- cago, Ill.
- cago, III. Corning Glass Works, Corning, N. Y. ELECTRICAL INDUSTRIES, INC., 42 Summer Ave., Newark 4, N. J. SEE ADV. PG. 132. ELECTRO-SEAL CORP., 946 Lee St., Des Plaines, III. SEE ADV. PG. 90. Electronic Mechanics, Inc., 70 Clifton Blvd., Clifton, N. J.
- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. General Ceramics & Steatite Corp., Keasbey,
- N. J.
- Fusite Corp., Carthage at Hannaford, Cincinnati 12, Ohio Hermaseal Co., Inc., Riverside Dr., Elkhart, Ind.
- 12, Ohio Hermaseal Co., Inc., Riverside Dr., Elkhart, Ind. HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark, N. J. SEE ADV. PG. 223. Legris Co., Inc., 846 Amsterdam Ave., New York 25, N. Y. Lundey Associates, Mfg. Div., 694 Main St., Waltham 54 Mass.
- Waltham 54, Mass. Multi-Products Tool Co., 123 Sussex Ave., New-
- Multi-Products Tool Co., 123 Sussex Ave., New-ark 4, N. J. Mykroy Inc., Arlington Heights Airport, Arling-ton Heights, III. STUPAKOFF CERAMIC & MFG. Co., Latrobe, Pa. SEE ADV. PG. 78. Triad Transformer Mfg. Co., 423 N. Western

- Ave., Los Angeles 3, Calif. Vitroseal Corp., The, 918 Oak St., Wyoming, Cincinnati 15, Ohio Wheaton Co., T. C., Industrial Division, 220 G. Street, Millville, N. J.

# TEST CHAMBERS

See Chambers, Test

# TESTERS—Automatic Tube and Set

- BUCK ENGINEERING CO., 37-41 Marcy St., Freehold, N. J. SEE ADV. PG. 224. Coastwise Electronics Corp., 130 N. Beaudry Ave., Los Angeles, Calif. Conant Labs., 6500 O St., Lincoln 5, Neb. Dayco Radio Corp., 915 Valley St., Dayton 4, Obio
- Ohio Ecco High Frequency Corp., 7020 Hudson Blvd.,
- North Bergen, N. J. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 223.
- PG. 223. Espey Mfg. Co., Inc., 528 E. 72nd St., New York,
- Feiler Engineering Co., 945 W. George St., Chi-
- Feiler Engineering Co., 945 W. George St., Chi-cago 14, III. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio Jackson Electrical Instrument Co., 16 S. Patter-son Blud Davien 1. Ohio
- son Blvd., Dayton 1, Ohio MacLeod & Hanopol, 10 Joiner St., Charlestown 29. Mass.
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill.

- Philco Corp., Tioga & C Sts., Phila. 34, Pa. Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y. Simpson Electric Co., 5218 W. Kinzie St., Chi-cago, Ill.

Star Measurements Co., 442 East 166th St., New York 56, N. Y.
Supreme, Inc., Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS 240.244

- 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Triplett Electrical Instrument Co., 286 Harmon
- Rd., Bluffton, Ohio WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- Weston Laboratories, Weston 93, Mass.

#### **TESTERS**—Battery

31, Ill.

Mass.

Canada

Cleveland 1, Ohio

TESTERS—Capacitor

Brooklyn 17, N. Y

Bowers Battery & Spark Plug Co., Reading, Pa. Chaslyn Co., The, 1952 Irving Park Bldg., Chicago

- 13 III Columbus Electronics Corp., 229 S. Waverly St.,
- Columbus Electronics Corp., 229 S. Waverly St., Yonkers, N. Y.
  Daven Co., 191 Central Ave., Newark 4, N. J.
  Electric Heat Control Co., 9123 Inman Ave., Cleveland 5, Ohio
  Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- N. 1. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio Industrial Electronics & Transformer Co., 1809
- E. Slauson Ave., Los Angeles 11, Calif. International Instruments, Inc., 331 East St.,
- International Instruments, Inc., 331 East St., New Haven 11, Conn.
  J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
  Precision Apparatus Co., Inc., 92-27 Horace Hard-ing Blvd., Elmhurst, N. Y.
  Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.

- Pa. A and A and

Supreme, Inc., Greenwood, Miss. Triplett Electrical Instruments Co., 286 Harmon Rd., Bluffton, Ohio Willard Storage Battery Co., 246 E. 131st St.,

Aerovox Corp., 740 Belleville Ave., New Bedford,

Bradshaw Instruments Co., 348 Livingston St.,

Brooklyn 17, N. Y. Clippard Instrument Laboratory, Inc., 1125 Bank St., Cincinnati 14, Ohio Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Conant Labs., 6500 O St., Lincoln 5, Neb. Electric Heat Control Co., 9123 Inman Ave., Cleve-land 5, Ohio Ferror Wife Co. Inc. 528 F. 72nd St. New York

Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

N. Y. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Heath Co., Benton Harbor, Mich. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio Jackson Electrical Instrument Co., 16 S. Patter-son Blvd., Dayton 1, Ohio MacLeod & Hanopol, 10 Joiner St., Charlestown 29, Mass. McMurdo Silver Co. Inc. 1240 Main St. Hart

McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn.

Measurement Engineering Ltd., Arnprior. Ontario,

Canada Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Network Manufacturing Corp., Bayonne, N. J. Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa

Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J. Sprague Electric Co., North Adams, Mass. UNITED CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225.

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# *<i>IESTERS*

- WESTON ELECTRICAL INSTRUMENT CORP., 618 Freylinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- Weston Laboratories, Weston 93, Mass. Wheeler Laboratories, Inc., 259-09 Northern Blvd., Great Neck, N. Y.

## TESTERS-Circuit

- Bradshaw Instrument Co., 348 Livingston St., Brooklyn 17, N. Y. Cole Instrument Co., 1320 S. Grand Ave., Los

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
  Conant Labs., 6500 O St., Lincoln 5, Neb.
  Eagle Electric Mig. Co., Inc., 23.10 Bridge Plaza
  S., Long Island City, N. Y.
  Electronic Development Co., 4420 No. 23rd St., Omaha 11, Nebraska
  ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y.
  Espey Mig. Co., Inc. 528 F. 70.101
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York,
- Feiler Engineering Co., 945 W. George St., Chicago 14, Ill. General Cement Mfg. Co., 919 Taylor Ave., Rock-

- General Cement Mig. Co., 515 Taylor Aver, note-ford, Ill.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Heath Co., Benton Harbor, Mich.
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
  Jackson Electrical Instrument Co., 16 S. Patter-are Public Destroy 1, Ohio
- son Blvd., Dayton 1, Ohio Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Littelfuse Inc., 4757 Ravenswood Ave., Chicago
- 40, Ill.
- Martindale Electric Co., Box 617 Edgewater Branch, Cleveland 7, Ohio Measurement Engineering Ltd., Arnprior, Ontario,

- Canada Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Philco Corp., Tioga & C Cts., Phila. 34, Pa. Precision Apparatus Co., Inc., 92.27 Horace Hard-ing Blvd., Elmhurst, N. Y. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio City Products, Co., Inc., 152 W. 25th St., New York 1, N. Y. Reiner Electronics Co., 152 W. 25th Street, New York, N. Y. Roller-Smith, Bethlehem, Pa. Sittler Corporation, 18 N. Ada Street, Chicago 7, Ill.
- Ill.
- III. Special Products Co., Silver Spring, Maryland Supreme, Inc., Greenwood, Miss. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS.
- 868, Pittsburgh 30, Pa. SEE ADV. PGS.
  66, 67.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

# TESTERS—Coating Thickness

- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. Branson Instruments, Inc., 436 Fairfield Ave.,
- Stamford, Conn. Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.

## TESTERS—Coil

- Conant Labs., 6500 O St., Lincoln 5, Neb. Electric Heat Control Co., 9123 Inman Ave., Cleveland 5, Ohio Feiler Engineering Co., 945 W. George St.,
- Chicago 14, Ill.
- Chicago 14, III.
   GENERAL ELECTRIC CO., Schenectady 5, N. Y.
   SEE ADV. PGS. 5-18.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209. ZUJ. Kartron, Inc., Box 472, Huntington Beach, Calif. Pioneer Electric & Research Corp., The, 7212 Circle Ave., Forest Park, Ill. Radex Corp., 2076 N. Elston Ave., Chicago 14,
- Rubicon Co., 3751 Ridge Ave., Phila., Pa.

- Shallcross Mfg. Co., 10 Jackson Ave., Collingdale.
- WESTON ELECTRICAL INSTRUMENT CORP. 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- Wheeler Laboratories, Inc., 259.09 Northern Blvd., Great Neck, N. Y.

#### **TESTERS**—Continuity

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Douglas Radio Labs., 40 Wayland St., Boston 25,
- Mass. Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska
- Feiler Engineering Co., 945 W. George St., Chi-

- Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Heath Co., Benton Harbor, Mich.
  Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland, Ohio
  Leco Engineering Corp., Box 908, Lincoln, Nebr.
  Measurement Engineering Ltd., Arnprior, Ontario, Canada Canada
- Philco Corp., Tioga & C Sts., Phila. 34, Pa. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- Pa. Special Products Co., Silver Spring, Maryland
- Supreme, Inc., Greenwood, Miss. Thermionic Engineering Corp., Pompton Plains,
- Triplett Electrical Instrument Co., 286 Harmon
- Road, Buffton, Ohio Weston Laboratories, Weston 93, Mass.

#### **TESTERS**—Crystal Testing

- CLARK CRYSTAL CO., 2 Farm Rd., Marlhoro, Mass. SEE ADV. PG. 175. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
- Monitor Products Co., 815 Fremont Ave., So.
- Monitor Products (C.) Pasadena, Calif. PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. SEE ADV.

- PG. 213.
  Radio Specialty Mfg: Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
  REEVES-HOFFMAN CORP., 321 Cherry St., Carlisle, Pa. SEE ADV. PG. 104.
  Westline Electronics Co., 11660 Olympic Blvd., Los Angeles 25, Calif.

### **TESTERS**—Ink Penetration

- Rubicon Co., 3751 Ridge Ave., Phila., Pa
- Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. Thwing-Albert Instrument Co., 5351 Pulaski Avenue, Philadelphia 44, Pa.

#### **TESTERS**—Insulation

- Aircraft Electronics Associates, Inc., 1031 New
- Ameriate Electronics Associates, Inc., 1031 New Britain Ave., Hartford 10, Conn. Amplifier Corp. of America, 396 Broadway, New York 13, N. Y. Associated Research, Inc., 3758 W. Belmont, Chicago 18, Ill.
- Chicago 18, 111.
  BETA ELECTRONICS CO., 1762 3rd Ave., New York 29, N. Y. SEE ADV. PG. 126.
  Biddle Co., James G., 1316 Arch St., Philadel-phia 7, Pa.
  Central Research Laboratories, Inc., Red Wing,
- Minn. Cinema Engineering Co., 1510 W. Verdugo Ave.,
- Burbank, Calif.
   Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
   ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181

- 181. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 518.
- Holtzer-Cabot, Inc., 125 Amory St., Boston 19, Mass.
- Ideal Industries Inc., Park & Borden Avenues,
- Sycamore, Ill. Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.

La Rose & Associates, Inc., W. T., 646 Second

1949-1950 DIRECTORY of

- Ave., Troy, N. Y. Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa. Lyman Electronic Corp., 12 Cass St., Spring-

- Lyman Electronic Corp., 12 Cass St., Oping field, Mass. MacLeod & Hanopol, 10 Joiner St., Charlestown 29, Mass. Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio MEASUREMENTS CORP., Boonton, N. J. SEE ADV PG 110
- MEASUREMENTS CORP., Boonton, N. J. SEE ADV. PG. 110.
  Network Manufacturing Corp., Bayonne, N. J.
  Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
  Radio City Products Co., Inc., 152 W. 25th St., New York J, N. Y.
  Radio Frequency Labs., Inc., Boonton, N. J.
  Reiner Electronics Co., 152 W. 25th St., New York, N. Y.

- York, N. Y. Rubicon Co., 3751 Ridge Ave., Phila., Pa. Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale, Pa. Standard Electrical Products Co., Dayton 3,
- Ohio
- Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y. Thermionic Engineering Corp., Pompton Plains,
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67
- WESTON ELECTRICAL INSTRUMENT CORP. ADV. PG. 193. Winslow Company, Inc., The, 9 Liberty St., New-ark 5, N. J.

#### **TESTERS**—Meter

Columbus Electronics Corp., 229 S. Waverly St., Yonkers, N. Lonkers, N. F. Eastern Specialty Co., Philadelphia 40, Pa. Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska ELECTRONIC MEASUREMENTS CO., Red Bank,

N. J. SEE ADV. PG. 172. Hickok Electrical Instrument Co., 10514 Dupont

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
MARION ELECTRICAL INSTRUMENT CO., Man-chester, N. H. SEE ADV. PG. 79.
Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
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.

York, N. Y. Rubicon Co., 3751 Ridge Ave., Phila., Pa. States Co., 19 New Park Ave., Hartford 6, Conn. Triplett Electrical Instrument Co., 286 Harmon

Road, Bluffton, Ohio WESTON ELECTRICAL INSTRUMENT CORP.

TESTERS—Microwave Radar

Equipment

5th Ave., Nev PGS. 240-244.

June, 1949 - MID MONTH - ELECTRONICS BUYERS' GUIDE

618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Dalmo Victor Co., San Carlos, Calif. ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215. Leru Laboratories, Inc., 360 Bleecker St., New York 14. N. Y.

Leru Laboratories, Inc., 360 Bleecker St., New York 14, N. Y.
Network Manufacturing Corp., Bayonne, N. J.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Rm. 303, Brooklyn 2, N. Y. SEE ADV. PG. 63.
Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif.
Servo Corp. of America, 20-20 Jericho Turnpike,

Servo Corp. of America, 20-20 Jericho Turnpike,

Servo Corp. of America, 20 2 New Hyde Park, N. Y. SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV

Thermionic Engineering Corp., Pompton Plains, N. J.

Testina

#### **TESTERS**—Moisture Detection

American Instrument Co., 8030 Georgia Ave.,

- Silver Spring, Md. Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y. Delmhorst Instrument Co., 115 Cornelia St., Boonton, N. J.

- Boonton, N. J.
  Fielden Electronics Inc., 1171 New York Ave., Huntington Station, N. Y.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.
  Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.
  Moisture Register Co., P. O. Drawer No. 910, Alhambra, Calif.
  Network Manufacturing Corp., Bayonne, N. J.
  Patterson Co., C. J., 3947 Broadway, Kansas City, Mo.

- City, Mo. Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J. Thompson & Associates, John E., 7210 S. Yates
- Ave., Chicago 49, Ill. Thwing-Albert Instrument Co., 5351 Pulaski
- Avenue, Philadelphia 44, Pa.

## TESTERS-Radar Tube

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.

#### **TESTERS**—*Transconductance Tube*

- Espey Mig. Co., Inc., 528 E. 72nd St., New York, Υ.
- Heath Co., Benton Harbor, Mich. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. National Technical Lab., 820 Mission St., S.
- Pasadena, Calif.
- 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.
  Robotron Corp., 5570 W. Chicago Blvd., Detroit
- 4, Mich.
- Siter, Steel, Steel, Market Steel, Ste
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
- Weston Laboratories, Weston 93, Mass.

# TESTERS-Voltage Neon

- Aerolux Light Corp., 653 11th Ave., New York
- Agroux Light Colp., 633 11th Ave., New York 19, N. Y.
   Dante Electric Mig. Co., Bantam, Conn.
   Fordham Mig. Co., 2736 Creston Ave., New York 58, N. Y.
- General Cement Míg. Co., 919 Taylor Ave., Rockford, Ill.
- HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209
- Ideal Industries, Inc., Park & Borden Aves., Sycamore, Ill. Industrial Devices, Inc., 22 State Rd., Edge-
- Mustral Detroits, M.J. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Minerallac Electric Co., 25 N Peoria St., Chicago,
- Standard Electrical Products Co., Dayton 3,
- Ohio
- Superior Instruments Co., 227 Fulton St., New York 7, N. Y. U. S. Electronics Corp., 275 Warren St., Lynd-
- hurst, N. J.

#### THERMISTORS

- Friez Instrument Div., Bendix Aviation Corp.,
- Baltimore 4, Md. Keystone Carbon Co., Inc., Saint Marys, Pa. Microwave Equipment Co; North Caldwell, N. J

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- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. SEE ADV. PG. 78.
- THERMOCOUPLES
- American Electric Cable Co., Holyoke, Mass. AMERICAN PLATINUM WORKS, N. J. R R
- Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.
- American Thermo Electric Co., 67 E. 8th St.,
- New York 3, N. Y. BALLANTINE LABS., INC., Boonton, N. J. SEE
- BALLANTINE LADS, Inc., Essential ADV. PG. 134. Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Cole Instrument Co., 1320 S. Grand Ave., Los Apgeles 15. Calif.
- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif. Elematic Equipment Corp., 6046 S. Wentworth Ave. Chicago. 21, 111
- Ave., Chicago 21, Ill. Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y. FIELD ELECTRICAL INSTRUMENT CO., 109 E.
- 184th St., New York 53, N. Y. SEE ADV. PG. 80

- General Controls Co., Glendale 1, Calif. General Controls Co., Glendale 1, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Gordon Co., Claud S., 3000 S. Wallace St., Chi-cago 16, Ill. Hickok Electrical Instrument Co., 10514 Dupont

- Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
  Illinois Testing Labs., Inc., 420 N., LaSalle St., Chicago 10, Ill.
  J B T INSTRUMENTS INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229.
  Manning, Maxwell & Moore, Inc., 11 Elias St., Bridgeport 2, Conn.
- Measurement Engineering Ltd., Arnprior, Ontario,
- Canada Minneapolis-Honeywell Regulator C Fourth Ave., S., Minneapolis, Minn. Co., 2753
- Fourth Ave., Š., Minneapolis, Minn.
  Nurnberg Thermometer Co., Inc., 4 Corey St., Boston 32, Mass.
  Perkin-Elmer Corp., The, Glenbrook, Conn.
  Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
  Reeder & Co., Charles M., 171 Victor Ave., De-troit 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.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

- EVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J. Thwing-Albert Instrument Co., 5351 Pulaski Ave.,
- Philadelphia 44, Pa. Uniform Tubes, Shurs Lane & Lauriston Sts., Roxborough, Phila., Pa. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, cr
- 67. Wheelco Instruments Co., 847 W. Harrison St.,
- Chicago 7, Ill. Winslow Company, Inc., The, 9 Liberty St., Newark 5, N. J.
- Xervac Instrument Co., 101 Vine St., Hartford 5, Conn.
- THERMOCOUPLES—Pyrometric
- Am<mark>erican Electric Cable Co., Holvoke, Mass.</mark> Bristol Co., The, Waterbury 91, Conn.
- Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
- Philadelphia 44, Pa. Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.

- Elematic Equipment Corp., 6046 S. Wentworth Ave., Chicago 21, Ill. Foxboro Co., The, Foxboro, Mass. Gordon Co., Claud S., 3000 S. Wallace St., Chi-cago 16, Ill. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill. Leeds & Northrup Co., 4970 Stenton Ave., Phila-delphia 44. Pa.

- delphia 44, Pa Lewis Engineering Co., 52 Rubber Ave., Nauga-
- tuck, Conn. Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.
- Ind.
  Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
  Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
  Roller-Smith, Bethlehem, Pa.
  Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
  Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

- Philadelphia 44, Pa.
- Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill. Winslow Company, Inc., The, 9 Liberty St.,
- Newark 5, N. J

#### THERMOMETERS—Platinum Contact

- Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10,
- Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.

Mack Electrical Devices, Inc., 43 Glenside Ave.,

Weksler Thermometer Corp., 52 W. Houston St.,

Assembly Products, Inc., Chagrin Falls 6, Ohio Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10,

Ohio Bristol Co., The, Waterbury 91, Conn. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. Foxboro Co., The, Foxboro, Mass. Fredericks Co., Geo. E., Bethayres, Pa. Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill. Ulinois Testing Labs. Inc., 420 N. LaSalle St.

Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill. Chicago 10, III. J B T INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229. Leeds & Northup Co., 4970 Stenton Ave.. Phila-

Leeds & Northrup Co., 4910 Stenton Area Andrea delphia 44, Pa. MACDONALD & CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. SEE ADV. PG. 118. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn. Precision Resistor Co., 334 Badge Ave., Newark 8, N. J.

N. J.
Ruge-DE Forest, Inc., 76 Massachusetts Ave., Cambridge 39, Mass.
Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
TRANS-SONICS, Bedford Airport, Bedford, Mass. SEE ADV. PG. 132.
UNITED CONDENSER CORP., 337 E. 139th St.,

NET DO CONDENSER CORP., 337 E. 139th St., New York 54, N. Y. SEE ADV. PG. 225. WESTON ELECTRICAL INSTRUMENT CORP.,

Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill. Winslow Company, Inc., The, 9 Liberty St., Newark 5, N. J.

Brown Instrument Co., Wayne & Roberts Aves.,

Phila. 44, Pa. Ppila. 44, Pa. Eppley Lab., Inc., The, Newpart, R. I. Farrand Optical Co., Inc., Bronx Blvd at 238th St., New York 66, N. Y. FIELD ELECTRICAL INSTRUMENT CO., 109 E.

184th St., New York 53, N. Y. SEE ADV. PG. 80.

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THERMOPILES

618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

Wyncote, Pa.

Ohio

New York, N. Y

THERMOMETERS—Resistance

# THYRATRONS

# Hastings Instrument Co., Box 1275, Hampton, Va. Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill. National Technical Lab., 820 Mission St., South

- Pasadena, Calif. Reeder & Co., Charles M., 171 Victor Ave., De-troit 3, Mich.
- Thwing-Albert Instrument Co., 5351 Pulaski Ave-nue, Philadelphia 44, Pa.

## THYRATRONS

See Tubes

# **TIMERS**—Automatic Cycle

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. Airlectron, P. O. Box 151, Caldwell, N. J. Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa. Barber-Colman Co., Rockford, Ill. Bristol Co., The, Waterbury 91, Conn. Cooper Co., Clark, 374 N. Market St., Palmyra, N. J.

- N. J. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Cutler-Hammer, Inc., 315 North 12th Street, Milwaukee 1, Wis. Eagle Signal Corp., Moline, III. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181. Fleetronic Control Corp., 1573 E. Forest St.,
- Lot.
  Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
  Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
  Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21 Mass.
- Fisher Freide Gui, 21, Mass. Foxboro Co., The, Foxboro, Mass. GENERAL CONTROL COMPANY, 1200 Soldiers Field Rd., Boston 34, Mass. SEE ADV. PG.

- 161.
  General Controls Co., Glendale 1, Calif.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Gorrell & Gorrell, Haworth, N. J.
  Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
  HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
  Kurman Electric Co., Inc., 35-18 37th St., L. I. City 1, N. Y.

- City 1, N. Y. Lektra Labs., 30 E. 10th St., New York, N. Y. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill. Maritime Quality Hardware Co., Inc., Belfast,
- Maine
- Montgomery Mfg. Co., 549 W. Washington Blvd., Chicago 6, Ill. O'Connor & Co., John T., West Orange, N. J. Paragon Electric Co., Two Rivers, Wis. Photoswitch, Inc., 77 Broadway, Cambridge 42,

Mass.

- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. POTTER & BRUMFIELD SALES CO., 549 W.
- Washington Blvd., Chicago 6, Ill. SEE ADV.
- PG. 42. RESEARCH ELECTRONIC LAB., 2859 Susque-hanna Rd., Roslyn, Pa. SEE ADV. PG. 233. Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill.
- Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn. Robotron Corp., 5570 W. Chicago Blvd., Detroit

- Robotron Corp., 5570 W. Chicago Bivd., Detroit 4, Mich.
  Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, 1ll.
  Self Winding Clock Co., 205 Willoughby Ave., Brooklyn 5, N. Y.
  SIGNAL ENGINEERING & MFG. CO., 154-6 W.
  14th St., New York, N. Y. SEE ADV. PG. 223.
  Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.
  Tork Clock Co., Inc., 1 Grove St., Mt. Vernon.
- Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
- White Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo. Wilson & Co., G. C., 2 N. Passaic Ave., Chatham,
- N. J. Zenith Electric Co., 152 W. Walton St., Chicago 10, 111.

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#### TIMERS—Automatic Interval

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. Airlectron, P. O. Box 151, Caldwell, N. J. Aurex Corp., 1117 N. Franklin St., Chicago, Ill. Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa. Brinnell Co., The, Granby, Conn. Cooper Co., Clark, 374 N. Market St., Palmyra, N. J. CRAMER CO. INC. P. W. Contacture Con-

- CRAMER CO., INC., R. W., Centerbrook, Conn.
- CRAMER CU., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99.
   Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio Eagle Signal Corp., Moline, Ill.
   ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- Electyme Motor Products Corp., 565 W. Wash-ington Blvd., Chicago 6, Ill. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston
- 21. Mass.
- GENERAL CONTROL COMPANY, 1200 Soldiers Field Rd., Boston 34, Mass. SEE ADV. PG. 161.

- 161.
  General Controls Co., Glendale 1, Calif.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Gorrell & Gorrell, Haworth, N. J.
  Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
  HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
  Heath Co., Benton Harbor, Mich.
  Industrial Timer Corp., 115 Edison Pl., Newark 5, N. J.

- ark 5, N. J. Kurman Electric Co., Inc., 35-18 37th St., L. I.
- Kurman Electric Co., inc., 35-18 Still St., E. I. City 1, N. Y.
  Lektra Labs., 30 E. 10th St., New York, N. Y.
  Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
  Maritime Quality Hardware Co., Inc., Belfast, Maine
- Marine Nuclear Instrument & Development Corp., 223 W. Erie St., Chicago 10, Ill. O'Connor & Co., John T., West Orange, N. J. Paragon Electric Co., Two Rivers, Wis. Photoswitch, Inc., 77 Broadway, Cambridge 42, More

- Mass. Picker X-Ray Corp., 300 Fourth Ave., New York
- 10, N. Y. POTTER & BRUMFIELD SALES CO. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42.

- Washington Blvd., Chicago 6, 111. SEE ADV. PG. 42. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Reliance Automatic Lighting Co., 1927 Mead St., Racine, Wis. Research Electronic Lab., 2859 Susquehanna
- Rd., Roslyn, Pa. Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill. Rhodes Inc., M. A., 30 Bartholomew Ave., Hart-
- ford, Conn. Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
- Robotron Corp., 5570 W. Chicago Blvd., De-troit 4, Mich.
- Brook J., Mich.
  Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 29, Ill.
  Self Winding Clock Co., 205 Willoughby Ave., Brooklyn 5, N. Y.
  Tech Laboratories, Inc., Bergen & Edsall Blvds., Deliada, Bock N. J.
- Palisades Park, N. J. TELECHRON INC., Homer Ave., Ashland, Mass. SEE ADV. PG. 85.
- Tork Clock Co., Inc., 1 Grove St., Mt. Vernon,
- N. Y.
- N. Y.
  Walser Automatic Timer Co., Graybar Building, New York, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  Zenith Electric Co., 152 W. Walton St., Chi-rene 10, UK cago 10, Ill.

## **TIMERS**—Automatic Reset

Airlectron, P. O. Box 151, Caldwell, N. J.
American Time Corp., Springfield 1, Mass.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa.
Bristol Co., The, Waterbury 91, Conn.

CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Eagle Signal Corp., Moline, Ill. ELECTRO-TECH EQUIPMENT CO., 117 Lafay-ette St., New York 13, N. Y. SEE ADV. PG.

1949-1950 DIRECTORY of

- 181. Electyme Motor Products Corp., 565 W. Wash-ington Blvd., Chicago 6, Ill. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21,
- Mass
- GENERAL CONTROL COMPANY, 1200 Soldiers Field Rd., Boston 34, Mass. SEE ADV. PG. 161. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Gorrell & Gorrell, Haworth, N. J.
  Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
  HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
  Industrial Timer Corp., 115 Edison Pl., Newark 5, N. J.

- N. J.
- N. J.
  Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
  Lektra Labs., 30 E. 10th St., New York, N. Y.
  Lumenite Electric Co., 407 S. Dearborn St., Chi-cago 5, Ill.
  Maritime Quality Hardware Co., Inc., Belfast, Maine

- Maine.

10. Ill.

N. J.

PG. 42

J. N

10, Ill.

Mass

Mass.

TIMERS—Impulse

**TIMERS**—Hour Counting

Maine. Paragon Electric Co., Two Rivers, Wisc. Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Ulanet Co., George, 413 Market St., Newark 5, N. J.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Zenith Electric Co., 152 W. Walton St., Chicago

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. ELECTRO-TECH EQUIPMENT CO., 117 Lafay-ette St., New York 13, N. Y. SEE ADV. PG. 181.

181.
Electyme Motor Products Corp., 565 W. Washington Blvd., Chicago 6, Ill.
GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
Gorrell & Gorrell, Haworth, N. J.
Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
Industrial Timer Corp., 115 Edison Pl., Newark 5, N. J.

Monroe Coil Co., 2659 W. 19th St., Chicago, Ill. National Instrument Co., 246 Walnut St., Newton-

ville 60, Mass. POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6, Ill. SEE ADV.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wilson & Co., G. C., 2 N. Passaic Ave., Chatham,

Zenith Electric Co., 152 W. Walton St., Chicago

Alden Products Co., 117 N. Main St., Brockton 64,

Mass. ATOMIC INSTRUMENT CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200. Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa. Bristol Co., The., Waterbury 91, Conn. BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Eagle Signal Corp., Moline, Ill. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston 21, Mass.

General Electric X-Ray Corp., 4855 W. McGeoch Ave., Milwaukee, Wisc.

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- Haydon Co., A. W., The, 111 W. Main St., Water-bury 32, Conn. Industrial Timer Corp., 115 Edison Pl., Newark 5,
- N. J. Lumenite Electric Co., 407 S. Dearborn St., Chi-
- cago 5, Ill. Picker X-Ray Corp., 300 Fourth Ave., New York 10, N. Y.
- Polter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div.,
- Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
- Robotron Corp., 5570 W. Chicago Blvd., Detroit 4, Mich.
- Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Zenith Electric Co., 152 W. Walton St., Chicago
- 10, Ill.

#### **TIMERS**—Inertia

Struthers-Dunn, Inc., 150 N. 13th St., Philadelphia 7, Pa.

#### TIMERS—Motor Operated

- Alden Products Co., 117 No. Main St., Brock-
- Alden Products Co., 117 No. Main St., Brock-ton 64, Mass. American Time Corp., Springfield 1, Mass. Amglo Corp., 4234 Lincoln Ave., Chicago 18, III. Arlington Electric Products, Inc., 500 W. 52nd St., New York 19, N. Y. Automatic Temperature Control Co., Inc., 5212 Evaluation Annual Control Co., Section 2012
- Pulaski Ave., Phila. 44, Pa. Barber Colman Co., Rockford, Ill. Cooper Co., Clark, 374 N. Market St., Palmyra,

- N. J. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio Eagle Signal Corp., Moline, Ill. Electyme Motor Products Corp., 565 W. Wash-ington Blvd., Chicago 6, Ill. General Controls Co., Glendale 1, Calif. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SFE ADV. PGS, 5-18.

- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Gorrell & Gorrell, Haworth, N. J. Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn. HAYDON MFG. CO., INC., 584 E. Elm St., Tor-rington, Conn. SEE ADV. PGS. 68, 69. Industrial Timer Corp., 115 Edison Pl., Newark 5 N J

- Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y. Lektra Labs., 30 E. 10th St., New York, N. Y. Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
- Maritime Quality Hardware Co., Inc., Belfast, Maine
- Manne Montgomery Mfg. Co., 549 W. Washington Blvd., Chicago 6, Ill. Paragon Electric Co., Two Rivers, Wis. POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6, Ill. SEE ADV.

- PG. 42
- Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill. Standard Electric Time Co., The, 89 Logan St., Springfield, Mass.
- Struthers-Dunn, Inc., 150 N. 13th St., Phila. 7,
- Pa.
- TELECHRON INC., Homer Ave., Ashland, Mass. SEE ADV. PG. 85. Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
- N. 1. WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo. Louis 6, Mo.
- Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

#### **TIMERS**—Multicontact

- Amglo Corp., 4234 Lincoln Ave., Chicago 18, Ill.
   Automatic Temperature Control Co., Inc., 5212
   Pulaski Ave., Phila. 44, Pa.
   CRAMER CO., INC., R. W., Centerbrook, Conn.
   SEE ADV. PG. 99.

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- Cutler-Hammer, Inc., 315 No. 12th St., Milwau-

- Cutler-Hammer, Inc., 315 No. 12th St., Minwauke 1, Wis.
  Eagle Signal Corp., Moline, Ill.
  Gorrell & Gorrell, Haworth, N. J.
  Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
  HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
  Industrial Timer Corp., 155 Edison Pl., Newark 5. N. J.
- 5, N. J. Lumenite Electric Co., 407 S. Dearborn St., Chi-cago 5, Ill. Maritime Quality Hardware Co., Inc., Belfast,
- Maine
- Paragon Electric Co., Two Rivers, Wis. POTTER & BRUMFIELD SALES CO., 549 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 42.
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Tork Clock Co., Inc., 1 Grove St., Mt. Vernon,
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

## TIMERS—Percentage

- Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa.
  CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99.
  Eagle Signal Corp., Moline, III.
  ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Zenith Electric Co., 152 W. Walton St., Chi-cago 10, Ill.

#### TIMERS—Photoelectric

- Alden Products Co., 117 No. Main St., Brockton 64, Mass. Automatic Temperature Control Co., Inc., 5212
- Pulaski Ave., Phila. 44, Pa. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 233.
- Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. J. Fisher-Pierce Co., Inc., 70 Ceylon St., Boston

- Fisher-Pierce Co., Inc., 19 Co., 19 21, Mass. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. O'Connor & Co., John T., West Orange, N. J. Photobell Co., 116 Nassau St., New York 7, N. Y.
- Photocon Research Products, 1062 N. Allen Ave., Pasadena 7, Calif. Photoswitch, Inc., 77 Broadway, Cambridge 42,
- Mass.
- Pho Tron Instrument Co., 5713 Euclid Ave., Cleveland, Ohio POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Rhodes Inc., M. H., 30 Bartholomew Ave., Hart-
- ford, Conn. Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn.
- Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Thermo Labs., Inc., 355 W. 26th St., New York
- M
- I. N. Y.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
   Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.

# TIMERS—Sequence

- ADAMS & WESTLAKE CO., Michigan St., Elk-hart, Ind. SEE ADV. PGS. 76, 77. Airlectron, P. O. Box 151, Caldwell, N. J. ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. SEE ADV. PGS. 34, 35.

- Automatic Temperature Controls Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa. Bristol Co., The, Waterbury 91, Conn. CRAMER CO., INC., R. W., Centerbrook, Conn. SEE ADV. PG. 99. Cutler-Hammer, Inc., 315 No. 12th St., Milwau-kee 1. Wis.

- Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee 1, Wis.
  Eagle Signal Corp., Moline, Ill.
  EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Globe Industries, 125 Sunrise Pl., Dayton, Ohio Haydon Co., A. W., The, 111 W. Main St., Waterbury 32, Conn.
  HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. SEE ADV. PGS. 68, 69.
  Industrial Timer Corp., 115 Edison Pl., Newark 5, N. J.

- Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill. Maritime Quality Hardware Co., Inc., Belfast,
- Maine
- O'Connor & Co., John T., West Orange, N. J. Paragon Electric Co., Two Rivers, Wisc. Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
- Potter Instrument Co., Inc., 136-56 Roosevelt Ave., Flushing, N. Y. Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill. Ripley Co., Inc., P. O. Box 31, Middletown,
- Conn. Robotron Corp., 5570 W. Chicago Blvd., Detroit
- Robotron Corp., 5570 W. Chicago Blvd., Detroit 4, Mich.
  Rowe Engineering Corp., 2422 N. Pulaski Road, Chicago 39, 111.
  Self Winding Clock Co., 205 Willoughby Ave., Brooklyn 5, N. Y.
  Serdex, Inc., 91 Cambridge St., Boston, Mass.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  Zenith Electric Co., 152 W. Walton St., Chicago 10, 111.

Cooper Co., Clark, 374 N. Market St., Palmyra,

Edison, Inc., Thomas A., Instrument Div., West Orange, N. J. General Controls Co., Glendale 1, Calif. Lektra Labs., 30 E. 10th St., New York, N. Y. Reynolds Electric Co., 2650 W. Congress St., Chicago 12, IU

Chicago 12, Ill. Standard Electrical Products Co., Dayton 3,

Struthers-Dunn, Inc., 150 N. 13th St., Philadel-

phia 7, Pa. Ulanet Co., George, 413 Market St., Newark 5,

N. J. WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. SEE ADV. PG. 151.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa. Clark Controller Co., 1146 E. 152nd St., Cleve-

Cutler-Hammer, Inc., 315 No. 12th St., Mil-waukee 1, Wisc.

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Electronic Controls, Inc., 44 Summer Ave., New-

GENERAL ELECTRIC CO., Schenectady 5, N. Y.

Industrial Timer Corp., 115 Edison Pl., Newark

Lektra Labs., 30 E. 10th St., New York, N. Y. Photoswitch, Inc., 77 Broadway, Cambridge 42,

Progressive Welder Co., 3050 E. Outer Dr., Detroit, Mich. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.

Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill. Ripley Co., Inc., P. O. Box 31, Middletown,

D-145

10. Ill.

N. J.

Ohio

TIMERS—Thermal

TIMERS—Welding

land 10, Ohio

N

Mass.

Conn.

J, N.

SEE ADV. PGS. 5-18.

# TITRATION APPARATUS

- Robotron Corp., 5570 W. Chicago Blvd., Detroit
- 4. Mich.
   Weltronic Co., 19500 West 8 Mile Road, Detroit 19, Mich.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

# TITRATION APPARATUS

- Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif. EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189. Fischer Scientific Co., 717 Forbes St., Pitts-burgh 19, Pa.
- Minnesota Electronics Corp., 97 E. Fifth St., St.
- Paul 1, Minn. National Technical Lab., 820 Mission St., S.
- Pasadena, Calif. Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

# **TOOLS**—Acetylene Soldering

- Cole Radio Works, 86 Westville Ave., Caldwell, N. J.
- Linde Air Products Co., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York
- 17, N. Y. Torit Mfg. Co., Paul 2, Minn. Co., Walnut & Exchange Sts., St.

# **TOOLS**—Resistance Soldering

Ideal Industries, Inc., Park & Borden Avenues,

Sycamore, 111. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

#### ---Screwdrivers and Small Insu-TOOLSlated

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. Bonney Forge & Tool Works, Allentown, Pa. Brandywine Fibre Co., 15th & Poplar Sts., Wil-
- mington, Del. Bridgeport Hardware Mfg. Corp., Iranistan Ave.,
- Bridgeport, Conn. Connecticut Hard Rubber Co., 407 East St., New
- Haven 9, Conn. General Cement Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Metzger & Son, F. F., 2600 N. 6th St., Philadel-
- phia 33, Pa. Park Metalware Co., 28 Bank St., Orchard Park,
- N. Y. Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
- Speedway Mfg. Co., 1834 South 52nd Ave., Cicero
- 50. Ill.
- Standard Pressed Steel Co., Jenkintown, Pa. Stanley Works, The, New Britain, Conn. Stevens-Walden, Inc., 475 Shrewsbury St., Worcester, Mass
- Vaco Products Co., 317 E. Ontario St., Chicago 11,
- Waterbury Companies, Inc., Waterbury 80, Conn.

# **TOOLS**—Soldering Guns

Multi-Products Tool Co., 123 Sussex Ave., Newark 4. N. J Weller Mfg. Co., 806 Packer St., Easton, Pa.

# TRACERS, RADIOACTIVE

See Isotopes

D-146

#### TRACERS—Signal

- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo. Coastwise Electronics Corp., 130 N. Beaudry Ave.,
- Los Angeles, Calif. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV.
- PG. 233. Feiler Engineering Co., 945 W. George St., Chi-
- cago 14, Ill. Heath Co., Benton Harbor, Mich.

- McMurdo Silver Co., 1240 Main St., Hartford 3,
- MEASUREMENTS CORPORATION, Boonton, N .J. SEE ADV. PG. 110.
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Precision Electronics, 641 Milwaukee Ave., Chi-
- cago 22, Ill.
- cago 22, 111.
  Radex Corp., 2760 N. Elston Ave., Chicago 14, 111.
  Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
  PGS. 197, Inside Back and Back Covers.
  Reiner Electronics Co., 152 W. 25th St., New York N. Y.
- York, N. Y. Special Products Co., Silver Spring, Maryland Superior Instruments Co., 227 Fulton St., New York 7, N. Y. Supreme, Inc., Greenwood, Miss. Thermionic Engineering Corp., Pompton Plains, N. J.
- N.J.

## **TRANSCEIVERS**—Aviation

- American Electroneering Co., 2112 S. La Brea
- American Electroneering Co., 2112 S. La Brea Ave. Los Angeles, Calif. Bassett, Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla. Bendix Radio Div., Bendix Aviation Corp., Balti-
- Benuix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  Collins Radio Co., Cedar Rapids, Iowa
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  Espec Mig. Co. Line, 529 E. 20, 100 Minuteset

- Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
- N. Y.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers..
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
  Selectar Industries, Inc., 401 E. 138th St., New
- Selectar Industries, Inc., 401 E. 138th St., New
- York 54, N. Y. Smuckler & Co., Inc., A. F. 202 Tillary St., Brooklyn 1, N. Y. Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England

### TRANSCEIVERS—Back-Pack

- Air Associates, Inc., Teterboro, N. J.
   American Electroneering Co., 2112 S. La Brea Ave. Los Angeles, Calif.
   Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md.
- more 4, Md. Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chi-
- cago 36, Ill.
- Measurement Engineering, Ltd., Anprior, Ontario, Canada
- Radio Specialty Mfg. Co., 2023 SE Sixth Ave., Portland 14, Ore.
- Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. Smuckler & Co., Inc., A. F. 202 Tillary St., Brooklyn 1, N. Y.

## TRANSCEIVERS-Hand-Pack

- American Electroneering Co., 2112 S. La Brea
- American Electroneering Co., 2112 S. 214 Star
   Ave. Los Angeles, Calif.
   Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
   Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chi-
- Gross Electronics, Inc., 1921 S. Example Draw, one cago 36, Ill.
   FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
   Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio
- Measurement Engineering, Ltd., Anprior, Ontario, Canada
- Canada Radio Specialty Mfg. Co., 2023 SE Sixth Ave., Portland 14, Ore. Radio Transceiver Labs., 116-23 Jamaica Ave., Richmond Hill 18, N. Y.

Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y. Smuckler & Co., Inc., A. F. 202 Tillary St., Brooklyn 1, N. Y.

1949-1950 DIRECTORY of

## TRANSCEIVERS—Lifeboat

- Bassett, Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.

- Lauderdale, Fla.
  Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y.
  Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
  Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.

## TRANSCEIVERS-uhf

TRANSCEIVERS-whf

N. Y.

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- Air Associates, Inc., Teterboro, N. J. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Bassett, Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.

- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24,
- Ill. Ill.
  Radio Specialty Mfg. Co., 2023 SE Sixth Ave., Portland 14, Ore.
  Rowe Engineering Corp., 2422 N. Pulaski Road, Chicago 39, Ill.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Bassett, Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla. Dedie Dir Bendin Avietics Comp. Politi

Lauderdale, Fla. Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Md. Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y. Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio Philco Corp., Tioga & C Sts., Phila. 34, Pa. Radio Specialty Mfg. Co., 2023 SE Sixth Ave., Portland 14, Ore. Bowe Engineering Corp., 2422 N. Pulaski Road

Portiand 14, Ore.
 Powe Engineering Corp., 2422 N. Pulaski Road, Chicago 39, Ill.
 Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
 SPERRY GYROSCOPE CO., Div. of Sperry Corp.,

Great Neck, N. Y. SEE ADV. PGS. 51, 52. Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England Telephonics Corp., 350 W. 31st Street, New York,

ACME ELECTRIC CORPORATION, Cuba, N. Y. SEE ADV. PG. 231. (h)

Acro Products Co., 5330 Baltimore Ave., Phila.

Pa. Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby, (h)

Airpax Products Co., 1024 Greenmount Ave., Bal-

Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md.
(h)
Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
(h)
AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116.
(h)
Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind.
(h)

AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94. Audio Equipment Co., Inc., 80-20 45th Ave., Elm-

Throughout all transformer listings:

TRANSFORMERS-Audio

(h) indicates hermetically sealed types

- Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
- N. J. Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, III. (h) Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III. (h) Columbus Process Co., Inc., State & Maple Sts., East Columbus, Ind. Control Corp., 718 Central Ave., Minneapolis 14, Minn

- Minn. D. & M. Manufacturing Co., 2 Delford Ave., Ber-
- genfield, N. J. Davis & Co., Dean W., Kentland, Ind. Delco Radio Div., General Motors Corp., Kokomo, Ind.
- Ind. Dinion Coil Co., Inc., Caledonia, N. Y. Dormitzer Electric & Míg. Corp., 782 Common-wealth Ave., Boston 15, Mass. (h) Electran Míg. Co., 4596 Elston Ave., Chicago 30, 10
- H1. (h)
- Electrical Windings, Inc., 2015 N. Kolmar Ave Chicago 39, Ill. (h)
- Chicago 39, 10. (h) Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h) ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.
- 200. Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.
- Rochelle, N. Y. FEDERAL TELEPHONE AND RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. (h)
- Foster Transformer Co., Inc., 3820 Colerain Ave Cincinnati 23, Ohio (h)
- General Transformer Corp., 4321 N. Knox Ave. Chicago 41, Ill. (h) Goslin Electric & Mfg. Co., 2921 W. Olive St., Burhank, Calif. (h)
- (h) GRAMER COMPANY, THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132. Halldorson Company, The, 4500 Ravenswood Ave., Chicago 40.
- Halldorson Company, The, 4500 Ravenswood Ave., Chicago 40, Ill.
  Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
  Inductive Equipment Co., Gettysburg, Pa.
  Islip Radio Mfg. Corp., Beceh St., Islip, N. Y. (h)
  Jefferson Electric Co., Bellwood, Ill.
  Largon Mfg. Co., Seo1. S. Loranzia Ava. Chicaga

- Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago
- 38, III. K-V Transformer Corp., 4414 Park Ave., New

- Karet Associates, Inc., R. M., 510 N. Dearborn St., Chicago, Ill.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139. Kyle Co., Div. of Line Material Co., South Mil-
- Walke, Wisc. Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h)
- Magnavox Co., The, Components Div., Fort Wayne
- 4, Ind. 4, Ind. Magnetic Products Corp., The, Norwalk, Conn. (h) Maguire Industries, Inc., Electronics Dept., Bridge-
- port, Conn. Melco Products, Inc., 22 E. Hennepen Avc., Min-
- Melco Products, Inc., 22 E. Hennepen Avc., Min-neapolis I, Minn. (h) Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. Miller, B. F., P. O. Box 568, Trenton 4, N. J. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h)

- Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) (h)
- Peerless Electrical Products Co., 6920 McKin-ley Ave., Los Angeles 1. Calif.
- PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230.
- PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130.
- Precision Transformer Co., Inc., 1101 N. Pau-lina St., Chicago 22, Ill.
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio-Music Corp., Port Chester, N. Y.

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- RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Red Arrow Electric Corp., 100 Colt St., Irving-ton 11, N. J. (h) Rola Co. Inc., 2530 Superior Ave., Cleveland, Obis
- Hoia Co. Inc., 2000 Dapenter (h)
   (h)

   Ohio
   (h)

   S. N. C. Mfg. Co., Inc., Oskosh, Wis.
   (h)

   Slepian Co., Arthur, Bridgeport, Conn. \*
   Southwestern Industrial Electronic Co. 2831 Post

   Oak Rd., Houston 19, Texas
   (h)

   Standard Electrical Products Co., Dayton 3,
   (h)
- (h)
- STANDARD TRANSFORMER CORP., Alston, Kedzie & Addison, Chicago 18, Illinois. SEE ADV. PG. 207. (h) SUPER ELECTRIC PRODUCTS CORP. 1057
- Summit Ave., Jersey City, N. J. SEE ADV. PG 33. (h)
- (h)
   Thermador Electric Mfg. Co., 5119 District
   Blvd., Los Angeles 22, Calif.
   (h)
   Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, III.
- Transformer Engineers, 389 South Arroyo Park-
- way, Pasadena, Calif. Triad Transformer Mfg. Co., 423 N. Western
- Iriad Iransformer Mig. Co., 423 N. Western Ave., Los Angeles 4, Calif.
  UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
  Universal Broadcast Equipment Corp., 6035 Northwest Highway, Chicago 31, Ill.
  Webster Electric Co., 1900 Clark St., Racine, Wis
- Wis. Western Electric Co., Inc., 195 Broadway, New
- York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

#### TRANSFORMERS-Auto

- ACME ELECTRIC CORPORATION, Cuba, N. Y. SEE ADV. PG, 231. (h) Acro Products Co., 5330 Baltimore Ave., Phila.,
- AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116. (h) Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa.
- (h)
- Pa. (h) Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md. (h) AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116. (h) Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. (h) AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94. (h) Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, 11. (h)

- Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.
  (h)
  Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
  (h)
  D. & M. Manufacturing Co., 2 Delford Ave., Bergenfield, N. J.
  Davis & Co., Dean W., Kentland, Ind.
  Dinion Coil Co., Inc., Caledonia, N. Y.
  Dongan Electric Mfg. Co., 2987 Franklin St., Detroit, Mich.
  ELSLER ENGINFERING CO., INC., 740. 5, 1001

- ElsLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Electran Mfg. Co., 4596 Elston Ave., Chicago
- 30, 111. Electrical Windings, Inc., 2015 N. Kolmar Ave., (h)
- Chicago 39, Ill. (h) Electricoil Transformer Co., 421 Canal St., New
- York 13, N. Y.
- DOIN 10, N. 1.
   Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
   ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200 (h)
- FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23. Obio
- Foster Transformer Co., Inc., 3820 Coleran AVe., Cincinnati 23, Ohio (h)
  FREED TRANSFORMER CO., 1736 Weirfield St., Brooklyn 27, N. Y. SEE ADV. PG. 53. (h)
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.

Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif. (h) Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif. (h) GRAMER COMPANY, THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132. Halldorson Company, The, 4500 Ravenswood Ave., Chicago 40, Ill. Inductive Equipment Co., Bellwood, Ill. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h)

- York 57, N. Y. (h) KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.
- 139. Langevin Míg. Corp., 37 W. 65th St., New York 23, N. Y. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. Magnetic Products Corp., The, Norwalk, Conn. (h) Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa. (h) Melco Products, Inc., 22 E. Hennepen Ave., Min-neapolis 1, Minn. (h) Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.

- Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. Miller, B. F., P. O. Box 568, Trenton 4, N. J. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h) Nothelfer Winding Labs., 9 Albemarle Ave., Tren-ton 3, N. J.
- Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley
- Ave., Los Angeles I, Calif.
   RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
   Red Arrow Electric Corp., 100 Colt St., Irving-ton N. L.
- ton, N. J. Rola Co., Inc., The, 2530 Superior Ave., Cleve-land 14, Ohio (h) S. N. C. Mfg. Co., Oshkosh, Wisc. (h) Sheboygan X-Ray Co., 1135 Indiana, Sheboygan,

- Sola Electric Co., 4633 W: 16th St., Chicago 50, **T11** III. SORENSON & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211. (h) Sorgel Electric Co., 838 W. National Ave., Mil-waukee 4, Wisc.

waukee 4, Wisc. Standard Electrical Products Co., Dayton

(h) STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Illinois. SEE ADV. PG. 207. (h) SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG.

33. (h)
Thermador Electric Mfg. Co., 5119 District Blvd.,
Los Angeles 22, Calif. (h)
Thordarson Electric Mfg. Div., Maguire Industries,
Inc., 500 W. Huron St., Chicago 10, Ill. (h)
Triad Transformer Mfg. Co., 423 N. Western Ave.,
Los Angeles 4, Calif. (h)
UNITED TRANSFORMER CO., 150 Varick St.,
New York 13, N. Y. SEE ADV. PG. Inside
Front Cover. (h)

Front Cover. (h) Wagner Electric Corp., 6400 Plymouth Ave., St. Louis, Mo. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wheeler Insulated Wire Co., Inc., Waterbury 91,

TRANSFORMERS-Blocking Oscillator

Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darhy

Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)

St., Fort Wayne, Ind. (h) AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94. (h) BARKER & WILLIAMSON. 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III. (h) Davis & Co., Dean W., Kentland, Ind. Dietz Design & Mfg. Co., 5810 Park Ave., Kansas City 4, Mo.

City 4, Mo. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.

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# TRANSFORMERS

# 1949-1950 DIRECTORY of

- Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y. Rochelle, N. Y. FEDERAL TELEPHONE & RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) (h)
- Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23. Ohio. (h) GENERAL ELECTRIC CO., Schenectady 5, N.
- SEE ADV. PGS. 5-18. (h) Goslin Electric & Mfg. Co., 2921 W. Olive St.,

- Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif. (h) GRAMER CO., THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h) LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h) Magnetic Products Corp., The, Norwalk, Conn. (h) Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa. (h)

- Mansburg Ave. & Holson Bivd., Easton, Fa. (h) Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h) Northern Communications Mfg. Corp., 210 E. 40th St. Nue, Vach J. C. V.

- Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif. Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rola Co., Inc., The, 2530 Superior Ave., Cleve-land 14, Ohio (h) S. N. C. Mfg. Co., Inc., Oshkosh, Wis. (h) STANDARD TRANSFORMER CORP., Alston, Kedzie & Addison, Chicago 18, Ill. SEE ADV.
- Kedzie & Addison, Chicago 18, Ill. SEE ADV PG. 207. (h)
- UPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. SUPER
- (h) S-W Inductor Co., 1056 N. Wood St., Chicago, Ill. Telectron Co., The, 4019 Prospect Ave., Cleve-land 3, Ohio
- land 3, Unio Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. (h) Transformer Engineers, 389 S. Arroyo Pkway., Pasadena, Calif.
- Pasadena, Calif. Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 3, Calif. (h) UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h) WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.
- Conn.

## TRANSFORMERS—Current

- Annis Co., R. B., 1101 N. Delaware St., Indian-apolis. Ind.
- Anna Sto, Ind. Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. (h) Associated Research, Inc., 3758 W. Belmont,
- Chicago 18, Ill. Burlington Instrument Co., Burlington, Iowa
- Burlington Instrument Co., Burlington, Iowa 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. (h) Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Communication Accessories Co. Box 345 110th St. & Hillcrest Rd., Hickman Hills, Missouri Davis & Co., Dean W., Kentland, Ind. Electran Mfg. Co., 4596 Elston Ave., Chicago 30, Ill. (h)

- TH
- III. (h)
   Electric Machinery Míg. Co., 1331 N.E. Tyler
   St., Minneapolis 13, Minn.
   Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
   ELECTRONIC TRANSFORMER CO., INC., 207
   W. 25th St., New York, N. Y. SEE ADV. PG.
   200 200
- Esterline-Angus Co., Inc., P. O. Box 596, In-
- Esterine-Angus Co., Inc., P. O. Box 599, In-dianapolis, Ind. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio (h)
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- GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schenettauy J. H. A., SEE ADV. PGS. 5-18. (h)
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132,
  Hickok Electrical Instrument Co., 10514 Dupont
- Ave., Cleveland, O.
- Hickok Electrical Instrument Co., 10514 Dupont Avec, Cleveland, O.
  Inductive Equipment Co., Gettysburg, Pa.
  Instrument Electronics, 42-17 A. Douglaston Pkway, Douglaston, L. I., N. Y.
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h)
  Magnetic Products, Corp., The, Norwalk, Conn. (h)
  Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn. (h)
  Miller, B. F., P. O. Box 568, Trenton 4, N. J.
  Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
  Northern Communications Mfg. Corp., 210 E.
  40th St., New York 16, N. Y. (h)
  Peerless Electrical Products Co., 6920 McKin-ley Ave., Los Angeles 1, Calif.
  Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, 111.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
  PGS. 197, Inside Back and Back Covers.
  Rola Co., Inc., The, 2530 Superior Ave., Cleve-land 14 Obic

- Rola Co., Inc., The, 2530 Superior Ave., Cleve-land 14, Ohio (h) S. N. C. Mfg. Co., Inc., Oshkosh, Wis. (h) Sheboygan X-Ray Co., 1135 Indiana, Sheboygan,

- Wis. SORENSEN & CO., INC., 375 Fairfield Ave., Stanford, Conn. SEE ADV. PG. 211. (h) Sorgel Electric Co., 838 W. National Ave., Mil-waukee 4, Wis. SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211. (h) Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, 111. (h)
- (h)
- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h) Webster Electric Co., 1900 Clark St., Racine,
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **TRANSFORMERS**—Discriminator

- Acro Transformer & Mfg., Corp., 21-20 33rd Ave., Long Island City 6, N. Y.
  Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md.
  (h) BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45.
  Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
- 111
- Chicago Electronics Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. (h) Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. (h) Coil Winders, Inc., 61 Bergen St., Brooklyn 2, N V.

- Davis & Co., Dean W., Kentland, Ind. Dietz Design & Mfg. Co., 5810 Park Ave., Kan-sas City 4, Mo. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200 (h)
- 200. (h)
  Essex Electronics, Berkeley Heights, N. J.
  FEDERAL TELEPHONE & RADIO CORP., 100
  Kingsland Rd., Clifton, N. J. SEE ADV. PGS.
  129, 131, 133, 135. (h)
  GENERAL ELECTRIC CO., Schenectady 5, N. Y.
  SEE ADV. PGS. 5-18. (h)
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132.
  HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG. 188.

- HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. SEE ADV. PG. 112.
- PG. 112. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h) Leonard Electric Products Co., Inc., 1562 61st St., Brooklyn 19, N. Y. Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa
- Pa.

Maguire Industries Inc., Electronics Dept., Bridge-

- Maguire industries Inc., Electronics Dept., Bridge-port, Conn.
  Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
  Millen Mfg. Co., James, 150 Exchange St., Mal-den, Mass.
- Monroe Coil Co., 2659 W. 19th St., Chicago, Ill. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
- Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley
- Ave., Los Angeles 1, Calif. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. RADIO CORP. OF AMERICA, RCA Victor Div.
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. S-W Inductor Co., 1056 N. Wood St., Chicago, TH
- Sickles Co., F. W., 165 Front St., Chicopee, Mass
- STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 18, Ill. SEE ADV. PG. 219
- Stanwyck Winding Co., 102-104 S. Lander St.,
- Newburgh, N. Y. SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33
- Teleradio Engineering Corp., 99 Wall St., New
- Teleradio Engineering Corp., York 5, N. Y. Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, (h)
- (n) UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h)
- West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

# TRANSFORMERS—Impedance Matching

- Acro Products Co., 5330 Baltimore Ave., Phila.,
- Pa. Pa. Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby, (h)
- Airpax Products Co., 1024 Greenmount Ave., Bal-
- timore 2. Md. (h)
- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y. (h) Arco Transformer & Electrical Co., 1602 S. Hanna

- Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind.
  (h)
  AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94.
  (h)
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45.
  Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III.
  (h)
  CINAUDAGRAPH SPEAKERS, INC., Div. of Aireon Mfg. Corp., 1401 Fairfax Trafficway, Kansas City, Kan. SEE ADV. PG. 62.
  Communication Products Co., Inc., Broadway & Clark St., Keyport, N. J.
  Dormizer Electric & Mfg. Corp., 782 Common-

Clark St., Keyport, N. J. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. (h) Electran Mfg. Co., 4596 Elston Ave., Chicago 30,

Electrical Windings, Inc., 2015 N. Kolmar Av

Chicago 39, III. (h) Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.

200. (h) FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif. (h) GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132. Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.

38, III. V Transformer Corp., 4414 Park Ave., New York 57, N. Y.

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- Karet Associates, Inc., R. M., 510 N. Dearborn St., Chicago, Ill.
  Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h)
  Leonard Electric Products Co., Inc., 1562 61st St., Brooklyn 19, N. Y.
- Leonard Electric Fronters Co., and The Brooklyn 19, N. Y. Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa. (h) MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110.

- ADV. PG. 110. Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. Miller, B. F., P. O. Box 568, Trenton 4, N. J. Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h) Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.

- Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio-Music Corp., Port Chester, N. Y.
  Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, Ill.
  Rola Co., Inc., The, 2530 Superior Ave., Cleve-land 14, Ohio
  S. N. C. Mfg. Co., Inc., Oshkosh, Wisc. (h)
  Standard Electrical Products Co., Dayton 3, Ohio

- Ohio (h)
- (h) Standard Transformer Corp., Elston, Kedzie & Addison, Chicago 18, 111. (h) Telectron Co., The, 4019 Prospect Ave., Cleve-land 3, Ohio.
- Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. (h) Transformer Engineers, 389 S. Arroyo Pkwy., Pas-radase Collif.
- adena, Calif.
- adiena, Calif. Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif. (h) UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h)
- Wheeler Insulated Wire Co., Inc., Waterbury 91,
- Wilder Mfg. Corp., 3569 Fullerton Ave., Chicago 47, Ill.

## **TRANSFORMERS**—Instrument

- Annis Co., R. B., 1101 N. Delaware St., Indian-
- Arma Core, R. B., 1101 N. Delaware St., Indian-apolis, Ind. Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. (h) ARMA CORP., 254 36th St., Brooklyn 32, N. Y. SEE ADV. PG. 220.
- Associated Research, Inc., 3758 W. Belmont, Chicago 18, Ill.
- AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94. (h) Burlington Instrument Co., Burlington, Iowa

- Burlington Instrument Co., Burlington, Iowa 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. (h) Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri Davis & Co., Dean W., Kentland, Ind. Dinion Coil Co., Inc., Caledonia, N. Y. Electran Mfg. Co., 4596 Elston Ave., Chicago 30, Ill. (h)
- 30. Ill.
- Oo, III. (h)
   Electro Engineering Works, 6021 College Ave.,
   Oakland 18, Calif.
   ELECTRO-TECH EQUIPMENT CO., 117 Lafa-vette St., New York 13, N. Y. SEE ADV. PG. 181.
- ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200.
- Esterline-Angus Co., Inc., P. O. Box 596, In-
- FEDERAL TELEPHONE & RADIO CORP., 100
  Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
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- FREED TRANSFORMER CO., 1736 Weirfield St.,
- Brooklyn 27, N. Y. SEE ADV. PG. 53. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h)
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132.
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
  Inductive Equipment Co., Gettysburg, Pa.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h)

- York 57, N. Y. (h) Karet Associates, Inc., R. M., 510 N. Dearborn St., Chicago, Ill. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h) Magnetic Windings Div., Essex Wire Corp, Free-mansburg Ave. & Hobson Blvd., Easton, Pa. (h)
- Pa. Pa. Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn. (h) Minneapolis 1, Cark St.,
- Minneapoils 1, Minn. (n) Merit Coil & Transformer Co., 4427 N. Clark St., Chicago 40, III NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. Nothelfer Winding Labs., 9 Albemarle Ave., Treaten 3, N. J.
- Trenton 3, N. J.
- Trenton 3, N. J. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif. Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, 111. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Red Arrow Electric Corp., 100 Colt St., Irving-ton 11, N. J. (h)

- Ked Arrow Electric Corp., 100 Colt St., Irvington 11, N. J.
  S. N. C. Mfg. Co., Inc., Oshkosh, Wis. (h)
  Southwestern Industrial Electronic Co., 2831
  Post Oak Rd., Houston 19, Texas
  SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52
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- Standard Electrical Products Co., Dayton Ohio (h)
- Ohio SUPERIOR ELECTRIC CO., THE, 83 Laurel St., Bistol, Conn. SEE ADV. PGS. 142, 143. Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, The state of (h)
- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h)
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 2000 DECEMBER 100 DECEMBER
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

# TRANSFORMERS\_Microphone

- ACME ELECTRIC CORPORATION, Cuba, N. Y.
- ACME ELECTRIC CORPORATION, Cuba, N. Y. SEE ADV. PG. 231. (h) Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City, 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby,

- Andersign, Inc., ETT Fairlieft Aver., Opper, Darby, Pa.
  (h)
  AMERICAN TRANSFORMER CO., 178 Emmet St., Newark, N. J. SEE ADV. PG. 116.
  Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne. Ind.
  AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94. (h)
  Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. (h)
  Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. (h)
  Columbus Process Co., Inc., State & Maple Sts., East Columbus, Ind.
  Davis & Co., Dean W., Kentland, Ind.
  Dinion Coil Co., Inc., Coledonia, N. Y.
  Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (h)

- Chicago 39 III ELECTRO-VOICE, INC., Buchanan, Mich. SEE
- ADV. PG. 195. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. (h)

- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h)
- 129, 131, 135, 139.
   (h)

   Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
   (h)

   GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
   (h)

   Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank Calif.
   (h)

- SEE ADV. 106. Mfg. Co., 2921 W. Olive St., Burbank, Calif. (h)
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132.
  Halldorson Company, The, 4500 Ravenswood Ave., Chicago 40, Ill.
  Inductive Equipment Co., Gettysburg, Pa.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h)
  KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS.
  138, 139. (h)
  LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h)
  Magnetic Products Corp., The, Norwalk, Conn. (h)
- (h) Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton,
- Pa. Merit Coil & Transformer Corp., 4427 N. Clark

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  Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
  Miller, B. F., P. O. Box 568, Trenton 4, N. J.
  MEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h)
  Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h)
  Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230.
  Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rauland-Borg Corp., 4245 N. Knox Ave., Chi-cago 41, Ill.
  Red Arrow Electric Corp., 100 Colt St., Irving-ton 11, N. J. (h)
  N. C. Mirg Co., Inc., Oshkosh, Wis. (h)

- ton 11, N. J. S. N. C. Míg. Co., Inc., Oshkosh, Wis. Standard Electrical Products Co., Dayton (h) (h)
- (h) STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV. PG. 207.
- JPER ELECTRIC PRODUCTS CORP., 1057 Summit Avenue, Jersey City, N. J. SEE ADV SUPER 1057 PG. 33. (h) Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10,

 111.
 (h)

 Transformer Engineers, 389 South Arroyo Parkway, Pasadena, Calif.
 (h)

 Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif.
 (h)

 NITED TRANSFORMER CO., 150 Variek St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.
 (h)

 Wastern Electric Co. Inc. 195 Recoduct New York
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Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

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. (h) DeMornay-Budd, Inc., 475 Grand Concourse, New York 51, N. Y. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio

Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif. (h) K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h) Microwave Equipment Co., North Caldwell, N. J. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h)

TRANSFORMERS-Microwave

(h)

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TH.

# TRANSFORMERS

# 1949-1950 DIRECTORY of

Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley

- Ave., Los Angeles 1, Calif. RADIO CORP. OF AMERICA, RCA Victor Div

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
   PGS. 197, Inside Back and Back Covers.
   RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
   N. C. Mfg. Co., Inc., Oshkosh, Wis.
   (h)
   SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52 52.
- Technicraft Laboratories, Inc., Box 1908, Water-
- bury, Conn. Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

#### TRANSFORMERS-Miniature

- Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- (h) Pa Airpax Products Co., 1024 Greenmount Ave
- ra.
  Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md.
  (h)
  AMERICAN TRANSFORMER CO., 178 Emmet St., Newark, N. J. SEE ADV. PG. 116.
  (h)
  AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94.
  (h)
  Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, III.
  (h)
  Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, III.
  (h)
  Columbus, Ind.
  Communication Accessories Co., Box 345, 110th St. & Hillcrest Rd., Hickman Hills, Missouri Davis & Co., Dean W., Kentland, Ind.
  Dietz Design & Mfg. Co., 5810 Park Ave., Kansas City 4, Mo.

- City 4, Mo. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. (h)
- 200
- 200. (n) FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. Foster Transformer Co., Inc., 3820 Colerain Ave., Cincingenti 23. Ohio. (h)
- (h)
- Cincinnati 23, Ohio Goslin Electric & Mfg. Co., 2921 W. Olive St. Burbank, Calif. HILBURN ELECTRONIC PRODUCTS CO., 5 NUMBER OF ADV (h)
- Nassau Ave., Brokolyn 22, N. Y. SEE ADV. PG. 112. V Transformer Corp., 4414 Park Ave., New
- K-V
- York 57, N. Y. (h) Karet Associates, Inc., R. M., 510 N. Dearborn St., Chicago, Ill. KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, (b)
- 129
- LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196.
   Magnetic Products Corp., The, Norwalk, Conn. (h) Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa.
- (h)
- Maguire Industries Inc., Electronics Dept., Bridgeport, Conn. Merit Coil & Transformer Corp., 4427 N. Clark
- St., Chicago 40, Ill. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h) Northern Communications Mfg. Corp., 210 E. 40th
- St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley

- Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  PERMOFLUX CORP., 4900 W. Grand Ave., Chi-cago, Ill. SEE ADV. PG. 230.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back and Back Covers.
  S. N. C. Mfg. Co., Inc., Oshkosh, Wis. (h) Southwestern Industrial Electronic Co., 2831 Post Oak Houston 19. Texas
- Oak Rd., Houston 19, Texas Standard Electrical Products Co., Dayton (h)
- STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV. 207. (h)
- SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Avenue, Jersey City, N. J. SEE ADV. PG. 33.

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- Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. (h) Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. (h) Transformer Engineers, 389 South Arroyo Park-way, Pasadena, Calif. Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4. Calif.
- Los Angeles 4, Calif. (h) UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h) Vacolite Co., 3001-3003 N. Henderson, Dallas,
- Texas WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.
- Wilder Mfg. Corp., 3569 Fullerton Ave., Chicago 47, Ill.

#### TRANSFORMERS-Plug-in

- Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- Pa. (h) Products Co., 1024 Greenmount Ave., Airpax
- Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md. (h) Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. (h) AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94. (h) Coil Winders Inc., 61 Bergen St., Brooklyn 2, N.Y.

- N. Y. Davis & Co., Dean W., Kentland, Ind. Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (h) Electricoil Transformer Co., 421 Canal St., New York 13, N. Y. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200 200
- 200. (h) FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) Foster Transformer Co., Inc., 3820 Colerain Ave.,

- (h)
  Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
  (h)
  KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.
- Magnetic Products Corp., The, Norwalk, Conn. (h) Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton. Pa. (h)
- Pa. (h) Newcomb Audio Products Co., 6814 Lexington Ave., Hollywood 38, Calif. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h) Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif. Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill. Rittenhouse Co., Inc., The, Honeoye Falls, N. Y.

- Rittenhouse Co., Inc., The, Honeoye Falls, N. Y. S. N. C. Mfg. Co., Inc., Oshkosh, Wis. (h) Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Standard Electrical Products Co., Dayton 3, Obio
- Ohio (h) SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33 (h)

- 33. (h) Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. (h) Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. (h) Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif. (h) UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h) Front Cover. (h)

# TRANSFORMERS-Power

- ACME ELECTRIC CORPORATION, Cuba, N. Y. SEE ADV. PG. 231. (h)
- Acro Products Co., 5330 Baltimore Ave., Phila (h)

Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby,

- Pa. (h)
- Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md. (h) Altec Lansing Corp., 161 Avenue of the Amer-icas, New York 13, N. Y. (h) AMERICAN TELEVISION & RADIO CO., 300 E. Exercite St. Ca. David J. Mirco, STE ADV. DC. Fourth St., St. Paul 1, Minn. SEE ADV. PG.
- AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116. (h) Arco Transformer & Electrical Co., 1602 S. Hanna
- St., Fort Wayne, Ind. (h) AUDIO DEVELOPMENT CO., 2833 13th Ave. S. Minneapolis 7, Minn. SEE ADV. PG. 94. (h)
- Bittermann Electric Co., Box 665, Canaan, Conn. (h)
- (h) Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. (h) Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. (h) Cole Radio Works, 86 Westville Ave., Caldwell, N
- NJ
- Columbus Process Co., Inc., State & Maple Sts., East Columbus, Ind. Control Corp., 718 Central Ave., Minneapolis 14, Minn.
- D. & M. Mfg. Co., 2 Delford Ave., Bergenfield, N. J.
- DANO ELECTRIC CO., Winsted. Conn. SEE ADV.
- PG. 162. Delco Radio Div., General Motors Corp., Kokomo, Ind.
- Ind. Dinion Coil Co., Inc., Caledonia, N. Y. Dongan Electric Mfg. Co., 2987 Franklin St., Detroit, Mich. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. (h) Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J. EISLER ENGINEERING CO., INC., 740 S. 13th St. Numerk. 2, N. L. SEE ADV. DC. 128
- St., Newark 3, N. J. SEE ADV. PG. 128. Electran Mfg. Co., 4596 Elston Ave., Chicago 30,
- III. (h) Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio

- Cleveland 5, Ohio Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (h) Electricoil Transformer Co., 421 Canal St., New York 13, N. Y. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h) Electronic Labs., Inc., 24 W. 24th St., In-dianarolic 4 Just
- dianapolis 4, Ind. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.
- 200. (h) Empire Coil Co., Inc., 238 Huguenot St., New Ro-
- chelle, N. Y. FEDERAL TELEPHONE & RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. Foster Transformer Co., Inc., 3820 Colerain Ave., Cincingenti 23, Obio.

Cincinnati 23, Ohio (h) Gardner Electric Mfg. Co., 4227 Hollis St., Em-

Gaveco Labs., Inc., 2 East Ave., New York 21, N. Y.

N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) General Transformer Corp., 4321 N. Knox Ave., Chicago 41. Ul. (h)

Chicago 41, Ill. (h) Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif. (h) GRAMER CO., THE, 2734 N. Pulaski Rd., Chi-cago 39, Ill. SEE ADV. PG. 132. Halldorson Co., The, 4500 Ravenswood Ave., Chicago 40, Ill. Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y. Inductive Equipment Co., Gettysburg, Pa. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. (h)

F.D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.

Jefferson Electric Co., Bellwood, Ill. K-V Transformer Corp., 4414 Park Ave., New

Karet Associates, Inc., R. M., 510 N. Dearborn St., Chicago, Ill.

eryville 8, Calif.

J.F.D. MFG.

York 57, N. Y.

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KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139. (h)

**ELECTRONIC and ALLIED PRODUCTS** 

Kyle Co., Div. of Line Material Co., South Mil-

waukee, Wis. Langevin Mfg. Corp., 37 W. 65th St., New York

23, N. Y. LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h) Magnetic Products Corp., The, Norwalk,

Conn. (h)

Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa. (h)

Maguire Industries Inc., Electronics Dept., Bridgeport, Conn. Melco Products, Inc., 22 E. Hennepen Ave., Min-

Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn. (h)
Mellaphone Corp., Rochester 2, N. Y.
Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
Miller, B. F., P. O. Box 568, Trenton 4, N. J.
NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h)
Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h)
Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
Piezo Mfg. Corp., 110 E. 42nd St., New York 17, N. Y.

Precision Transformer Co., Inc., 1101 N. Paulina

Precision Transformer Co., Inc., 1101 N. Faulina St., Chicago 22, Ill. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS, 197, Inside Back and Back Covers.

Radionic Transformer Co., 411 S. Sanganion St., Chicago 7, Ill. RAYTHEON MFG. CO., Equipment Sales Div.,

Waltham 54, Mass. SEE ADV. PG. 55.

Red Arrow Electric Corp., 100 Colt St., Irvington 11, N. J. (h)

- Rittenhouse Co., Inc., The, Honeoye Falls, N. Y. Rola Co., Inc., The, 2530 Superior Ave., Cleve-land 14, Ohio (h)
- "S" CORRUGATED QUENCHED GAP CO., Sci-entific Electric Div., 107 Monroe St., Garfield, N. J. SEE ADV. PG. 161.
- Sheboygan X-Ray Co., 1135 Indiana, Sheboygan,

Wis.

Slepian Co., Arthur, Bridgeport, Conn.

- Sola Electric Co., 4633 W. 16th St., Chicago 50, III.
- DRENSON & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211. (h) SORENSON & CO., Sorgel Electric Co., 838 W. National Ave., Mil-
- waukee 4, Wis. Standard Electrical Products Co., Dayton
- Ohio (h) STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Ill. SEE ADV.
- PG. 207. (h) SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33. (h)
- Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. (h)
- Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, III (h)
- Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif. (h)
- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h)
- VICKERS ELECTRIC DIV., Vickers Inc., 1815 Locust St., St. Louis 3, Mo. SEE ADV. PG. 194. (h)
- Wagner Electric Corp., 6400 Plymouth Ave., St. Louis, Mo.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Weymouth Instrument Co., 1440 Commercial St.,
- East Weymouth 89, Mass. Wheeler Insulated Wire Co., Inc., Waterbury 91,
- Conn. Wilder Mfg. Corp., 3569 Fullerton Ave., Chicago
- 47, Ill.

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# TRANSFORMERS-Pulse

- Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairfield Ave., Upper Darby,
- Pa.
- Airpax Products Co., 1024 Greenmount Ave. Airpax Froducts Co., 1024 Greenmount Avee., Baltimore 2, Md. (h) Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y. (h) AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116. (h) AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Museroria 2, Muser SEE ADV. DC. 64. (k)

- Minneapolis 7, Minn. SEE ADV. PG. 94. (h) Dinion Coil Co., Inc., Caledonia, N. Y. Electro Engineering Works, 6021 College Ave.,
- Dakland 18, Calif.
   Electronic Transformer Co., 178 Emmett St., Newark, N. J.
   ELECTRONIC TRANSFORMER CO., INC., 207
   W. 25th St., New York, N. Y. SEE ADV. PG., (b) 200
- FORTANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. Foster Transformer Co., Inc., 3820 Colerain Ave.,
- Foster Transformer Co., Inc., 5520 Colerant Ave., Cincinnati 23, Ohio GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) Goslin Electric & Mfg. Co., 2921 W. Olive St., Deubel, Colif.
- Burbank, Calif. (h)
- Karet Associates, Inc., R. M., 510 N. Dearborn St., Chicago, Ill.
- K. Chicago, III.
  K.V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
  (h)
  KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139.
- 139. (n) LENKURT ELECTRIC CO., INC., San Carlos, Calif, SEE ADV. PG. 196. (h) Magnetic Products Corp., The, Norwalk, Conn. Magnetic Windings Div., Essex Wire Corp., Free-mansburg Ave. & Hobson Blvd., Easton, Pa. (h)
- Pa. (h)Maguire Industries Inc., Electronics Dept., Bridge-
- Maguire industries inc., Electronics Depth, End port, Conn. NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h) Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley Ave. Los Angeles 1, Calif.

- reeriess Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  S-W Inductor Co., 1056 N. Wood St., Chicago, III.

- Slepian Co., Arthur, Bridgeport, Conn. SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. SEE ADV. PG. 211. (h) Standard Electrical Products Co., Dayton 3, Obi Ohio (h)
- (n) Telectron Co., The, 4019 Prospect Ave., Cleve-land 3, Ohio Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
- Transformer Engineers, 389 S. Arroyo P'kway, Pasadena, Calif.
- NUNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h)
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

# TRANSFORMERS-r-f and i-f

- ACME ELECTRIC CORPORATION, Cuba, N. Y. SEE ADV. PG. 231. (h) Aladdin Radio Industries, Inc., 501 W. 35th St.,
- Chicago 16, Ill. Automatic Mfg. Corp., 65 Governeur St., Newark,
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Bittermann Electric Co., Box 665, Canaan,
- Conn. (h)BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.

C-B Mfg. Co., 480 Broome St., New York 13, N. Y.

TRANSFORMERS

- CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG. 178.
- Carron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
- Clippard Instrument Lab., Inc., 1125 Bank St., Cincinnati 14, Ohio Coil Winders Inc., 61 Bergen St., Brooklyn 2,
- N. Y. Communication Parts, 1101 N. Paulina St., Chi-
- cago 22. Ill. Delco Radio Div., General Motors Corp., Ko-
- komo, Ind. Dietz Design & Mfg. Co., 5810 Park Ave., Kan-
- sas City 4, Mo. Electro Engineering Works, 6021 College Ave.,
- Cakiand 18, Calif. Essex Electronics, Berkeley Heights, N. J. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd, Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Schenectady 5, N.
- SEE ADV. PGS. 5-18. (h) GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. (h) HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG.
- 188 HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. SEE ADV. PG. 112.
- Houlihan Co., T. J., 2508-14 W. Lawrence Ave.,
- Chicago 25, Ill. Johnson Co., E. F., Waseca, Minn. Leonard Electric Products Co., Inc., 1562 61st
- St., Brooklyn 19, N. Y. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
- McMurdo Silver Co., 1240 Main St., Hartford 3,
- Conn. Maguire Industries Inc., Electronics Dept., Bridge-port, Conn.
- Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. Millen Mfg. Co., James, 150 Exchange St., Mal-
- den, Mass. Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Monroe Coil Co., 2659 W. 19th St., Chicago, III.

- III.
  Muter Co., 1255 S. Michigan Ave., Chicago, III.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, III. SEE ADV. PG. 219. 219. Ross Mfg. Co., 860 Washington St., Burlington,

S-W Inductor Co., 1056 N. Wood St., Chicago, Ill. Sickles Co., F. W., 165 Front St., Chicopee,

Mass. Special Products Co., Silver Spring, Maryland STANDARD COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 249.

Stanwyck Winding Company, 102-104 S. Lander St., Newburgh, N. Y.
 SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG.

Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

Automatic Mfg. Corp., 65 Governeur St., Newark,

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. BOND ELECTRONICS CORP., 88 Franklin Place, Summit, N. J. SEE ADV. PG. 212.

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Iowa

33.

TRANSFORMERS-r-f

# TRANSFORMERS

# 1949-1950 DIRECTORY of

- C-B Mfg. Co., 480 Broome St., New York 13,
- CAMBRIDGE THERMIONIC CORP., 445 Con-cord Ave., Cambridge, Mass. SEE ADV. PG. 178. Carron Mfg. Co., 415 S. Aberdeen St., Chicago, TH.
- Clippard Instrument Lab., Inc., 1125 Bank St., Cincinnati 14, Ohio Coil Winders Inc., 61 Bergen St., Brooklyn 2, N. Y.

- N. Y. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. Essex Electronics, Berkeley Heights, N. J. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. (h) HARNETT ELECTRIC CORP., 138 Haven Ave., Port Washington, L. I., N. Y. SEE ADV. PG. 188.

- 188. Houlihan Co., T. J., 2508-14 Lawrence Ave., Chi-cago 25, Ill. Johnson Co., E. F., Waseca, Minn. Leonard Electric Products Co., Inc., 1562 61st St., Brooklyn 19, N. Y. Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
- Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. Miller Co., J. W., 5917 S. Main St., Los Angeles,
- Calif. Peerless Electrical Products Co., 6920 McKinley

- Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.
  Precision Tube Co., Inc., 3828 Terrace St., Phila-dephia 28, Pa.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
- I11.
- Sickles Co., F. W., 165 Front St., Chicopee, Mass. SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Ave., Jersey City, N. J. SEE ADV. PG. 33.
- Telectron Co., The, 4019 Prospect Ave., Cleveland
- 3, Ohio
  Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.

#### TRANSFORMERS — Rhombic Antenna Coupling

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) J.F.D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Maguire Industries Inc., Electronics Dept., Bridge-

- port, Conn. Press Wireless Mfg. Co., Inc., Cantiague Rd., Uicksville, L. I., N. Y.
- Bress Wile E. I., N. Y.
  S.W Inductor Co., 1056 N. Wood St., Chicago, Ill.
  Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y.

# TRANSFORMERS-Tone Oscillator

- Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N. Y. Airdesign, Inc., 241 Fairchild Ave., Upper Darby,
- Pa
- Pa. (h) Amplifier Corp. of America, 396 Broadway, New York 13, N. Y. Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. (h) AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. SEE ADV. PG. 94. (h) BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. SEE ADV. PG. 45. Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. (h)

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- Communication Accessories Co., Box 345, 110th St., & Hillcrest Rd., Hickman Hills, Mo. Davis & Co., Dean W., Kentland, Ind. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200. (h)
- 200. (h) FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio (h) GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS, 5-18. (h)

- SEE ADV. PGS. 5-18. (h) Inductive Equipment Co., Gettysburg, Pa. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h)
- York 57, N. Y.
   (h)

   KENYON TRANSFORMER CO., INC., 840 Barry

   St., New York 59, N. Y. SEE ADV. PGS. 138,

   139.

   (h)
- LENKURT ELECTRIC CO., INC., San Carlos, Calif. SEE ADV. PG. 196. (h) Merit Coil & Transformer Corp., 4427 N. Clark
- St., Chicago 40, Ill.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass
- NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. SEE ADV. PG. 156. (h) Precision Transformer Co., Inc., 1101 N. Paulina
- St., Chicago 22, Ill. S. N. C. Mfg. Co., Oshkosh, Wis. (h) SUPER ELECTRIC PRODUCTS CORP., 1057 Summit Avenue, Jersey City, N. J. SEE ADV PC. 23 1057
- PG. 33. (h) Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. (h) Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 3, Calif. (h) UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h)

# TRANSFORMERS-Ultrasonic

- Acro Transformer & Mfg. Corp., 21-20 33rd Ave., Long Island City 6, N.Y.
- Acro Transformer & Mig. Corp., 21-20 33rd Ave., Long Island City 6, N. Y.
  AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. SEE ADV. PG. 94. (h)
  Communication Accessories Co., Box 345, 110th St., & Hillcrest Rd., Hickman Hills, Missouri
  ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. (h)

- 200. (n) FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) Inductive Equipment Co., Gettysburg, Pa. K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y. (h)
- York 57, N. Y. (h) KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. SEE ADV. PGS. 138, 139. (h)
- Lash, Carlos, Calif. SEE ADV. PG. 196. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Radio Sonic Corp., 186 Union Ave., New Rochelle,
- Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.
  S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
  Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. (h)
  Transformer Engineers, 389 S. Arroyo P'kway., Pasadena, Calif.
  Triad Transformer Mfg. Co., 423 N. Western
- Pasadena, Calif. Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 3, Calif. (h) UNITED TRANSFORMER CO., 150 Varick Street, New York 13, N. Y. SEE ADV. PG. Inside Front Cover (h) Front Cover.

# TRANSFORMERS-Vacuum Microwave

- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. Adv. Pgs. 129, 131, 133, 135. (h) JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158, 150

# TRANSFORMERS-Vibrator

See Transformers, Power

# TRANSFORMERS—Voltage Regulating

- ACME ELECTRIC CORPORATION, Cuba, N. Y.

- ACME ELECTRIC CORPORATION, Cuba, N. Y.

   SEE ADV. PG. 231.
   (h)

   Acro Transformer & Mfg. Corp., 21-20 33rd

   Ave., Long Island City 6, N. Y.

   Airpax Products Co., 1024 Greenmount Ave., Baltimore 2, Md.
   (h)

   AMERICAN TRANSFORMER CO., 178 Emmett

   St., Newark, N. J. SEE ADV. PG. 116.
   (h)

   Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.

   Arco Transformer & Electrical Co., 1602 S.

   Hanna St., Fort Wayne, Ind.
   (h)

   BONTON RADIO CORP., Boonton, N. J. SEE ADV. PG. 61.

   Chicago Electronic Engineering Co., 3223 W.

   Armitage Ave., Chicago 47, III
   (h)

   DANO ELECTRIC CO., Winsted, Conn. SEE ADV.

   PG. 192.
   Contact Not Note ADV.
- PG. 192 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (h)
- Chicago 39, 111. (h) Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.
- W. 25th St., New York, N. Y. SEE ADV. PG. 200.
  (h)
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  (h)
  Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio
  (h)
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  (h)
  GRAMER CO., THE, 2734 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 132.
  Halldorson Co., The, 4500 Ravenswood Ave., Chicago 40, Ill.
  Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
  Inductive Equipment Co., Gettysburg, Pa.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
  Karet Associates, Inc., R. M. 510 N. Dearborn St., Chicago, Ill.
  Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.

- Maguire Industries Inc., Electronics 2.4 port, Conn. Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis I, Minn. (h) Miller, B. F., P. O. Box 568, Trenton 4, N. J. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles I, Calif. Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, 11. Progressive Welder Co., 3050 E. Outer Dr., Detroit, Mich.

- Progressive weiter Co., 5000 E. Content I., Detroit, Mich. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Sola Electric Co., 4633 W. 16th St., Chicago 50, (h) TH. Standard Electrical Products Co., Dayton

Ohio SUPERIOR ELECTRIC CO., THE, 83 Laurel St., Bristol, Conn. SEE ADV. PGS. 142, 143. Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10,

Transformer Products Inc., 143 W. 51st St., New York, N. Y. UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h)

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

ACME ELECTRIC CORPORATION, Cuba, N. Y. SEE ADV. PG. 231. (h) AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116. (h) Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa. (h)

ra. (h) AMERICAN TRANSFORMER CO., 178 Emmett St., Newark, N. J. SEE ADV. PG. 116. (h) Arco Transformer & Electrical Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)

TRANSFORMERS-Welding

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Ohio

III.

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Electran Mig. Co., 4596 Elston Ave., Chicago 30,

**ELECTRONIC** and **ALLIED PRODUCTS** 

- III. (h) Electricoil Transformer Co., 421 Canal St., New
- York 13, N. Y. Electro Engineering Works, 6021 College Ave.,
- Oakland 18, Calif. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG.
- 200. (h) FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. (h) FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio

- Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio (h)
  Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8, Calif.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h)
  Inductive Equipment Co., Gettysburg, Pa.
  Melco Products, Inc., 22 E. Hennepen Ave., Minneapolis 1, Minn. (h)

- Minneapoils 1, Minn. (h) Mellaphone Corp., Rochester 2, N. Y. Miller, B. F., P. O. Box 568, Trenton 4, N. J. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. (h) Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J. Boerloes Electrical P. Letter C. 2000 Market
- Peerless Electrical Products Co., 6920 McKinley
- Ave., Los Angeles I, Calif. Progressive Welder Co., 3050 E. Outer Dr., Detroit, Mich.
- Sciaky Bros., 4915 W. 67th Street, Chicago 38,
- Sola Electric Co., 4633 W. 16th St., Chicago 50, III.
- Standard Electrical Products Co., Dayton
- Standarg Electrical (n) Ohio STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Illinois. SEE ADV. PG. 207. (h) Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, (h)
- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover. (h)

#### TRANSFORMERS-X-Ray

- Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, 111. (h) Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 29 IU.
- Chicago 39, Ill. (h) Electricoil Transformer Co., 421 Canal St., New
- Electricol Transformer Co., 521 College Ave., York 13, N. Y. Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. SEE ADV. PG. 200 (h)
- 200. (h) Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. (h) General Electric X-Ray Corp., 4855 W. McGeoch Ave., Milwaukee, Wis. (h) Miller, B. F., P. O. Box 568, Trenton, N. J. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. Nothelfer Winding Labs., 9 Albemarle Ave., Tren-ton 3, N. J. Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Calif.

- Ave., Los Angeles 1, Calif. Picker X-Ray Corp., 300 Fourth Ave., New York
- 10, N. Y Sheboygan X-Ray Co., 1135 Indiana, Sheboygan,
- Wis
- Sola Electric Co., 4633 W. 16th St., Chicago 10, III.
- Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, TH.
- Triplett & Barton, Inc., 831 N. Lake St., Bur-
- bank, Calif. UNITED TRANSFORMER CO., 150 Varick St., New York 7, N. Y. SEE ADV. PG. Inside Front (b) Cover.

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### TRANSISTORS

RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.

#### TRANSMISSION LINES

See Cable or Guides, Wave

#### TRANSMITTERS—Aircraft

- Air Associates Inc., Teterboro, N. J.
- Aircraft Radio Corp., Boonton, N. J. Aircraft Radio Corp., Boonton, N. J. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-dule Colu

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
  Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
  Belmont Radio Co., Div. Raytheon Mfg. Co., 5921
  W. Dickens Ave., Chicago 39, Ill.
  Bendix Radio Div., Bendix Aviation Corp., Baltimore, a Md.
- more 4, Md. Collins Radio Co., Cedar Rapids, Iowa
- Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Communications Co., Inc., 300 Greco Ave., Coral
- Gables 34, Fla. Electronic Specialty Co., 3456 Glendale Blvd.,
- Los Angeles, Calif. EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
- Bero Radio Labs. Inc., East Stewart Ave., Garden City, N. Y.
   Espey Mfg. Co., Inc., 528 E. 72nd St., New York,
- N. 1. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2. Mich.
- Mich
- RADIO CORP. OF AMERICA, RCA Victor Div Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
- Radio Development & Research Co., 26 Cornellson Ave., Jersey City, N. J.
  RADIO RECEPTOR CO., 251 W. 19th St., New York, N. Y. SEE ADV. PGS. 162, 163.
  Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Orogon

- Portland 14, Oregon Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N Y.
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. Telemark, Inc., 79 Prospect St., Stamford, Conn. Wilcox Electric Co., 1400 Chestnut St., Kansas
  - City, Mo.

## TRANSMITTERS\_Amateur

- Audar, Inc., Argos, Indiana
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
  Collins Radio Co., Cedar Rapids, Iowa
  Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
  EL-TRONICS INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189.
  Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

- Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24,
- III. III. Harvey Wells Electronics Inc., North St., South-bridge, Mass. Johnson Co., E. F., Waseca, Minn. McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn. Meissner Mfg Div., Maguire Industries, Inc., Mt. Carmel, III.

- Millen Mfg. Co., James, 150 Exchange St., Malden,

- Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. STANDARD TRANSFORMER CORP., Elston, Kedzie & Addison, Chicago 18, Illinois. SEE ADV. PG. 207.
- ransmitter Equipment Mfg. Co., Inc., 345 Hud-son St., New York 14, N. Y. Weston Laboratories, Weston 93, Mass.

#### TRANSMITTERS-Broadcast

American Radio Co., 611 E. Garfield Ave., Glendale, Calif. Bunnell & Co., J. H., 215 Fulton St., New York,

TRANSMITTERS

- N. Y. Collins Radio Co., Cedar Rapids, Iowa Continental Electronics Mfg. Co., 1728 Wood St., Dallas 1, Texas Electronic Engineering Co., 616 G St., San Diego
- Liectronic Languages and the second s
- Erco Radio Labs. Inc., East Stewart Ave., Gat den City, N. Y. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Gates Radio Co., Quincy, Ill. Measurement Engineering Ltd., Arnprior, Ontario, Canada

- Canada
   Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
   Radio Development and Beckersch. Co. 26 Covers.

- PGS. 197, Inside Back and Back Covers.
  Radio Development and Research Co., 26 Cornellson Ave. Jersey City, N. J.
  Radio Engineering Labs. Inc., 35-54 36th St., Long Island City, N. Y.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Smuckler & Co., Inc., 202 Tillary St., Brooklyn
  I. N. Y.
- Sinderfer & Co., Inc., 202 Tillary St., Brooklyn I. N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Erco Radio Labs. Inc., East Stewart Ave., Gar-

den City, N. Y. FEDERAL TELEPHONE AND RADIO CORP

PGS. 129, 131, 133, 135. Gates Radio Co., Quincy, III. Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass. Link Radio Corp., 125 W. 17th St., New York,

N. Y.
Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden. N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Radio Engineering Labs. Inc., 35-54 36th St., Long Island City, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.

TRANSMITTERS—Citizen's Radio Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio

TRANSMITTERS-Color Television

**TRANSMITTERS**—Direction Finding

3090 Douglas Rd., Miami 33,

FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Aeronautical Communications Equipment, Inc.,

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Erco Radio Labs. Inc., East Stewart Ave., Gar-den City, N. Y.

den City, N. 1.
Grady Instrument Co., 689 Belmont St., Belmont 78, Mass.
Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.

Hicks Wile Li, N. Y.
 RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
 Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

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100 Kingsland Rd., Clifton, N. J. SEE ADV.

TRANSMITTERS-Broadcast STL

N. Y

## TRANSMITTERS

- RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. SEE ADV, PGS. 162, 163. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y.

### TRANSMITTERS-f-m

- American Electroneering Co., 2112 S. La Brea
- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  Collins Radio Co., Cedar Rapids, Iowa
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Communications Co., Inc., 300 Greco Ave., Coral Cables 34 Fla
- Communications Co., Inc., 300 Greeo Ave., Colar Gables 34, Fla. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Erco Radio Labs. Inc., East Stewart Ave., Gar-den City, N. Y. Farnsworth Television & Radio Corp., Ft. Wayne, Ind

- FDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Gates Radio Co., Quincy, Ill. Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24,
- III.
- Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass. Harvey Wells Electronics Inc., North St., South-

- Harvey Wells Electronics Inc., Horth St., Country bridge, Mass.
  Hofman Radio Corp., 3716 S. Hill St., Los An-geles 7, Calif.
  Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.
  Maryland Electronic Mfg. Corp., 5009 Calvert Road, College Park, Maryland
  Measurement Engineering Ltd., Arnprior, Ontario, Conada
- Canada Melpar, Inc., 452 Swann Ave., Alexandria, Va. Motorola Inc., 4545 W. Augusta Blvd., Chicago
- 51 TII
- anditional III.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Engineering Labs., Inc., 34-54 36th Street, Long Island City, N. Y.
  RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Sierra Electronic Corp., Belmont & San Carlos, Calif.

- Calif

- Calif. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y. Telemark, Inc., 79 Prospect St., Stamford, Conn. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## TRANSMITTERS-Facsimile

- Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Alden Products Co., 117 No. Main St., Brockton
- 64, Mass. Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass. Automatic Electric Sales Corp., 1033 W. Van
- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Bunnell & Co., J. H., 215 Fulton St., New York,

- N. Y. McElroy Mfg. Corp., Littleton, Mass. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Radio Inventions, Inc., 155 Perry St., New York 14, N. Y.

- Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y. Times Facsimile Corp., 229 W. 43rd St., New
- York, N. Y. Western Union Telegraph Co., 60 Hudson St., Ver Vork 13, N. Y.
- New York 13, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### TRANSMITTERS-Fixed Frequency

- Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla. Air Associates, Inc., Teterboro, N. J. American Electroneering Co., 2112 S. La Brea

- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  Audar Inc., Argos, Indiana
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bassett Inc., Rex, 307-11 N.W. 1st Ave., Ft., Lauderdale, Fla.
  Belmont Radio Co. Div. Raytheon Mfg. Co. 5921
- Lauderdale, Fla. Belmont Radio Co., Div., Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Ill. Bendix Radio Div., Bendix Aviation Corp., Bal-timore 4, Md. Collins Radio Co., Cedar Rapids, Ohio Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Doolittle Radio Inc., 7421 S. Loomis Blvd., Chi-cago 36, Ill.

- cago 36, Ill. Electronic Engineering Co., 616 G St., San Diego 1. Calif.
- Electronic Systems Co., 201 N. Wells St., Chicago 1. Ill
- EL-TRONICS, INC., 2647 No. Howard St., Phila-delphia 33, Pa. SEE ADV. PG. 189. Erco Radio Labs. Inc., East Stewart Ave., Garden
- City, N. Y. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Gates Radio Co., Quincy, Ill. Hallicrafters Co., 4401 W. Fifth Ave., Chicago
- 24, Ill.
- Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo
- Alto, Calif. LAVOIE LABORATORIES, Morganville, N. J.
- SEE ADV. PGS. 182. Maryland Electronic Mfg. Corp., 5009 Calvert Road, College Park, Maryland. Melpar, Inc., 452 Swann Ave., Alexandria, Va. Motorola Inc., 4545 W. Augusta Blvd., Chicago
- NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. National Electronics Labs., Inc., 200 King St.,
- Alexandria, Va.

- Alexandria, Va.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. **RAD10 CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. **RAD10 RECEPTOR CO.**, 251 W. 19th Street, New York 11, N. Y. SEE ADV. PGS. 162, 163.
  Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C.
  Sierra Electronic Corp., Belmont & San Carlos, Calif.

- Calif.
- Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Southwestern Industrial Electronic Co., 2831 Post

- Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas
  Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  Weston Laboratories, Weston 93, Mass.
  Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
- City, Mo.

#### **TRANSMITTERS**—Fixed Station Communication

1949-1950 DIRECTORY of

- Aeroautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla. Air Associates, Inc., Tetertoro, N. J. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-
- dale, Calif.
- Audar Inc., Argos, Indiana BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Bassett Inc., Rex., 307.11 N. W., 1st Ave., Ft. Lauderdale, Fla.
- Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, 111. Bendix Radio Div., Bendix Aviation Corp., Balti-
- more 4, Md. Collins Radio Co., Cedar Rapids, Iowa Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo. Communications Co., Inc., 300 Greco Ave., Coral

- Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
  Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chi-cago 36, Ill.
  Electronic Engineering Co., 616 G St., San Diego 1. Calif.
- 1. Calif
- EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. Erco Radio Labs. Inc., East Stewart Ave., Garden
- City, N. Y. Espey Mfy. Co., Inc., 528 E. 72nd St., New York, N. Υ.
- Farnsworth Television & Radio Corp., Ft. Wayne, Ind
- FEDERAL TELEPHONE AND RADIO CORP. 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Gates Radio Co., Quincy, Ill. Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24,

Hanimarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
Harvey Wells Electronics Inc., North St., South-beider Marce

bridge, Mass. Hoffman Radio Corp., 3761 S. Hill St., Los Angeles 7, Calif.

Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Johnson Co., E. F., Waseca, Minn. Kaar Engineering Co., 2815 Middlefield Rd., Palo

Link Radio Corp., 125 W. 17th St., New York,

Maryland Electronic Mfg. Corp., 5009 Calvert Road, College Park, Maryland McMurdo Silver Co., 1240 Main St., Hartford 3,

Millen Mfg. Co., James, 150 Exchange St., Malden,

Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill. National Electronics Labs., Inc., 200 King St., National Electronics Labs., Inc., 200 King St., Alexandria, Va. NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. SEE ADV. PGS. 153-155.

153-155. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Radio Development & Research Co., 26 Cornell-son Ave., Jersey City, N. J. RADIO RECEPTOR CO., 251 W. 19th St., New York, N. Y. SEE ADV. PGS. 162, 163. Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.

Sierra Electronic Corp., Belmont & San Carlos,

Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y.

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Ill.

Alto, Calif.

N. Y.

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Mass

Calif.

Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

**ELECTRONIC and ALLIED PRODUCTS** 

York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Weston Laboratories, Weston 93, Mass. Wilcox Electric Co., 1400 Chestnut St., Kansas

City, Mo.

#### TRANSMITTERS-Loran

- FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Harvey Radio Labs., Inc., 447 Concord Ave., Combiner Marce
- Harvey Radio Labs., Inc., 144 Contour Rec., Cambridge, Mass.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Selectar Industries, Inc., 401 E. 138th St., New Vork 54, N. Y.
- Sierra Electronic Corp., Belmont & San Carlos, Calif.

- Calli. Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y. Television Equipment Corp., 238 William St., New York 7, N. Y. Televiso Products Inc., 7466 West Irving Park Road, Chicago 34, Ill.

## TRANSMITTERS-Marine

- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-
- dale, Calif. BARKER & WILLIAMSON, 235 Fairfield Ave.,
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Communications Co., Inc., 300 Greco Ave., Coral Gables 24 Fla
- Communications Co., Inc., 500 Charles Gables 34, Fla. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Electronic Engineering Co., 616 G St., San Diego J, Calif.

- EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. Erco Radio Labs. Inc., East Stewart Ave., Gar-den City, N. Y.
- den City, N. Y. FEDERAL TELEPHONE AND RADIO CORP.
- FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif. Gates Radio Co., Quincy, Ill. Grady Instrument Co., 689 Belmont St., Bel-mont 78, Mass. Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill. Harvey Wells Electronics Inc. North St. South

- Harvey Wells Electronics Inc., North St., South-
- Hartoy Weits Electronics Inc., North St., South-bridge, Mass.
  Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y.
  Islip Radio Mfg. Corp., Beech St., Islip, N. Y.
  Jefferson, Inc., Ray, 40 E. Merrick Road, Free-port, N. Y.

- Jefferson-Travis Inc., 76 Ninth Ave., New York 11, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo
- Alto, Čalif. Kalbfell Labs.,
- Inc., 1076 Morena Blvd., San
- Kalbfell Labs., Inc., 1016 Morena Divu., San Diego 10, Calif.
  Maryland Electronic Mfg. Corp., 5009 Calvert Road, College Park, Maryland
  National-Simplex-Bludworth, Inc., Bludworth Ma-rine Div., 92 Gold St., New York 7, N. Y.
  Northern Radio Co., 314 Bell St., Seattle 1, Work
- Wash. Radiomarine Corp. of America, 72 Varick St., New York 13, N. Y. Selectar Industries, Inc., 401 E. 138th St., New York Ed. N. Y.

- Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  Smith-Meeker Engineering Co., 125 Barclay St., New York 7, N. Y.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Submarine Signal Div., Raytheon Mfg. Co., Wal-tham Mass
- tham, Mass.

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- Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y. 47th St., New York 19, N. Y. Televiso Products Inc., 7466 West Irving Park
- Rd., Chicago, Ill.
- Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. West Coast Electronics Co., 1601 S. Burlington
- Ave., Los Angeles 6, Calif.
   Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
   WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### TRANSMITTERS-Microwave

- TRANSMITTERS—Microwave
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
  DeMornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.
  Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
  Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd, Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Melpar, Inc., 452 Swann Ave., Alexandria, Va.
  Microwave Equipment Co., North Caldwell, N. J.
  Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, III.
- Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, 111.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Cover. **RAYTHEON MFG. CO.**, Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55.
  Servo Corp. of America, 20:20 Jericho Turnpike, New Hyde Park, N. Y.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y.
  Televiso Products Inc., 7466 West Irving Park Rd., Chicago 34, III.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
  Wheeler Laboratories, Inc., 259-09 Northern Blvd., Great Neck, New York.

#### **TRANSMITTERS**—Portable and Mobile Radiotelephone

- American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
  Audar Inc., Argos, Indiana
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
  Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 Dickens Ave., Chicago 39, Ill.
  Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
  Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.

- Kansas City 8, Mo. Communications Co. Inc., 300 Greco Ave., Coral

- Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
  Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
  Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chicago 36, III.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  Free Radio Labs. Inc. Fast Stewart Ava. Care

- Erco Radio Labs., Inc., East Stewart Ave., Gar-den City, N. Y. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y. Farnsworth Television and Radio Corp., Ft.
- Wayne, Ind. FEDERAL TELEPHONE & RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Grady Instrument Co., 689 Belmont St., Bel-
- mont 78, Mass.

Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill. Harvey Radio Labs., Inc., 447 Concord Ave.,

TRANSMITTERS

- Cambridge, Mass. Harvey Wells Electronics Inc., North St., South-
- harvey wens Electronics Inc., North St., South-bridge, Mass. Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y. Intervox Corp., 2701 California Ave., Seattle,
- Wash.
- Jefferson, Inc., Ray, 40 E. Merrick Rd., Free-port, N. Y. Kaar Engineering Co., 2815 Middlefield Rd.,
- Maar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif.
  Link Radio Corp., 125 W. 17th St., New York, N. Y.
  Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
  Measurement Engineering Ltd., Arnprior, On-tario, Canada.
- Meck Industries, John, Liberty at Pa., Plymouth, Ind.
- Motorola Inc., 4545 W. Augusta Blvd., Chicago 51. Ill.
- National Electronics Labs., Inc., 200 King St.,
- Alexandria, Va. National-Simplex-Bludworth, Inc., Bludworth Ma-rine Div., 92 Gold St., New York 7, N. Y. Northern Radio Co., 314 Bell St., Seattle 1,
- Wash.
- Wash.
  Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
  PGS. 197, Inside Back and Back Covers.
  Radio Development and Research Co., 26 Cornellson Ave., Jersey City, N. J.
  Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
  Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
  Radio Lamasciver Labs. 116,23 Jamaica Ave.

- Portland 14, Ore. Radio Transceiver Labs., 116-23 Jamaica Ave., Richmond Hill 18, N. Y. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y. Transmitter Equipment Co., Inc., 345 Hudson

Arth St., New York 19, N. 1.
Transmitter Equipment Co., Inc., 345 Hudson St., New York 19, N. Y.
West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box

TRANSMITTERS-Pulse Time Modulation

Communication Measurements Lab., Inc., 120 Greenwich St., New York, N. Y. Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J. FEDERAL TELEPHONE AND RADIO CORP., 100 Kington J De Colf. A. J. CORP., 100

FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Melpar, Inc., 452 Swann Ave., Alexandria, Va.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada DeMornay-Budd Inc., 475 Grand Concourse, New

DeMornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.
FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, 11

Microwave Equipment Co., North Caldwell, N. J. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.

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TRANSMITTERS-Radar

868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## TRANSMITTERS

1949-1950 DIRECTORY of

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
- Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
- Reeves Instrument Corp., 215 E. 91st St., New
- York, N. Y. Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N. Y. Submarine Signal Div., Raytheon Mfg. Co., Wal-
- tham, Mass. SYLVANIA ELECTRIC PRODUCTS, INC, 500
- 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Telemark, Inc., 79 Prospect St., Stamford, Conn. Televiso Products Inc., 7466 W. Irving Pk. Rd., Chicago 34, Ill.
- Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### TRANSMITTERS—Radio Range

- Air Associates, Inc., Teterboro, N. J. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla. Erco Radio Labs., Inc., East Stewart Ave., Conduc Cim. N.Y.

- Garden City, N. Y. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. LAVOIE LABORATORIES, Morganville, N. J. SEE ADV PG 182.

- LAVOIE LABORATORIES, Morganville, N. J. SEE ADV. PG. 182. Press Wireless Mig. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. PADIO PECEPTOR CO. 251 W 19th St. New
- PGS. 197, Inside Back and Back Covers.
  RADIO RECEPTOR CO., 251 W. 19th St., New York, N. Y. SEE ADV. PGS. 162, 163.
  Smuckler & Co., Inc., A. F. 202 Tillary St., Brooklyn 1, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### TRANSMITTERS-Railroad

- Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla. Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Farnsworth Television & Radio Corp., Ft.
- Wayne, Ind. **FDERAL TELEPHONE & RADIO CORP.**, 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.

- 129, 131, 133, 135.
  Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, 111.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
  West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## TRANSMITTERS-Television

D-156

- DuMont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.

- DuMont Labs., Inc., Allen B., 2 main Ave., Passaic, N. J.
  Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rowe Engineering Corp., 2422 N. Pulaski Road, Chicago 39, Ill.
- Chicago 39, Ill.
- Television Equipment Corp., 238 William St., New York 7, N. Y.
- Television Projects, Inc., 3660 Coral Way, Mi-anii 35, Fla.

#### TRANSMITTERS-uhf

- Air Associates, Inc., Teterboro, N. J. American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Radio Co., 611 E. Garfield Ave., Glen-
- American Radio Co., 611 E. Garneid Aver, Glei-dale, Calif.
  Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
  Coinmercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
  Decimeter, Inc., 1430 Market St., Denver 2, Colo.
- Colo. Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Doolittle Radio, Inc., 7421 S. Loomis Blvd.,

- Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chicago 36, Ill.
  Electronic Engineering Co., 616 G St., San Diego 1, Calif.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Road, Clifton, N. Y. SEE ADV. PGS. 129, 131, 133, 135.
  Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio
  Kaar Engineering Co., 2815 Middlefield Rd.,
- Kaar Engineering Co., 2815 Middlefield Rd., Palo Alto, Calif. Link Radio Corp., 125 W. 17th St., New York, N. Y.
- Maryland Electronics Mfg. Corp., 5009 Calvert Road, College Park, Maryland McMurdo Silver Co., 1240 Main St., Hartford 3,
- Conn. Measurement Engineering Ltd., Arnprior, Ontario,
- Canada Melpar, Inc., 452 Swann Ave., Alexandria, Va. Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.

- 51, Ill.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Ore.
  Rowe Engineering Corp., 2422 N. Pulaski Road,

- Portland 14, Ore. Rowe Engineering Corp., 2422 N. Pulaski Road, Chicago 39, Ill. Smuckler & Co., Inc., A. F. 202 Tillary St., Brooklyn 1, N. Y. Telemark, Inc., 79 Prospect St., Stamford, Conn. Television Equipment Corp., 238 William St., New York 7, N. Y.
- New York 7, N. Y. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif. Weymouth Instrument Co., 1440 Commercial St., East Weymouth \$9, Mas.

#### TRANSMITTERS-vhf

- Aeronautical Communications Equipment, Inc.,

- Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
  Air Associates, Inc., Teterboro, N. J.
  Aircraft Radio Corp., Boonton, N. J.
  American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif.
  Bassett Inc., Rex, 307-11 N. W. 1st Ave., Fort Lauderdale, Fla.
  Bendix Radio Div., Bendix Aviation Corp., Balti-more 4, Mr.
  Collins Radio Co., Cedar Ranids, Iowa

- more 4, Mr. Collins Radio Co., Cedar Rapids, Iowa Communications Co., 300 Greco Ave., Coral Gables 34, Fla. Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chicago 36, Ill.
- Electronic Engineering Co., 616 G St., San Diego
- 1, Calif. EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189. Erco Radio Labs., Inc., East Stewart Ave., Garden
- City, N. Y. Farnsworth Television & Radio Corp., Fort
- Wayne, Ind. FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.

- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio
- Hallicrafters Co., 4401 W. Fifth Ave., Chicago
- 24, Ill. Harvey Wells Electronics Inc., North St., South-
- bridge, Mass. Islip Radio Mfg. Corp., Beech St., Islip, N. Y. Kaar Engineering Co., 2815 Middlefield Rd., Palo
- Alto, Calif.
- Link Radio Corp., 125 W. 17th St., New York,
- N. Y. Maryland Electronic Mfg. Corp., 5009 Calvert Road, College Park, Maryland McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn.
- Melpar, Inc., 452 Swann Ave., Alexandria, Va. Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
- National Electronics Labs., Inc., 200 King St.,

- National Electronics Labs., Inc., 200 King St., Alexandria, Va.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa.
  Pioneer Electric & Research Corp., The, 7212 Circle Ave., Forest Park, Ill.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J., SEE ADV. PGS. 197, Inside Back and Back Covers.
  RADIO RECEPTOR CO., 251 W. 19th St., New York, N. Y. SEE ADV. PGS. 162, 163.
  Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Ore.
  Radio Transceiver Labs., 116-23 Jamaica Ave.,

- Radio Specialty Mig. Co., 2023 S. E. Olli Ave., Portland 14, Ore.
  Radio Transceiver Labs., 116-23 Jamaica Ave., Richmond Hill 18, N. Y.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
  SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck. N. Y. SEE ADV. PGS. 51, 52.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
  Telemark, Inc., 79 Prospect St., Stamford, Conn.
  Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  Wilcox Electric Co., 1400 Chestnut St., Kansas City, Missouri

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. BUD RADIO, INC., 2118 E. 55th St., Cleveland 3, Ohio. SEE ADV. PG. 19. Essex Electronics, Berkeley Heights, N. J. HILLBURN ELECTRONIC PRODUCTS CO., 55 Norma Ave. Resolving 22, N. V. SEF ADV.

Nassau Ave., Brooklyn 22, N. Y. SEE ADV. PG. 112.

Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Millen Mfg. Co., James, 150 Exchange St., Malden,

Miller Co., J. W., 5917 S. Main St., Los Angeles,

Miller Co., J. W., 9917 S. Main St., Los Angeles, Calif.
Network Manufacturing Corp., Bayonne, N. J.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
S.W Inductor Co., 1056 N. Wood St., Chicago, III.

Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y. Stanwyck Winding Company, 102-104 S. Lander

Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis. NATIONAL CARBON CO., INC., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. SEE ADV. PG. 57.

St., Newburgh, N. Y. TRIMMER—Capacitors

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See Capacitors

TUBE PARTS Anodes, Carbon

TRAPS—Wave

Mass

## **ELECTRONIC** and **ALLIED PRODUCTS**

Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio

- Stackpole Carbon Co., St. Marys, Pa. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.
- 240-244 Volkert Metal Stampings, Inc., John, 141 Spencer St., Brooklyn 5, N. Y.

## Anodes, Gold

- AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV.
- PG. 192. Baker Co., Inc., 113 Astor St., Newark 5, N. J. HANDY & HARMAN, 82 Fulton St., New York 7, N. Y. SEE ADV. PG. 204. MAKEPEACE CO., D. E., Attleboro, Mass. SEE
- ADV. PG. 84. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Volkert Metal Stampings, Inc., John, 141 Spencer St., Brooklyn 5, N. Y. Wildberg Bros. Smelting & Refining Co., 742
- Market St., San Francisco 2, Calif.

#### Anodes, Graphite

- Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.
  NATIONAL CARBON CO., INC., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. SEE ADV. PG. 57.
  Speer Carbon Co., Lincoln Ave., St. Marys, Pa.
  Stackpole Carbon Co., St. Marys, Pa.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### Anodes, Metal

- Aluminum Co. of America, Gulf Bldg., Pittsburgh,
- AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192.
- ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232.
   Chase Brass & Copper Co., Inc., Waterbury 91,
- du Pont de Nemours & Co., Inc., E. I., Wilming-
- ton 98, Del. Eitel-McCullough, Inc., San Bruno, Calif. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Road, North Chicago, Ill. SEE ADV.
- 29

- PG. 29.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.
  SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. SEE ADV. PGS. 100, 101.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 Fifth Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  Volkert Metal Stampings Inc. John 141 Spencer
- Volkert Metal Stampings, Inc., John, 141 Spencer
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
   Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

#### Anodes, Metallized Graphite

- Helwig Co., 2544 N. 30th St., Milwaukee 10,
- Wis. Speer Carbon Co., Lincoln Ave., St. Marys, Pa. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### Anodes, Silver

- AMERICAN PLATINUM WORKS, N. J., R. R. Ave. at Oliver St., Newark, N. J. SEE ADV. PG. 192.
  Baker Co., Inc., 113 Astor St., Newark 5, N. J. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
  HANDY & HARMAN, 82 Futton St., New York 7, N. Y. SEE ADV. PG. 204.
  HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209.

- 209.

- MAKEPEACE CO., D. E., Attleboro, Mass. SEE
- ADV. PG. 84.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

#### **Base** Pins

- Alden Products Co., 117 No. Main St., Brockton Mass
- 64, Mass.
  ART WIRE AND STAMPING CO., 22 High Street, Newark 2, N. J. SEE ADV. PG. 232.
  Bead Chain Mfg. Co., 110 Mountain Grove St., Bridgeport 5, Conn.
- Briggeport 5, Conn. Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio Greene Mfg. Corp., G. G., Warren, Pa. HAYDU BROS., Plainfield, N. J. SEE ADV.
- PG. 209. Instrument Parts Corp., P. O. Box 150, Ossining,
- N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240.244
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### Bases

- Alden Products Co., 117 No. Main St., Brockton

- Alden Products Co., 117 No. Main St., Brockton 64, Mass.
  AMERICAN LAVA CORP., Chaitanooga 5, Tenn. SEE ADV. PG. 97.
  Crowley & Co. Inc., Henry L., 1 Central Ave., West Orange, N. J.
  ENGINEERING CO., 27 Wright St., Newark, N. J. SEE ADV. PG. 228.
  General Ceramics Steatite Corp., Keasbey, N. J.
  GENERAL ELECTRIC CO., Chemicals Dept., Pittsfield, Mass. SEE ADV. PGS. 5-18.
  Greene Mfg. Corp., G. G., Warren, Pa.
  Owens-Illinois Glass Co., Toledo, Ohio
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Steward Mfg. Co., D. M., Chattanooga, Tenn.
  SYLVANIA ELECTRIC PODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868. Pittshurch 30. Pa. SEE ADV. PGS 66 67
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **Bulbs & Envelopes**

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. Corning Glass Works, Corning, N. Y. Crozier Scientific Glass Co., 17 Madison Ave., Landowy, P.
- Lansdowne, Pa. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Polan Industries, 220 Eighth St., Huntington,
- W. Va. RADIO CORP. OF AMERICA, RCA Victor Div
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240,244
- 240-244
- Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

#### Caps

- Alden Products Co., 117 No. Main St., Brockton Mass
- 64, Mass.
  EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128.
  ENGINEERING CO., 27 Wright St., Newark, N. J. SEE ADV. PG. 228.
  Goat Co., Inc., Fred, 314 Dean St., Brooklyn, New York
  HAYDU BROS. Plainfeld N. J. SEE ADV. PC.
- New York HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209.
- Millen Mfg. Co., James, 150 Exchange St., Mal-Mass. den,

Owens-Illinois Glass Co., Toledo, Ohio

- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. SEE ADV. PGS. 100, 101.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### **Conductive Paints**

See Paints, Conductive

#### **Filament Wire**

240-244

- Alloy Metal Wire Co., Prospect Pk. (Moore Sta.).
- Pa. ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232. Baker Co., Inc., 113 Astor St., Newark 5, N. J. Callite Tungsten Corp., 540 39th St., Union City,
- N. J
- Cohn Corp., Sigmund, 44 Gold St., New York, N. Y

- N. Y.
  Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J.
  EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128.
  GENERAL ELECTRIC CO., Nela Park, Cleveland 12, Ohio. SEE ADV. PGS. 51-8.
  North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  SVLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. Wildberg Bros. Smelting & Refining Co., 742
- Market St., San Francisco 2, Calif.

#### Getters

Acheson Colloids Corp., Port Huron, Mich. Callite Tungsten Corp., 540 39th St., Union City, N. J.

- RADIO CORP. OF AMERICA, RCA Victor Div RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240.244
- 240-244. Volkert Metal Stampings, Inc., John, 141 Spencer St., Brooklyn 5, N. Y.

Callite Tungsten Corp., 540 39th St., Union

City, N. J.
du Pont de Nemours & Co., E. I., Patterson Screen Div., Towanda, Pa.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
U. S. Radium Corp. 525 Pagel St. New York 7.

U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

CINCH MFG. CORP., 2335 W. Van Buren St., Chicago 12, Ill. SEE ADV. PG. 190. Krementz & Co., 49 Chestnut St., Newark 5,

RADIO CORP. OF AMERICA, RCA Victor Div Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

Volkert Metal Stampings, Inc., John, 141 Spencer St., Brooklyn 5, N. Y.

Crowley & Co. Inc., Henry L., 1 Central Ave., West Orange, N. J. RADIO CORP. OF AMERICA, RCA Victor Div.,

Cathode Sleeves and Tubes

Cathode Ray Tube Side Contacts

Cathode Ray Tube Powders

City, N. J.

## **TUBE PARTS**

- EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV. PG. 20
- PG. 29 King Laboratories Inc., 127 Solar St., Syracuse NY
- 4, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Cover. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240, 244 240-244.

#### **Grids and Supports**

- Eitel-McCullough, Inc., San Bruno, Calif. Goat Co., Inc., Fred, 314 Dean St., Brooklyn, N. Y. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 200
- 209. NATIONAL CARBON CO., INC., Unit of Union Carbide & Carbon Corp., 30 E. 42nd Street, New York 17, N. Y. SEE ADV. PG. 57. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. WESTINGHOUSE FLECTRIC CORP., P. O. Box
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### Grid Wire

Alloy Metal Wire Co., Prospect Pk. (Moore Sta.), Pa

- Alpha Wire Corp., 50 Howard St., New York 13,
- N. Y. Callite Tungsten Corp., 540 39th St., Union City, N. J. Cleveland Tungsten, Inc., 10200 Meech Ave.,
- Cleveland, Ohio Cohn Corp., Sigmund, 44 Gold St., New York, N. Y.

- N. Y. Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J. DRIVER-HARRIS CO., 201 Middlesex St., Har-rison, N. J. SEE ADV. PG. 43. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Eitel-McCullough Inc., San Bruno, Calif. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV. PG. 29.
- HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

- 209. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. WESTINGHOUSE ELECTRIC CORP. D. C. D.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **Heat Radiators**

- Eastern Industries Co., 296 Elm St., New Haven, Conn.
- Conn. Eitel-McCullough, Inc., San Bruno, Calif. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. WESTINGHOUSE ELECTRIC CORP., P. O. Box

- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **Metal Supports**

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- ART WIRE AND STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232. Cleveland Tungsten, Inc., 10200 Meech Ave.,
- Cleveland, Ohio ANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV. FANSTEEL
- PG. 29.

- Fryling Mfg. Co., 639 W. 12th St., Erie, Pa.
  Goat Co., Inc., Fred, 314 Dean St., Brooklyn, N. Y.
  Greene Mfg. Corp., G. G., Warren, Pa.
  HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

- 209. STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV.
- 5th Ave., PGS. 240 Define Ave., New Toky 16, A. T. Chill 1977.
  PGS. 240-244.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### Mica Supports

Asheville Mica Co., 900 Jefferson Ave., Newport News, Va. Ford Radio & Mica Corp., 536 63rd St., Brooklyn,

- New York Fryling Mfg. Co., 639 W. 12th St., Erie, Pa. HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209.
- Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
- Mica Insulator Co., Schenectady 1, N. Y. Micacraft Products Inc., 701 McCarter Highway,
- Newark 5, N. J. RADIO CORP. OF AMERICA, RCA Victor Div
- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### **Tube Seal Leads**

- Bead Chain Mfg. Co., 110 Mountain Grove St., Bridgeport 5, Conn. Callite Tungsten Corp., 540 39th St., Union City,
- N. J.
- Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland 5, Ohio ENGINEERING CO., 27 Wright St., Newark, N. J. SEE ADV. PG. 228. HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 200
- 209.

- 209. Herinaseal Co., Inc., Riverside Dr., Elkhart, Ind. HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark, N. J. SEE ADV. PG. 223. NATIONAL ELECTRONICS, INC., Geneva, Illi-nois. SEE ADV. PG. 102. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. WESTINGHOUSE ELECTRIC CORP. P. O. Bax
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### Water Jackets

- Ecco High Frequency Corp., 7020 Hudson Blvd.,
- North Bergen, N. J. FEDERAL TELEPHONE AND RADIO CORP., FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. MACHLETT LABORATORIES, Springdale, Conn. COD. 147.

- MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rotron Division, 7-9 Schoonmaker Lane, Wood-ctack N. V. stock, N. Y.

#### Wire Parts

- ART WIRE AND STAMPING CO., 227 High St., Newark 2, N. J. SEE ADV. PG. 232. Bead Chain Mfg. Co., 110 Mountain Grove St.,
- Bridgeport 5, Conn. Cleveland Tungsten, Inc., 10200 Meech Ave.,
- Cleveland, Ohio Cohn Corp., Sigmund, 44 Gold St., New York,
- EISLER ENGINEERING CO., INC., 740 S. 13th
- St., Newark 3, N. J. SEE ADV. PG. 128. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV.
- PG. 29. Co., Inc., Fred, 314 Dean St., Brooklyn, Goat Co N. Y.

## HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

1949-1950 DIRECTORY of

- 209. STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV.
- 5th Ave., PGS 240-244

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### TUBES-Ballast

- AMPERITE CO., 561 Broadway, New York 12, N. Y. SEE ADV. PG. 90. Arcturus Radio & Television Corp., 54 Clark St.,
- Newark, N. J.
- Clarostat Mig. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y. Electronic Enterprises, Inc., 65 7th Ave., New-
- ark 4, N. J. Emerson Radio & Phonograph Corp., 111 8th
- Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kip Electronics Corp., 155 Waverly Place, New York 14, N. Y.
- York 14, N. Y. National Union Radio Corp., 350 Scotland Rd.,
- National Union Radio Corp., 350 Scotland Rd., Orange, N. J.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, Englaud
   SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS, 240-244.
   Westorn Electric Co. Inc. 195 Broadway, New
- Western Electric Co., Inc., 195 Broadway, New
- York 7. N. Y.

#### **TUBES**—Battery Charger

N. J.

TUBES—Bolometer

5th Ave., Nev PGS. 240-244.

Phila. 18, Pa.

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TUBES-Cathode Ray

- Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J. Baldor Electric Co., 4353 Duncan Ave., St. Louis,
- CHATHAM ELECTRONICS CORP., 475 Washing-
- ton St., Newark 2, N. J. SEE ADV. PG. 28. CONTINENTAL ELECTRIC CO., Geneva, Ill. SEE ADV. PG. 176. Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio
- Electronic Enterprises, Inc., 65 7th Ave., Newark N. J. 4, N. J. ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. SEE ADV. PG. 141. Mellaphone Corp., Rochester 2, N. Y. NATIONAL ELECTRONICS, INC., Geneva, Ill. SEE ADV. PG. 102. RADIO CORP. OF AMERICA, RCA VICTOR DIV., Event & Conputer Ster Cauden N. J. SEE ADV.

Front & Cooper Sts., Cainden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

Standard Arcturus Corp., 54 Clark St., Newark 4,

SYLVANIA ELECTRIC PRODUCTS. INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

BALLANTINE LABS., INC., Boonton, N. J. SEE ADV. PG. 134. National Union Radio Corp., 350 Scotland Rd.,

Orange, N. J.
 SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
 SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV.

Amperex Electronic Corp., 25 Washington St., Brooklyn 1, N. Y. Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J.

Newark, N. J. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada DuMont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J. Electronic Tube Corp., 1200 E. Mermaid Ave.,

FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

ELECTRONIC and ALLIED PRODUCTS

GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.

General Electronics, Inc., 101 Hazel St., Paterson, N. J.

Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.

Kip Electronics Corp., 155 Waverly Place, New York 14, N. Y. Major Television Corp., 19 W. 44th St., New

York, N. Y. National Union Radio Corp., 350 Scotland Rd.,

National Union Radio Corp., 350 Scotland Rd., Orange, N. J.
North American Philips Co., 100 East 42nd St., New York 17, N. Y.
Oxford Radio Corp., 3911 S. Michigan Ave., Chicago 15, III.
Phileo Corp., Tioga & C Sts., Phila. 34, Pa.
RADIO CORP. OF AMERICA. RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Rauland Corp., 4245 N. Knox Ave., Chicago 41, III.

TH ANYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.

Standard Arcturus Corp., 54 Clark St., Newark,

N J

Standard Arcturus Corp., 54 Clark St., Newark, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
SYLVANIA ELECTRIC PRODUCTS, INC., 500
5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, III.
Tel-O-Tube Corp. of America, Paterson, N. J.
THOMAS ELECTRONICS, INC., 118 9th St., Passaic, N. J. SEE ADV. PG. 156.
TRANSVISION, INC., 460 North Ave., New Rochelle, N. Y. SEE ADV. PG. 156.
TUNG-SOL LAMP WORKS, INC., 95 Eighth Ave., Newark 4, N. J. SEE ADV. PG. 75.
U. S. Television Mfg. Corp., 3 W. 61st St., New York 23, N. Y.
Vacuum Tube Products, 203 North Clementine St., Oceanside, Calif.
Videodyne, Inc., 33 Jefferson St., Stamford, Conn.
WATERMAN PRODUCTS CO., INC., 2445-63 Emerald Street, Philadelphia 25, Pa. SEE ADV. PG. 146.

PG. 146. Zetka Television Tubes, Inc., 131-37 Getty Ave., Clifton, N. J.

### **TUBES**—Detector

Arcturus Radio & Television Corp., 54 Clark St.,

Arcturus Radio & Television Corp., 54 Clain St., Newark, N. J. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Standard Arcturus Corp., 54 Clark St., Newark

Standard Arcturus Corp., 54 Clark St., Newark 4, N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### **TUBES**—Electrometer

- Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **TUBES**—Geiger

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. Amperex Electronic Corp., 25 Washington St.,
- Brooklyn, N.

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Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y.
ATOMIC INSTRUMENTS CO., 160 Charles St., Boston, Mass. SEE ADV. PG. 200.
BALLANTINE LABS., INC., Boonton, N. J. SEE ADV. PG. 124

- BALLANTINE LABS., INC., Boonton, N. J. SEE ADV. PG. 134.
  Bomac Laboratories, Beverly, Mass.
  Cyclotron Specialties Co., Moraga 8, Calif.
  Distillation Products, Inc., Vacuum Equipt. Div., 755 Ridge Road West, Rochester 13, N. Y.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
  Electronic Products Co., 111 E. 3rd St., Mt. Ver-non. N. Y.
- non, N Y.

EL-TRONICS, INC., 2647 No. Howard St., Phila-

 EL-IRUNICS, INC., 2047 No. Howard St., Finia-delphia 33, Pa. SEE ADV. PG. 189.
 GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Geophysical Instrument Co., 1820 N. Nash St.,

Arlington, Va. National Technical Lab., 820 Mission St., South

Pasadena, Calif. North American Philips Co. Inc., 100 E. 42nd St., New York 17, N. Y.

Nuclear Development Lab., Box 7601, Kansas City, Mo.

Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill. Omaha Scientific Supply Co., 3623 Lake St., Omaha 4, Neb. Precision Transformer Co., Inc., 1101 N. Paulina

St., Chicago 22, Ill. Radiation Counter Labs., Inc., 1844 W. 21st

Radiaation Counter Labs., Inc., 1844 W. 21st St., Chicago 8, Ill.
Radioactive Products Inc., 3201 E. Woodbridge St., Detroit 7, Mich.
RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
Sheboygan X-Ray Co., 1135 Indiana, Sheyboygan, Wie

Wis

Wis. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Technical Associates, 3730 San Fernando Rd., Clandale 4, Calif.

Glendale 4, Calif.
 Tracerlab Inc., 55 Oliver St., Boston 10, Mass.
 VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### TUBES—Germicidal

GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV.

5th Ave., Nev PGS. 240-244.

PGS. 240-244. Ultra-Violet Products, Inc., 5205 Santa Monica Blvd., Los Angeles 27, Calif.

#### TUBES—Hearing Aid

Aurex Corp., 1117 N. Franklin St., Chicago, Ill. Globe Phone Mfg. Co., 2 Linden St., Reading

Mass. RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55. Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y. Staudard Arcturus Corp., 54 Clark St., Newark

4, N. J. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### TUBES----Industrial

Amperex Electronic Corp., 25 Washington St., Brooklyn 1, N. Y. Arcturus Radio & Television Corp., 54 Clark St.,

Arcturus Hadio & Felevision Corp., 51 Clark S., Newark, N. J. CHATHAM ELECTRONICS CORP., 475 Wash-ington St., Newark 2, N. J. SEE ADV. PG. 28. CONTINENTAL ELECTRIC CO., Geneva, III. SEE ADV. PG. 176.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Eitel-McCullough, Inc., San Bruno, Calif. Electronic Enterprises Inc., 65 7th Ave., Newark

TUBES

Electronic Enterprises inc., bp (in Ave., Newark 4, N. J. Electronic Products Co., 111 E. 3rd St., Mt. Vernon, N. Y. ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. SEE ADV. PG. 141. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingland Rd. Clifton N. J. SEE ADV. PGS

Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.

Kuthe Laboratories, 150 Summit St., Newark 4, N. J.

- Kuthe Laboratories, 150 Summit St., Newark 4, N. J.
  MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147.
  Mellaphone Corp., Rochester 2, N. Y.
  NATIONAL ELECTRONICS, INC., Geneva, Ill. SEE ADV. PG. 102.
  National Union Radio Corp., 350 Scotland Rd., Orange, N. J.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  RAYTHEON MFG. CO., Power Tube Div., Wal-tham 54, Mass. SEE ADV. PG. 55.
  RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
  Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.
- Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.
  Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. A. 2, England
  SVLVANIA ELECTRIC PRODUCTS, INC., 500
  5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, 11.
  TUNG-SOL LAMP WORKS INC., 95 Eighth Ave., Newark 4, N. J. SEE ADV. PG. 75.
  United Electronics Co., 42 Spring St., Newark 2, N. J.

VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Amperex Electronic Corp., 25 Washington St.,

Brooklyn 1, N. Y. Arcturus Radio & Television Corp., 54 Clark St.,

Arctifus Radio & Television Corp., 54 Clark St., Newark, N. J.
 FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
 KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PC, 215

N. J. SEE ADV. PG. 215. RADIO CORP. OF AMERICA, RCA Victor Div.

RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
RAYTHEON MFG. CO., Power Tube Div., Wal-tham 54, Mass. SEE ADV. PG. 55.
SPERRY GVROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.

N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Varian Associates, 99 Washington St., San Carlos Calif

Amperex Electronic Corp., 25 Washington St.,

Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y. Arcturus Radio & Television Corp., 54 Clark St.,

Bomac Laboratories, Beverly, Mass. FEDERAL TELEPHONE AND RADIO CORP., 100

Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.

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TUBES-Klystron

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Carlos, Calif.

TUBES-Magnetron

Newark, N. Y.

## 1949-1950 DIRECTORY of

- GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
  Litton Industries, San Carlos, Calif.
  MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197. Inside Back & Back Covers.
  RAYTHEON MFG. CO., Power Tube Div., Wal-tham 54, Mass. SEE ADV. PG. 55.
  Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.
- J 4. N.
- 4, N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV.
- PGS. 240-244.

#### **TUBES**—Mass Spectrometer

Vacuum Electronic Engineering Co., 316 37th St., Brooklyn 2, N. Y.

#### TUBES-Microwave Receiving or Transmitting

Amperex Electronics Corp., 25 Washington St.,

- Amperex Electronics Corp., 25 Washington St., Brooklyn 1, N. Y.
  Bomac Laboratories, Beverly, Mass.
  CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
  Eitel-McCullough, Inc., San Bruno, Calif.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Kuthe Laboratories, Inc., 150 Summit St., Newark 4, N. J.
- ark 4, N.J. MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147. National Union Radio Corp., 350 Scotland Rd.,
- J
- Orange, N. J. RADIO CORP. OF AMERICA, RCA Victor Div
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
   PGS. 197, Inside Back & Back Covers.
   RAYTHEON MFG. CO., Power Tube Div., Waltham 54, Mass. SEE ADV. PG. 55.
   SPERRY GROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.
   Standard Arcturus Corp., 54 Clark St., Newark

- 4, N. J. Standard Arlethus Colp., 54 Clark Co., Industry House, Aldwych, London, W. C. 2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS, 240-244.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **TUBES**—Phototubes and Photocells

- TUBES—Phototubes and Photocells
  American Scientific Co., P. O. Box 1, Highbridge Station, New York 52, N. Y.
  Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y.
  Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J.
  BRADLEY LABS., 82 Meadows St., New Haven, Conn. SEE ADV. PG. 171.
  CONTINENTAL ELECTRIC CO., Geneva, Ill. SEE ADV. PG. 176.
  DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  National Technical Lab., 820 Mission St., South Pasadena, Calif.
  National Union Radio Corp., 350 Scotland Rd.,

- National Union Radio Corp., 350 Scotland Rd., Orange, N. J. RADIO CORP. OF AMERICA, RCA Victor Div.,
- Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. Rauland Corp., 4245 N. Knox Ave., Chicago 41, 111.
- Standard Arcturus Corp., 54 Clark St., Newark
- 4, N. J. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. VICKERS ELECTRIC DIV., Vickers, Inc., 1815 Locust St., St. Louis 3, Mo. SEE ADV. PG. 194. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## TUBES—Pirani

- Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd. W., Rochester, N. Y.
  EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128.
  Fredericks Co., Geo. E., Bethayres, Pa.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
  WESTINGHOUSE ELECTRIC CORP., P. O. Bax

- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### TUBES-Quartz (for Short Wave Medical Apparatus)

- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. 19, N. Y. Dallons Labs.,
- 5066 Santa Monica Blvd., Los
- Angeles, Calif. Ultra-Violet 'Products, Inc., 5205 Santa Monica Blvd., Los Angeles 27, Calif.

#### TUBES—Receiving

- Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. General Electronics, Inc., 101 Hazel St., Paterson, N.J.

- N. J. Hytron Radio & Electronics Corp., 76 Lafayette

- Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
  National Union Radio Corp., 350 Scotland Rd., Orange, N. J.
  Philco Corp., Tioga & C Sts., Phila. 34, Pa. **RADIO CORP. OF AMERICA**, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. **RAYTHEON MFG.** CO., Power Tube Div., Wal-tham 54, Mass. SEE ADV. PG. 55. **RAYTHEON MFG. CO.**, Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
  Standard Arcturus Corp., 54 Clark St., Newark 4,
- Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.

- N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C., 2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. Technical Materiel Corporation, The, 453 West 47th St., New York 19, N. Y. TUNG-SOL LAMP WORKS INC., 95 Eighth Ave., Newark 4, N. J. SEE ADV. PG. 75. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
- Vork 7 N
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **TUBES**—Rectifying

- Aerolux Light Co., 653 11th Ave., New York 19, N. Y.
- Amperex Electronic Corp., 25 Washington St.,
- Amperex Electronic Corp., 25 Washington St., Brooklyn, N. Y.
   Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J.
   CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
   CONTINENTAL ELECTRIC CO., Geneva, III. SEE ADV. PG. 176
- ADV. PG. 176. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Eitel-McCullough, Inc., San Bruno, Calif. Electronic Enterprises Inc., 65 7th Ave., Newark
- N J Electronic Products Co., 111 E. Third St., Mt.
- Vernon, N. Y. ELECTRONS INC.,
- Vernon, N. Y. ELECTRONS INC., 127 Sussex Ave., Newark 4, N. J. SEE ADV. PG. 141. Emerson Radio & Phonograph Corp., 111 8th Ave. New York, N. Y. FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clinton, N. J. SEE ADV. PGS. 129, 131, 133, 135.

GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. General Electronics, Inc., 101 Hazel St., Paterson,

- N. J. Heintz & Kaufman, Ltd., South San Francisco, Calif.
- Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass. Kuthe Laboratories, Inc., 150 Summit St., Newark N.
- Л. 4, N. J. MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147. Mellaphone Corp., Rochester 2, N. Y. NATIONAL ELECTRONICS, INC., Geneva, Ill. SEE ADV. PG. 102. National Union Radio Corp., 350 Scotland Rd.,

- Orange N. J. RADIO CORP. OF AMERICA, RCA Victor Div
- RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Civers.
   RAYTHEON MFG. CO., Power Tube Div., Wal-tham 54, Mass. SEE ADV. PG. 55.
   RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
- Sheyboygan X-Ray Co., 1135 Indiana, Sheyboygan,
- Wis. Standard Arcturus Corp., 54 Clark St., Newark
- 4. N. J.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
   SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.
   240-244.
   Tenhen Ling, 2212 Webaptin Ave. Chicago.
- Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago
- TH
- TUNG-SOL LAMP WORKS INC., 95 Eighth Ave., Newark 4, N. J. SEE ADV. PG. 75. United Electronics Co., 42 Spring St., Newark 2,
- N.J. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. BALLANTINE LABS., INC., Boonton, N. J. SEE ADV. PG. 134. Standard Arcturus Corp., 54 Clark St., Newark

SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

Aerolux Light Corp., 653 11th Ave., New York 19, N. Y. Amglo Corp., 4234 Lincoln Ave., Chicago 18, Ill.

Bomac Laboratories, Beverly, Mass. Electronic Enterprises, Inc., 65 7th Ave., Newark

4, N. J. Electronic Products Co., 111 E. 3rd St., Mt. Vernon, N. Y. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114,

Standard Arcturus Corp., 54 Clark St., Newark

4, N. J. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.

Arcturus Radio & Television Corp., 54 Clark St.,

Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J.
Aurex Corp., 1117 N. Franklin St., Chicago, Ill.
GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
Kip Electronics Corp., 155 Waverly Place, New York 14, N. Y.
National Union Radio Corp., 350 Scotland Rd.,

Orange, N. J.
 Philco Corp., Tioga & C Sts., Phila. 34, Pa.
 RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

**TUBES**—Sonic Gas-Filled

67

240-244.

115.

240-244.

**TUBES**—Subminiature

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TUBES-Strobotron

ELECTRONIC and ALLIED PRODUCTS

- RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.
  Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
  Standard Arcturus Corp., 54 Clark St., Newark 4 Notesian Statesian States

- Standard Arcturus Corp., 54 Clark St., Newark 4, N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 210.214
- 240.244
- VICTOREEN INSTRUMENT CO., 5806 Hough St., Cleveland 3, Ohio. SEE ADV. PG. 227.

#### **TUBES**—Television

See Tubes, Cathode Ray

#### TUBES—Television Pickup

- Amperex Electronic Corp., 25 Washington St.,
- Amperex Electronic Corp., 20 Washington St., Brooklyn 1, N. Y.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   General Electronics, Inc., 101 Hazel St., Pater-
- son, N. J. RADIO CORP. OF AMERICA, RCA Victor Div.,
- Front & CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Remington Rand, Inc., Systems Div., Vericon Dept., South Norwalk, Conn. Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.

## TUBES ---- Television Picture

National Union Radio Corp., 350 Scotland Rd.,

Orange, N. J. acuum Tube Products, 302 North Clementine Vacuum St., Oceanside, Calif.

## 

- Arcturus Radio & Television Corp., 54 Clark St.,
- Newark, N. J. CONTINENTAL ELECTRIC CO., Geneva, III. SEE ADV. PG. 176.
- Du Mont Labs., Allen B., 2 Main Ave., Passaic,
- Eitel-McCullough, Inc., San Bruno, California Electronic Enterprises, Inc., 65 7th Ave., Newark
- LECTRONS INC., 127 Sussex Ave., Newark 4, N. J. SEE ADV. PG. 141. FEDERAL TELEPHONE & RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS, 5-18.
   General Electronics, Inc., 101 Hazel St., Paterson, N. J.
- N. J. Kuthe Laboratories, Inc., 150 Summit St.,

- Newark 4, N. J. NATIONAL ELECTRONICS, INC., Geneva, III. SEE ADV. PG. 102. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Standard Arcturus Corp., 54 Clark St., Newark
- J 4. N.
- 7, N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England SYLVANIA ELECTRIC PROLUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS.
- 240-244. Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### **TUBES**—Transmitting and Power

- Amperex Electronic Corp., 25 Washington St., Amperex Electronic Corp., 25 Washington St., Brooklyn, N. Y.
  Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J.
  CHATHAM ELECTRONICS CORP., 475 Washington St., Newark 2, N. J. SEE ADV. PG. 28.
  Collins Radio Co., Cedar Rapids, Iowa
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  Eitel-McCullough, Inc., San Bruno, Calif.
  Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.

- Electronic Products Co., 111 E. Third St., Mt.
- Vernon, N. Y

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- FEDERAL TELEPHONE AND RADIO CORP., 100
- Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 127, 131, 133, 135.
   GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
   General Electronics, Inc., 101 Hazel St., Pater-con. N. L.
- son, N. J Heintz & Kaufman, Ltd., South San Francisco,
- Calif. Hytron Radio & Electronics Corp., 76 Lafayette
- St., Salem, Mass. JENNINGS RADIO MFG. CO., 1098 E. William St., San Jose 12, Calif. SEE ADV. PGS. 158, 159.
- Kuthe Laboratories, Inc., 150 Summit St., New-
- ark 4, N. J. MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147.
- SEE ADV. PG. 147. NATIONAL ELECTRONICS, INC., Geneva, Ill. SEE ADV. PG. 102. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers,
- Standard Arcturus Corp., 54 Clark st., Newark 4, N. J.
- Standard Telephones & Cables Ltd., Connaught
- House, Aldwych, London, W. C. 2, England SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240 - 244
- Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ili
- United Electronics Co., 42 Spring St., Newark 2,
- Western Electric Co., Inc., 195 Broadway, New York 7.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66,

#### TUBES-TR and Anti TR

- Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J.
- Sonac Laboratories, Beverly, Mass. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240.244
- Technical Materiel Corp., The, 453 W. 47th St.,
- New York 19, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

## TUBES-uhf

- Amperex Electronic Corp., 25 Washington St., Brooklyn 1, N. Y. Arcturus Radio & Television Corp., 54 Clark St.,
- Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J.
  Eitel-McCullough Inc., San Bruno, Calif.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Road, Cliffton, N. J. SFE ADV. PGS. 129, 131, 133, 135.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  Wetron Rolls & Electronic Corp. 276 Lefenetta
- Syractise, N. Y. SEE ADV. PdS. 5-18, Hytron Radio & Electronics Corp., 176 Lafayette St., Salem, Mass.
   MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147.
   National Union Radio Corp., 350 Scotland Rd.,

- National Onion Radio Corp., 380 Scotland Rd., Orange, N. J.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
   RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG, 55.
- SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.
- N. J.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
   SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244
- Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
- Western Electric Co., Inc., 195 Broadway, New York 7 N Y
- York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### TUBES—Vacuum Thermocouple

- Aerolux Light Com., 653 11th Ave., New York N 19 American Thermo Electric Co., 67 E. 8th St., New
- York 3, N. Y. BALLANTINE LABS., INC., Boonton, N. J. SEE
- BALLANTINE LABS., INC., Doonton, N. J. Shila ADV. PG. 134.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  Distillation Products, Inc., Vacuum Equip. Div., 755 Ridge Rd., W., Rochester, N. Y.
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterbara, N. J.
- ELD ELECTRICAL INSTRUMENT CO., 109 E. 184th St., New York 53, N. Y. SEE ADV. PG. 80. FIELD
- PG. 80. Fredericks Co., Geo. E., Bethayres, Pa. GENERAL £LECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. Hastings Instrument Co., Box 1275, Hampton, Va. National Research Corp., 70 Memorial Drive, Co. b. Inst. 42. Marce
- Cambridge 42, Mass.
- Elm Ave., Mt. Vernon, N. Y. Standard Arcturus Corp., 54 Clark St., Newark
- 4. N. J.
- <sup>4</sup>, N. J.
   Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
   SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244
- Western Electric Co., Inc., 195 Broadway, New York 7, N. Y

## TUBES-Voltage Regulating

- Aerolux Light Corp., 653 11th Ave., New York
- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y.
  Amperex Electronic Corp., 25 Washington St., Brooklyn 1, N. Y.
  Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y.
  Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J.
  CHATHAM ELECTRONICS CORP., 475 Wash-ington St., Newark 2, N. J. SEE ADV. PG. 28.
  Cossor (Canada) Ltd., 301-303 Windsor St., Hali-fax, N. S., Canada
  Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.

GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18. General Electronics, Inc., 101 Hazel St., Pater-

son, N. J. Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass. Kuthe Laboratories, Inc., 150 Summit St., New-

ark 4, N. J. National Union Radio Corp., 350 Scotland Rd.,

National Union Radio Corp., 350 Scotland Rd., Orange, N. J.
 RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
 RAYTHEON MFG. CO., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. SEE ADV. PG. 55.

Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.

4. N. J. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, Englad. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

Taylor Tubes, Inc., 2312 Wabansia Ave., Chi-cago 47, Ill.

Cago 4., In: VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. SEE ADV. PG. 227. Western Electric Co., Inc., 195 Broadway, New

York 7, N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

Amperex Electronic Corp., 25 Washington St., Brooklyn I, N. Y. Anton Electronic Laboratories, Inc., 1226-1238 Flushing Ave., Brooklyn 6, N. Y. General Electric X-Ray Corp., 4855 W. Mc-Geoch Ave., Milwaukee, Wis. General Electronics, Inc., 101 Hazel St., Pater-son N. J.

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TUBES-X-Ray

son, N. J.

## TUBING

- MACHLETT LABORATORIES, Springdale, Conn. SEE ADV. PG. 147. North American Philips Co., Inc., 100 East 42nd St., New York, N. Y. Picker X-Ray Corp., 300 Fourth Ave., New York 10, N. Y.
- Sheboygan X-Ray Co., 1135 Indiana, Sheboygan,
- Wis.
- W15. Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England Triplett & Barton, Inc., 831 N. Lake St., Bur-bank, Calif.
- bank, Calif. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67

#### TUBING—Aluminum Waveguide

SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. SEE ADV. PGS. 101, 102.

#### TUBING-Brass & Copper

American Brass Co., Waterbury 88, Conn. Chase Brass & Copper Co., Inc., Waterbury 91,

- Conn.

- Conn.
  Ilsco Copper Tube & Products, Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio
  JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. SEE ADV. PG. 102.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212.
  Republic Copper & Brass, Inc., 230 Park Avenue, New York 17, N. Y.
  Uniform Tubes, Shurs Lane & Lauriston St., Roxborough, Philadelphia, Pa.

#### TUBING—Ceramic

- AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97. CENTRALAB DIV., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV PGS. 26, 27. Crowley & Co., Inc., Henry L., 1 Central Ave., West-Orange, N. J. Electrical Refractories Co., 50 Clark St., East Peletrica Chine Chine
- Palestine, Ohio General Ceramics & Steatite Corp., Keasbey,
- N. J. Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y. Lapp Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.
- Locke Incorporated, P. O. Box 57, Baltimore 3,
- RADIO CORP. OF AMERICA, RCA Victor Div RADIO CORP. OF AMERICA, RCA Victor Div., Front & Camden Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
  Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
  Steward Mfg. Co., D. M., Chattanooga, Tenn.
  STUPAKOFF CERAMIC & MFG. Co., Latrobe, Pa. SEE ADV. PG. 78.
  United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England SEE

- Surrey, England

#### **TUBING**—Fabric

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- Alpha Wire Corp., 50 Howard St., New York 13, Y
- Anchor Webbing Co., P. O. Box 1624, Providence,
- R. I. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Dielectric Materials Co., 5315-17 N. Ravens-wood Ave., Chicago 40, III.
- Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Delaware General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill.

- ford, Ill. Insulating Tube Co., 26 Cottage St., P. O. Box 1. Poughkeepsie, N. Y. INSULATION MFRS. CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J. MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV. PG. 54. 54.

- NATIONAL VARNISHED PRODUCTS CORP., 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117. NATIONAL VULCANIZED FIBRE CO., Wilming-
- ton, Del. SEE ADV. PG. 31. Synthane Corp., Oaks, Pa. Taylor Fibre Co., Norristown, Pa. Varflex Corp., N. Jay St., Rome, N. Y.

#### TUBING-Fibre

- Auburn Míg. Co., Middletown, Conn. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Brandywine Fibre Co., 15th & Poplar Sts., Wil-
- mington, Del. CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. SEE ADV. PG. 183.
- PG. 183.
  Franklin Fibre-Lamitex Corp., 12th & French Sts., Wilmington, Del.
  INSULATION MFRS. CORP., 565 W. Washing-ton Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
  Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Ill.
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Sheffco Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J.
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tona-wanda, N. Y.
  Varflex Corp., N. Jay St., Rome, N. Y.

#### TUBING—Glass

- Aerolux Light Corp., 653 11th Ave., New York
- 19, N. Y.
  BRAND & CO., WM., 276 Fourth Ave., New York
  10, N. Y. SEE ADV. PGS. 92, 93.
  Brandywine Fibre Co., 15th & Poplar Sts., Wilmington, Del.
  Corning Glass Works, Corning, N. Y.
  Fischer & Porter Co., Hatboro, Pa.
  Fish-Schurman Corp., 230 E. 45th St., New York 17, N. Y.
  Fredericks Co., Geo. E., Bethayres, Pa.
  HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209.

- 209.

## TUBING—Glass Fibre Insulation

- Alpha Wire Corp., 50 Howard St., New York,
- BENTLEY-HARRIS MFG. CO., Conshocken, Pa.
- SEE ADV. PG. 127. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Brandywine Fibre Co., 15th & Poplar Sts., Wil-
- mington, Del. CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Delaware. SEE ADV. PGS.
- St., Newark 10, Detailed Detail 119-122. Dielectric Materials Co., 5315-17 N. Ravens-wood Ave., Chicago 40, Ill. General Cement Mfg. Co., 919 Taylor Ave., Rock-

- Iord, III. INSULATION MFRS. CORP., 565 W. Washington Blvd., Chicago 6, III. SEE ADV. PG. 137. Mica Insulator Co., Schenectady 1, N. Y. MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV. PG. 54 54.
- b4.
  National Electric Coil Co., Columbus 16, Ohio
  NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. SEE ADV. PG. 31.
  Synthane Corp., Oaks, Pa.
  Varflex Corp., N. Jay St., Rome, N. Y.

#### **TUBING**—Knitted Wire

- Alpha Wire Corp., 50 Howard Street, New York, N. Y.
- Chicago Metal Hose Corp., 1309 S. 3rd Ave., Maywood, Ill. Essex Wire Corp., 1601 Wall St., Fort Wayne 6,
- Ind.

## TUBING—Metal and Alloy

Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa. American Brass Co., Waterbury 88, Conn. Bundy Tubing Co., 8109 E. Jefferson Ave., De-troit 14, Mich. Carpenter Steel Co., Kenilworth, N. J. Carpenter Steel Co., 142 West Bern St., Read-

ing, Pa. Chase Brass & Copper Co., Inc., Waterbury 91,

1949-1950 DIRECTORY of

- Conn. Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill
- 22, 10.
   GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
   Gordon Co., Claud S., 3000 S. Wallace St., Chi-cago 16, 10.
- Haynes Stellite Co., Unit of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, M
- International Nickel Co., Inc., 67 Wall St., New York 5. N.
- MAKEPEACE CO., D. E., Attleboro, Mass. SEE ADV. PG. 84. National Lead Co., 111 Broadway, New York 6,
- N. Y.
  PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212.
  Revere Copper & Brass, Inc., 230 Park Avenue, New York 17, N. Y.
  Reynolds Metals Co., Technical Service Dept., 2500 So. Third St., Louisville 1, Ky.
  Summerill Tubing Co., Div. Columbia Steel & Shafting Co., P. O. Box 1557, Pittsburgh 30, Pa.

- Pa.
   SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. SEE ADV. PGS. 100, 101.
   Timken Roller Bearing Co., The, Canton, Ohio Uniform Tubes, Shurs Lane & Lauriston St., Roxborough, Phila., Pa.

#### TUBING-Mica

TUBING-Nickel

TUBING—Paper

TUBING—Plastic

- Asheville Mica Co., 900 Jefferson Ave., Newport
- News, Va. CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122
- INSULATION MFRS. CORP., 565 W. Washing-ton Blvd., Chicago 6, Ill. SEE ADV. PG. 137. Mica Insulator Co., Schenectady 1, N. Y. MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV. PG.
- 54.

Bundy Tubing Co., 8109 E. Jefferson Ave., De-troit 14, Mich. Carpenter Steel Co., Kenilworth, N. J. Gordon Co., Claud S., 3000 S. Wallace St., Chi-cago 16, Ill.

International Nickel Co., Inc., 67 Wall St., New

York 5, N. Y. PRODUCTION ENGINEERING CO., 173 Sargeant

Ave., Clifton, N. J. SEE ADV. PG. 212. SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. SEE ADV. PGS. 100, 101.

Auburn Mfg. Co., Middletown, Conn. CLEVELAND CONTAINER CO., THE, 6201 Bar-berton Ave., Cleveland 2, Ohio. SEE ADV. PG. 183.

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Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
INSULATION MFRS. CORP., 565 W. Washing-ton Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
Paramount Paper Tube Corp., 614 Lafayette St., Fort Wayne 4, Ind.
PRECISION PAPER TUBE CO., 2033 W. Charles-ton St., Chicago 47, Ill. SEE ADV. PG. 112.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
ANCHOR PLASTICS CO., INC., 533-541 Canal St., New York 13, N. Y. SEE ADV. PG. 200.
B & C Insulation Products, Inc., Lincoln High-way, Josin N. V.

D & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Blum & Co., Julius, 532 W. 22nd St., New York 11, N. Y.

BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.

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Tar Heel Mica Co., Plumtree, N. C.

Brandywine Fibre Co., 15th & Poplar Sts., Wil-

**ELECTRONIC** and **ALLIED PRODUCTS** 

- mington, Del. CLEVELAND CONTAINER CO., THE, 6201 Bar-berton Ave., Cleveland 2, Ohio. SEE ADV. PG. 182
- CONTINENTAL DIAMOND Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122.
- Dielectric Materials Co., 5315,17 N. Ravens-wood Ave., Chicago 40, Ill.
   du Pont de Nemours & Co., Inc., E. I., Wilming-
- ton 98, Del. Franklin Fibre-Lamitex Corp., 12th & French Sts., Wilmington, Del. Gemloid Corp., 79-10 Albion Ave., Elmhurst,

- GENERAL ELECTRIC CO., Chemical Dept., Pitts-field, Mass. SEE ADV. PGS. 5-18. Howard Mfg. Corp., 1401 S. Main St., Council
- Bluffs, Iowa. Industrial Synthetics Corp., 225 North Ave.,

- Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
  Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
  INSULATION MFRS. CORP., 565 W. Washing-ton Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
  Irvington Varnish & Insulator Co., 10 Argyle Ter-race, Irvington 11, N. J.
  Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
  Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Illinois
  Micacraft Products Inc., 701 McCarter Highway, Newark 5, N. J.
  MITCHELL-RAND INSULATION CO., INC., 51 Muray St., New York 7, N. Y. SEE ADV. PG. 54.
- NATIONAL VARNISHED PRODUCTS CORP., 211 Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 31.
- Ave., New York, N. Y. Phalo Plastics Corp., 25 Foster St., Worcester 8,
- Mass.
- Plastex Corp., 402 Mt. Vernon Ave., Columbus 3, Ohio
- Plastex Corp., 402 Mt. Vernon Ave., Columbus 3, Ohio
  Plax Corp., P. O. Box 1019, Hartford, Conn.
  PRECISION PAPER TUBE CO., 2033 W. Charles-ton St., Chicago 47, Ill. SEE ADV. PG. 112.
  Schott Co., Walter L. 9306 Santa Monica Blvd., Beverly Hills, California
  Spaulding Fibre Co., Inc., 310 Wheeler St., Tona-wanda, N. Y.
  Surprenant Mfg. Co., 199 Washington Street, Boston 10, Mass.
  Synthane Corp., Oaks, Penna.
  Taylor Fibre Co., Norristown, Pa.
  United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  U. S. Stoneware Co., The, Akron 9, Ohio
  Varflex Corp., N. Jay St., Rome, N. Y.
  Willson Plastic Div., Willson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

### **TUBING**—Precious Metal

- AMERICAN PLATINUM WORKS, N. J. R. R. at Oliver St., Newark 5, N. J. SEE ADV. PG. 192
- Baker Co., Inc., 113 Astor St., Newark 5, N. J. Callite Tungsten Corp., 540 39th St., Union City, N. J.
- N. J.
  GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
  MAKEPACE CO., D. E., Attleboro, Mass. SEE ADV. PG. 84.
  NEY CO., J. M., 179 Elm St., Hartford, Conn. SEE ADV. PG. 56.
  Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

#### TUBING—Steel

- American Rolling Co., 368 Curtis St., Middletown, Ohio Armco Steel Corp., 703 Curtis St., Middletown,
- Ohio Bundy Tubing Co., 8109 E. Jefferson Ave., De-troit 14, Mich.

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Carpenter Steel Co., Kenilworth, N. J.

- Carpenter Steel Co., 142 West Bern St., Reading, Pa
- Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind
- Ind.
   La Magna Mfg. Co., Inc., East Rutherford, N. J.
   PRODUCTION ENGINEERING CO., 173 Sargeant Ave., Clifton, N. J. SEE ADV. PG. 212.
   Republic Steel Corp., Republic Bldg., Cleveland 1, Out.
- Ohio

- Onto Revere Copper & Brass Inc., 230 Park Avenue, New York 17, N. Y. Ryerson & Son, Inc., J. T., Box 8000-A, Chi-cago, Ill. Summerill Tubing Co., Div. Columbia Steel & Shafting Co., P. O. Box 1557, Pittsburgh 30, Pa
- Superior TUBE CO., 2504 Germantown Pike, Norristown, Pa. SEE ADV. PGS. 100, 101.
   Timken Roller Bearing Co., The, Canton, Ohio

#### TUBING—Synthetic Resin

- American Hard Rubber Co., 11 Mercer St., New
- American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
  AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, 111. SEE ADV. PG. 167.
  BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
  Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington, Dal
- mington, Del. CONTINENTAL DIAMOND FIBRE CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Delaware. SEE ADV. PGS. 119-122. Dielectric Materials Co., 5315-17 N. Ravens-wood Ave., Chicago 40, 111. du Point de Nemours & Co., Inc., E. I., Wilming-ton 98, Del.

- ton 98, Del. Industrial Synthetics Corp., 225 North Ave.,
- Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
  Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
  INSULATION MFRS. CORP., 565 W. Washing-ton Bivd., Chicago 6, Ill. SEE ADV. PG. 137.
  Irvington Varnish & Insulator Co., 10 Argyle Ter-race, Irvington 11, N. J.
  Lamicoid Fahricators, Inc., 4545 Cortland St., Chicago 39. Illinois

- Chicago 39, Illinois Mica Insulator Co., Schenectady 1, N. Y. MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV. PG, 54
- Plastex Corp., 402 Mt. Vernon Ave., Columbus 3. Ohio Spaulding Fibre Co., Inc., 310 Wheeler St., Tona-
- Spaulding Fibre Co., Inc., 310 wheeler St., 100a-wanda, N. Y.
  Surprenant Mfg. Co., 199 Washington Street, Boston 10, Mass.
  Synthane Corp., Oaks, Pa.
  Taylor Fibre Co., Norristown, Pa.
  U. S. Stoneware Co., The, Akron 9, Ohio
  Varlex Corp., N. Jay St., Rome, N. Y.
  Western Felt Works, 4029 Ogden Ave., Chicago, III.

- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### **TUBING**—Varnished or Lacquered

- Aerolite Electronic Hardware Corp., 24 Cliff St. Jersey City, N. J. Alpha Wire Corp., 50 Howard St., New York 13,
- Anchor Webbing Co., P. O. Box 1624, Providence,
- R. I.
  B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
  BRAND & CO., WILLIAM, 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
- York 10, N. Y. SEE ADV. PGS. 92, 93. CLEVELAND CONTAINER CO., THE, 6201 Bar-berton Ave., Cleveland 2, Ohio. SEE ADV. PG. 183.
- Dielectric Materials Co., 5315-17 N. Ravens-wood Ave., Chicago 40, Ill.
  Federal Screw Products Co., 224 W. Huron St., Chicago 10, 10
- Chicago 10, Ill. General Cement Mfg. Co., 919 Taylor Ave., Rock-

- General Ceinent Mtg. Co., 919 Taylor Ave., ROCK-ford, Ill.
   INSULATION MFRS. CORP., 565 W. Washing-ton Blvd., Chicago 6, Tll. SEE ADV. PG. 137.
   National Electric Coil Co., Columbus 16, Ohio NATIONAL VARNISHED PRODUCTS CORP., 211 Randolph Ave., Woodbridge, N. J. SEE ADV. DC. 117 PG. 117.

PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chciago 47, Ill. SEE ADV. PG. 112.
 Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, California
 Varflex Corp., N. Jay St., Rome, N. Y.

TUNERS

## TUBING—Varnished Cambric Insulation

- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Alpha Wire Corp. 50 Howard St., New York 13,
- N. Y
- Anchor Webbing Co., P. O. Box 1624, Providence,
- BENTLEY-HARRIS MFG. CO., Conshocken, Pa.

- BENTLEY-HARRIS MFG. CO., Conshocken, Pa. SEE ADV. PG. 127.
  BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
  Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
  Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
  NATIONAL VARNISHED PRODUCTS CORP., 211 Randolph Ave., Woodbridge, N. J. SEE ADV. Randolph Ave., Woodbridge, N. J. SEE ADV. PG. 117.
- Varflex Corp., N. Jay St., Rome, N. Y.

## TUNERS-a-m

Calif.

TUNERS-f-m

hurst, N, J.

- Adaptol Co., 120 New Lots Ave., Brooklyn, N. Y. American Communications Corp., 306 Broadway, New York 7, N. Y. Bogen Co., David, 663 Broadway, New York 12, N. Y.
- BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179. Collins Audio Products Co., P. O. Box 368, West-
- Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
  Dormitzer Electric & Mfg. Corp., 782 Commonwealth Ave., Boston 15, Mass.
  EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SEE ADV. PG. 189.
  Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
  Heath Co., Benton Marbor, Mich.
  Kinsey Radio Mfg. Co., 5804 Oak St., Omaha 7, Neb.

Measurement Engineering Ltd., Arnprior, Ontario,

Canada Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10,

Sargent-Rayment Co., The, 212 9th St., Oakland

Sickles Co., F. W., 165 Front St., Chicopee, Mass. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.

Bogen Co., David, 633 Broadway, New York 12.

N. Y. BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. SEE ADV. PG. 179. Collins Audio Products Co., P. O. Box 368, West-field, N. J. EL-TRONICS, INC., 2647 No. Howard St., Phila. 33, Pa. SE EADV. PG. 189. Heath Co., Benton Harbor, Mich. La Magna Mfg. Co., Inc., East Rutherford, N. J. Measurement Engineering Ltd., Arnprior, On-tario, Canada

tario, Canada Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Carmel, III.
Modulation Products Co., 202 E. 44th St., New York, N. Y.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
Radio Engineering Labs., Inc., 34-54 36th Street, Long Island City, N. Y.
Regal Electronics Corp., 603 W. 130th St., New York 27, N. Y.

Sargent-Rayment Co., The, 212 9th St., Oakland

9, Calif. Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y. U. S. Electronics Corp., 275 Warren St., Lynd-

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## TUNERS

#### TUNERS-f-m/g-m

- Bogen Co., David, 663 Broadway, New York 12,
- N. Y. BROWNING LABS., INC., 750 Main St., Win-chester, Mass. SEE ADV. PG. 179. Collins Audio Products, Co., P. O. Box 368, West-field, N. J.
- Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24,
- III. Heath Co., Benton Harbor, Mich. Modulation Products Co., 202 E. 44th St., New
- York, N. Υ. Radio Craftsmen, Inc., 1341 S. Michigan Ave.,
- Chicago 5, Ill. Sargent-Rayment Co., The, 212 9th St., Oakland Calif.
- Televista Corp. of America, 114 E. 16th St., New York 3, N. Y. U. S. Electronics Corp., 275 Warren St., Lynd-
- hurst, N, J.

#### TUNERS-Klystron

Microwave Equipment Co., North Caldwell, N. J. SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52.

#### **TUNERS**—Permeability

- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo. Aladdin Radio Industries, Inc., 501 W. 35th St.,
- Chicago 16, Ill.
- Clippard Instrument Laboratory, Inc., 1125 Bank St., Cincinnati 14, Ohio Electronic Labs, Inc., 24 W. 24th St., Indian-apolis 4, Ind.

- apolis 4, Ind. Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. Miller Co., J. W., 5917 S. Main St., Los An-geles, Calif. Modulation Products Co. 202 F. 44th St. New

- geles, Calif. Modulation Products Co., 202 E. 44th St., New York, N. Y. Oak Mig. Co., 1260 N. Clybourn Ave., Chicago 10, Ill. Radio Condenser Co., Camden, N. J. STANDARD PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. SEE ADV. PG. 219. Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y. U. S. Electronics Corp., 275 Warren St., Lynd-
- S. Electronics Corp., 275 Warren St., Lynd-U. hurst, N, J

#### **TUNERS**—Television

- Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. Guthman Inc., Edwin I., 15 S. Throop St., Chi-
- cago, Ill. RADIO CORP. OF AMERICA, RCA Victor Div.,
- KADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV.
   PGS. 197, Inside Back and Back Covers.
   STANDARD COIL PRODUCTS CO., 2329 N.
   Pulaski Rd., Chicago 39, III. SEE ADV. PG.
- TRANSVISION INC., 460 North Ave., New Ro-chelle, N. Y. SEE ADV. PG. 172. U. S. Electronics Corp., 275 Warren St., Lynd-
- hurst, N. J.

#### **TUNERS**—Television rf

General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J.

#### TUNERS-uhf Ring

- Clarkstan Corp., 11927 W. Pico Blvd., Los Angeles 34, Calif.
  Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.

#### TUNING DEVICES-Receiver Mechanical

- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
  BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39.
  Collins Audio Products Co., P. O. Box 368, West-field, N. J.

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- Collins Radio Co., Cedar Rapids, Iowa Delco Radio Div., General Motors Corp., Kokomo, Ind. Elm Laboratories, 18 South Broadway, Dobbs
- Ferry, N. S. General Instrument Corp., 829 Newark Ave.,
- General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J. Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill. Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y. Hi-Par Products Co., Fitchburg, Mass. La Magna Mig. Co., Inc., East Rutherford, N. J. Leland, Inc., G. H., 123 Webster St., Dayton 2, Ohio
- Ohio
- Maguire Industries Inc., Electronics Dept.,
- Bridgeport, Conn. Millen Mfg. Co., James, 150 Exchange St., Mal-

- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
  Modulation Products Co., 202 E. 44th St., New York, N. Y.
  NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108.
  Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, III.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Radio Condenser Co., Camden, N. J.
  Sickles Co., F. W., 165 Front St., Chicopee, Mass. Mass
- SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y. U. S. Electronics Corp., 275 Warren St., Lynd-
- hurst, N, J.
- Yates Engineering Services, Box 67, Cranford, N. J.

#### TUNING DEVICES-Transmitter Mechanical

- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. SEE ADV. PG. 39. Collins Radio Co., Cedar Rapids, Iowa Millen Mfg. Co., James, 150 Exchange St., Mal-
- Mass.
- den, Mass. NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y. Thermo Labs., Inc., 355 W. 26th St., New York

- 1, N. Y. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y.

#### **TUNING DEVICES**—Turntable Units

- General Industries Co., Taylor & Olive Sts., Elyria, Ohio
- Magnetic Products Corp., The, Norwalk, Conn. Maguire Industries Inc., Electronics Dept Dept., Conn
- Bridgeport PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y. SEE ADV. PG. 44.

#### TURNTABLES—Recording and Transciption

- Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio
- Allied Recording Products Co., 21-09 43rd Ave., Long Island City 1, N. Y.
- Bardwell & McAllister, Inc., P. O. Box 1310, Hollywood, Calif. Berndt-Bach, Inc., 7377 Beverly Blvd., Los An-
- geles 36, Calif. lifone Corp., 1041 N. Sycamore Ave., Holly-
- Califone Corp., 1 wood 38, Calif. Cinema Engineering Co., 1510 W. Verdugo Ave.,

- Cinema Engineering Co., 1810 W. Verdugo Ave., Burbank, Calif.
  Ellinwood Industries, 150 W. Slauson Ave., Los Angeles 3, Calif.
  Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
  FEDERAL TELEPHONE & RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Flock Process Co., Velvetone Div., 3 Quincy St., Norwalk, Conn.
- Norwalk, Conn.

Garrard Sales Corp., 315 Broadway, New York 7, N General Industries Co., Taylor & Olive Sts., Ely-

1949-1950 DIRECTORY of

- ria, Ohio Gray Mig. Co., 16 Arbor St., Hartford, Conn. GRAY RESEARCH & DEVELOPMENT CO., 16 Arbor St., Hartford 1, Conn. SEE ADV. PG. 187.
- Harris Mfg. Co., 2422 W. Seventh St., Los An-
- geles 5, Calif. Ingevin Mfg. Co York 23, N. Y. Langevin Corp., 37 W. 65th St., New
- geres 5, Cain.
  Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
  Magnetic Products Corp., The, Norwalk, Conn.
  PRESTO RECORDING CORP., Paramus, N. J. SEE ADV. PGS. 40, 41.
  PROCTOR SOUNDEX CORP., 133 N. 6th Ave., Mt. Vernon, N. Y. SEE ADV. PG. 230.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Radio Engineering Labs., Inc., 35-54 36th St., L. I. City, N. Y.
  Radio-Music Corp., Port Chester, New York
  Rek-O-Kut Co., Inc., 38-01 Queens Blvd., L. I. City, N. Y.
  Rowe Industries, 1702 Wayne St., Toledo 9, Ohio Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.

#### TWEETERS

See Loudspeakers

#### ULTRASONIC EQUIPMENT

Refer to any of the following: GENERATORS, Ultrasonic GAGES, Ultrasonic Thickness CRYSTALS, Ultrasonic

#### VACUUM GAGES

Va

209.

. J.

See Gages, Vacuum or Pirani

#### RECORDING VACUUM INDICATING, AND CONTROL EQUIPMENT

Bailey Meter Co., 1044 Ivanhoe Rd., Cleveland 10, Ohio
Bristol Co., The, Waterbury 91, Conn.
Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa.
CONTINENTAL ELECTRIC CO., Geneva, Ill. SEE ADV. PG. 176

CONTINENTAL ELECTRIC CO., Geneva, III. SEE ADV. PG. 176.
Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd. W., Rochester, N. Y.
Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
Foxboro Co., The, Foxboro, Mass.
Fredericks Co., Geo. E., Bethayres, Pa.
Hastings Instrument Co., Box 1275, Hampton, Va

HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

209.
Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
National Research Corp., 70 Memorial Drive, Cambridge 42, Mass.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
Research Electronic Lab., 2859 Susquehanna Rd., Roslyn, Pa.

Roslyn, Pa.
 Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y.
 SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS, 240-244.
 Tardiabus Carn. C. J. 614 Fredinghuysen Ave.

PGS. 240-244.
Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. Y.
Thompson Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.
Vacuum Electronic Engineering Co., 316 37th St., Brooklyn 2, N. Y.
Wallace & Tiernan Products Inc., Bellaville 0

Wallace & Tiernan Products, Inc., Belleville 9,

Weksler Thermometer Co., 52 W. Houston St., New York 12, N. Y. Winslow Company, Inc., The, 9 Liberty St., New-ark 5, N. J.

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## **ELECTRONIC** and **ALLIED PRODUCTS**

### VACUUM PUMPS-High

- BEACH-RUSS CO., 50 Church St., New York 7, N. Y. SEE ADV. PG. 196.
  Callite Tungsten Corp., 540 39th St., Union City, N. J.
  Central Scientific Co., 1700 Irving Park Road, Chines 12.

- Central Scientific Co., 1700 Irving Park Road, Chicago 13, 111.
  Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd. W., Rochester, N. Y.
  EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128.
  Eitel-McCullough Inc., San Bruno, Calif.
  Fredericks Co., Geo. E., Bethayres, Pa.
  HAYDU BROS., Plainfield, N. J. SEE ADV. PG. 209.

- 209
- International Machine Works, 2027 46th St.,
- North Bergen, N. J. KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. SEE ADV. PG. 152. Kinney Mig. Co., 3529 Washington St., Boston,
- Mass.
- Mass. Leiman Bros., 114 Christie St., Newark 5, N. J. National Research Corp., 70 Memorial Drive, Cambridge 42, Mass. Nelson Vacuum Pump Co., Geo. F., 2133 Fourth St., Berkeley 10, Calif. Optical Film Engineering Co., 2125 Cherry St., Dividedenia 2, Pa

- Optical Film Engineering Co., 2120 Cherry pt., Philadelphia 3, Pa.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Camden Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
  Vacuum Tube Products, 203 North Clementine St. Oceanside Calif.
- St., Oceanside, Calif. Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

#### Vacuum Tube Voltmeter

See Voltmeters, Electronic

#### VACUUM UNITS

- Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd. W., Rochester, N. Y. Fredericks Co., Geo. F., Bethayres, Pa. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- 209.
- 209. Leiman Bros., 114 Christie St., Newark 5, N. J. National Research Corp., 70 Memorial Drive, Cambridge 42, Mass. Optical Film Engineering Co., 2125 Cherry St., Philadelphia 3, Pa. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts. Camden N. J. SEF ADV.

- Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back & Back Covers. Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y.

#### VALVES—Solenoid

- Adel Precision Products Corp., 10777 Van Owen St., Burbank, Calif.
  Alco Valve Co., 865 Kingsland St., St. Louis 5,
- Mo
- Automatic Switch Co., 391 Lakeside Ave., Orange,
- Automate Switch Co., N. J. Barber Colman Co., Rockford, Ill. Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6. Calif.
- Cooper Co., Clark, 374 N. Market St., Palmyra,
- Cutler-Hammer Inc., 315 N. 12th St., Milwaukee Wis.
- 1, Wis. Distillation Products, Inc., Vacuum Equipment Div., 755 Ridge Rd. W., Rochester, N. Y. General Controls Co., Glendale 1, Calif. Hercules Electric & Mfg. Co., Inc., 2500 Atlan-tic Ave., Brooklyn 7, N. Y. McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
- St. Louis 10, Mo.
  Minneapolis-Honeywell Regulator Co., 2753
  Fourth Ave. S., Minneapolis, Minn.
  Piezo Mig. Corp., 110 E. 42nd St., New York 17, N. Y.

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- Sarco Co., Inc., Empire State Bldg., New York 1, N. Y. Skinner Electric Valve Div., The Skinner Chuck
- Skinner Electric valve Div., The Conner Co., 40 Belden Ave., Norwalk, Conn. Viking Products Sales Co., 2373 East Eight Mile Rd., Hazel Park, Mich.

#### VARISTORS

- Carborundum Co., The Globar Div., Niagara Falls, N. Y. GENERAL ELECTRIC CO., Schenectady 5, N. Y.
- SEE ADV. PGS. 5-18. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244
- 240-244. VICKERS ELECTRIC DIV., Vickers Inc., 1815 Locust St., St. Louis 3, Mo. SEE ADV. PG. 194. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### VARNISH CAMBRIC COATINGS

See Insulating Compounds

#### VIBRATION ANALYSIS EQUIPMENT

- Aircraft Electronics Associates, Inc., 1031 New Britain Ave., Hartford 10, Conn. Calidyne Co., The, 751 Main St., Winchester,
- Mass
- CENTURY GEOPHYSICAL CORP., Tulsa 3, Oklahoma. SEE ADV. PG. 164. Commercial Research Labs, Inc., 20 Bartlett Ave.,
- Detroit 3, Mich. Consolidated Engineering Corp., 620 N. Lake Ave.,
- Pasadena 4, Calif. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Electro Products Labs., Inc., 549 W. Randolph St.,
- Chicago 6, Ill. Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

- Detroit, Mich. Electronic Engineers, 1039-B Pacific St., Santa Monica, Calif. Gates Radio Co., Quincy, Ill. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10. Colo.
- Hathaway Instrument Co., 1919 S. Claintain Co., Denver 10, Colo.
  Heiland Research Corp., 130 East 5th Avenue, Denver 9, Colo.
  KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, New York, Colo.
- N. J. SEE ADV. PG. 215.
   M B MFG. CO., 1060 State St., New Haven 11, Conn. SEE ADV. PG. 221.
   Massa Laboratories, 3868 Carnegie St., Cleveland, Quint
- Ohio MICO INSTRUMENT CO., 90 Trowbridge St., Cambridge 38, Mass. SEE ADV. PG. 170. Miller Corp., Wm., 362 W. Colorado St., Pasa-
- dena. Calif.
- dena, Calif. PICKERING & CO., 309 Woods Ave., Oceanside, L. I., N. Y. SEE ADV. PG. 130. RAHM INSTRUMENTS, INC., 12 W. Broadway, New York 7, N. Y. SEE ADV. PG. 222. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Colic. Calif.
- Scott Inc., Herman Hosmer, 385 Putnam Ave.,
- Cambridge 39, Mass. Sheffield Corp., The, Dayton 1, Ohio SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240, 244
- 240-244
- Z40-Z44.
  Televiso Products Inc., 7466 West Irving Park Road, Chicago, Ill.
  Western Electric Co., Inc., 195 Broadway, New York 7, N. Y.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### VIBRATION ANALYSIS EQUIPMENT **Electronic Balancing**

- Annis Co., R. B., 1101 N. Delaware St., Indi-anapolis, Ind.
- Electro-Mechanical Instrument Co., 812 Chestnut St., Perkasie, Pa.

- Gisholt Machine Co., 1245 E. Washington Ave.,
- Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wisc. Ripley Co., Inc., P. O. Box 31, Middletown, Conn. Sheffield Corp., The, Dayton 1, Ohio SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. Televiso Products Inc., 7466 West Irving Park Road, Chicago 34, Ill. Vibroscope Co., 6 East 39th St., New York 16, N. Y.
- N. Y. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### VIBRATION ANALYSIS EQUIPMENT ----High Temperature Fatigue

Sheffield Corp., The, Dayton 1, Ohio

#### VIBRATION ANALYSIS EQUIPMENT ----Vibration Fatigue

- Dilks Co., Seymour, Conn. Gates Radio Co., Quincy, III. M B MFG. CO., 1060 State St., New Haven 11, Conn. SEE ADV. PG. 221. Sheffield Corp., The, Dayton 1, Ohio WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### VIBRATORS

PG. 87.

2, Ohio

Mich.

RECORDERS

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. Airpax Products Co., 1024 Greenmount Aye.,

- Baltimore 2, Md. AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul, Minn. SEE ADV. PG. 192. Calidyne Co., The, 751 Main St., Winchester,

CORNELL DUBILIER ELECTRIC CORP., 1000 Hamilton Blvd., S. Plainfield, N. J. SEE ADV.

Electronic Labs., Inc., 24 W. 24th St., Indi-anapolis 4, Ind. Eltron, Inc., 407 N. Jackson St., Jackson, Mich. Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.

Maguire Industries Inc., Electronics Dept., Bridge-

Maguire industries inc., 2000 port, Conn. MALLORY & CO., INC., P. R., 3029 E. Wash-ington St., Indianapolis 6, Ind. SEE ADV. PGS.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. SEE ADV. PGS. 105-108. National Union Radio Corp., 350 Scotland Rd., Orange, N. J. Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10,

Radiart Corp., The, 3571 W. 62nd St., Cleveland

Vibrapower Co., James, 3224 W. Armitage Ave.,

Chicago, Ill. Vokar Corp., 7300 Huron River Dr., Dexter,

VISCOSIMETERS WITH ELECTRONIC

Patterson Co., C. J., 3947 Broadway, Kansas City, Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.

Clippard Instrument Lab., Inc., 1125 Bank St.,

Chipara Instrument Lao., Inc., 112b Bank St., Cincinnati 14, Ohio INDUSTRIAL ELECTRONICS, INC., 2457 Wood-ward Ave., Detroit I, Mich. SEE ADV. PG. 226. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Shalleross Mfg. Co., 10 Jackson Ave., Collingdale, Pa

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. SEE ADV. PG. Inside Front Cover.

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VOLTAGE SUPPLIES-Decade

## VOLTMETERS

## VOLTMETERS

- Assembly Products, Inc., Chagrin Falls 6, Ohio Associated Research, Inc., 3758 W. Belmont, Chicago 18, 111. Beede Electrical Instrument Co., Inc., Penacook,
- N. H.
- N. H. Bristol Co., The, Waterbury 91, Conn. Burlington Instrument Co., Burlington, Iowa Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif. Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif. 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. Electric Design & Mfg. Corp., Burlington, Iowa Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio

- Cleveland 5, Ohio Electro-Mechanical Instrument Co., 812 Chestnut
- St., Perkasie, Pa.
   ELECTRO-TECH EQUIPMENT Co., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- Electronic Development Co., 4420 N. 23rd St.,
- Omaha 11, Nebraska ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG.
- ELECTRONIC MEASUREMENTS CO., Red Bank, N. J. SEE ADV. PG. 172. ESTERLINE-ANGUS CO., INC., P. O. Box 596,
- Indianapolis, Ind.
- Indianapolis, Ind. Feiler Engineering Co., 945 W. George St., Chi-cago 14, Ill. FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS 5-18. Heath Co., Benton Harbor, Mich. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.

- N. J.
- N. J. International Instruments, Inc., 331 East St., New Haven 11, Conn. JBT INSTRUMENTS, INC., 441 Chapel St., New Haven 8, Conn. SEE ADV. PG. 229. Lewis Engineering Co., 52 Rubber Ave., Nauga-
- MARION ELECTRICAL INSTRUMENT CO., Man-
- MARION ELECTRICAL INSTRUMENT CO., Mair chester, N. H. SEE ADV. PG. 79. Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio Measurement Engineering Ltd., Arnprior, Ontario, Canada
- Meters, Inc., 915 Westfield Blvd., Indianapolis 20, Ind.
- Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
- Norton Electrical Instrument Co., 59 Hilliard St.,
- Norton Electrical Instrument Co., 59 Hilliard St., Manchester, Conn.
  Precision Apparatus Co., Inc., 92-27 Horace Hard-ing Blvd., Elmhurst, N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rawson Electrical Instrument Co., Inc., 110 Potter St., Cambridge 42, Mass.
  Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, III.
- Chicago 12, Ill.
- Roller-Smith, Bethlehem, Pa.
- Sensitive Research Instrument Corporation, 9 Elm Avenue, Mount Vernon, N. Y. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
- SHURITE METERS, 61 Hamilton St., New Haven 6, Conn. SEE ADV. PG. 225.
- Simpson Electric Co., 5218 W. Kinzie St., Chicago 44. Ill.
- Star Measurements Co., 442 East 166th St., New York 56, N. Y.
- STERLING MFG. CO., 9205 Detroit Ave., Cleve-land, Ohio. SEE ADV. PG. 232.
- Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
- Sun Electric Corp., 6323 Avondale Ave., Chicago 31. Ill.
- Triplett Electrical Instrument Co., 286 Harmon Rd., Buffton, Ohio
- D-166

- U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa. Wallace & Tiernan Products, Inc., Belleville 9,
- N. J.
- N. J.
  Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
  WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.
  WESTON ELECTRICAL INSTRUMENT CORP., 618 Freinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.
  Willard Storage Battery Co., 246 E. 131st St., Cleveland 1, Ohio

#### VOLTMETERS—Crystal

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.

#### VOLTMETERS-Electronic

- American British Technology, Inc., 57 Park Ave., New York 16, N. Y. American Radio Co., 611 E. Garfield Ave., Glen-
- dale, Calif. BALLANTINE LABS., INC., Boonton, N. J. SEE

- ADV. PG. 134.
  Barber Labs., Alfred W., 34.04 Francis Lewis Blvd., Flushing, N. Y.
  BETA ELECTRONICS CO., 1762 Third Ave., New York 29, N. Y. SEE ADV. PG. 126.
  Clippard Instrument Lab., Inc., 1125 Bank St., Cincinnati 14, Ohio
  Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif.
  Development Engineering Co., Inc., The, 1818 Ashland St., Houston 8, Texas
  ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- 181. ELECTRODYNE COMPANY, 899 Boylston St., Boston 15, Mass. SEE ADV. PG. 188. ELECTRONIC DESIGNS, INC., Irvington, N. Y. SEE ADV. PG. 230. ELECTRONIC INSTRUMENT CO., INC., 276 Newport St., Brooklyn 12, N. Y. SEE ADV. PG. 233
- 233ELECTRONIC MEASUREMENTS CO., Red Bank,
- N. J. SEE ADV. PG. 172. Feiler Engineering Co., 945 W. George St., Chi-
- cago 14, Ill. Fluke Engineering Co., John, Box 755, Spring-
- Fluke Engineering Co., John, Box 755, Spring-dale, Conn.
  FREED TRANSFORMER CO., 1736 Weirfield Ave., Brooklyn 27, N. Y. SEE ADV. PG. 53.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
  GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. SEE ADV. PGS. 114, 115.
  Heath Co., Benton Harbor, Mich.
  HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. SEE ADV. PGS. 64, 65.
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio

- Ave., Cleveland, Ohio Instrument Electronics, 42-17A Douglaston Blvd., Douglaston, L. I., N. Y. Jackson Electrical Instrument Co., 16 S. Patter-
- son Bivd., Dayton I, Ohio. KAY ELECTRIC CO., 14 Maple Ave., Pine Brook, N. J. SEE ADV. PG. 215.
- McMurdo Silver Co., Inc., 1240 Main St., Hart-ford 3, Conn. MacLeod & Hanopol, 10 Joiner St., Charlestown
- 29. Mass
- Measurement Engineering Ltd., Arnprior, Ontario, Canada
- MEASUREMENTS CORP., Boonton, N. J. SEE
- ADV. PG. 110. Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. National Technical Labs., 820 Mission St., South Benedican, Calif.
- Pasadena, Calif.
- Precision Apparatus Co., Inc., 92-27 Horace Hard-ing Blvd., Elmhurst, N. Y. Radio City Products Co., Inc., 152 W. 25th St.,
- Radio Chy Products Co., Inc., 192 W. Dom Ols, New York 1, N. Y.
   RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.

Radio Design Co., 1353 Sterling Pl., Brooklyn, N. Y. Reiner Electronics Co., 152 W. 25th St., New

1949-1950 DIRECTORY of

- York. Ν. Rowe Engineering Corp., 2422 N. Pulaski Road,
- Chicago 39, Ill. Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y. Sierra Electronic Corp., Belmont & San Carlos,
- Calif. Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, Ill.

- 44, Ill. Southwestern Industrial Electronic Co., 2831 Post Oak Rd., Houston 19, Texas Superior Instruments Co., 227 Fulton St., New York 7, N. Y. Supreme, Inc., Greenwood, Miss. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240.244 240-244
- Thermo Labs., Inc., 355 W. 26th St., New York 1, N. Y.
- WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Avenue, Newark 5, N. J. SEE ADV. PG. 193.

#### **VOLTMETERS**—Electrostatic

- Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.
- ELECTRONIC MEASUREMENTS CO., Red Bank,
- N. J. SEE ADV. PG. 172. FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. SEE ADV. PG. 86. GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18. Hickok Electrical Instrument Co., 10514 Dupont Ave. Clavalovat Obio.
- Ave., Cleveland, Ohio Rawson Electrical Instrument Co., 110 Potter St.,

Cambridge 42, Mass. Sensitive Research Instrument Corporation, 9 Elm Ave., Mt. Vernon, N. Y. Weston Laboratories, Weston 93, Mass.

VOLTAGE REGULATORS & STABILIZERS See Regulators, Voltage Regulators & Stabilizers

Associated Research, Inc., 3758 W. Belmont, Chicago 18, Ill. Beede Electrical Instrument Co., Inc., Penacook, N. H.

N. H.
Coastwise Electronics Co., Inc., 130 N. Beaudry Ave., Los Angeles, Calif.
Cole Instrument Co., 1320 S. Grand Ave., Los Angeles 15, Calif.
Dayco Radio Corp., 915 Valley St., Dayton 4, Obic

Douglas Radio Labs., 40 Wayland St., Boston 25, Mass. Electro-Mechanical Instrument Co., 812 Chestnut St., Perkasie, Pa. ELECTRO-TECH EQUIPMENT CO., 117 Lafa-yette St., New York 13, N. Y. SEE ADV. PG. 181.

Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska ELECTRONIC MEASUREMENTS CO., Red Bank,

N. J. SEE ADV. PG. 172. Feiler Engineering Co., 945 W. George St., Chi-

Feiler Engineering Co., 945 W. George St., Chicago 14, Ill.
GENERAL ELECTRIC CO., Electronics Dept., Syracuse, N. Y. SEE ADV. PGS. 5-18.
Health Co., Benton Harbor, Mich.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Licensetical Instruments Inc. 331 East St.

Ave., Cleveland, Ohlo International Instruments, Inc., 331 East St., New Haven 11, Conn. Jackson Electrical Instrument Co., 16 Patterson Blvd., Dayton 1, Ohio McMurdo Silver Co., 1240 Main St., Hartford 3, Conn

MARION ELECTRICAL INSTRUMENT CO., Man-

chester, N. H. SEE ADV. PG. 79. Measurement Engineering Ltd., Arnprior, Ontario,

Meters, Inc., 915 Westfield Blvd., Indianapolis 20,

June, 1949 - MID MONTH - ELECTRONICS BUYERS' GUIDE

VOLT-OHM-MILLIAMMETERS

Ohio

Canada

Ind.

**ELECTRONIC** and **ALLIED PRODUCTS** 

Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Philco Corp., Tioga & C Sts., Philadelphia 34, Pa. Precision Apparatus Co., Inc., 92-27 Horace Hard-ing Blvd., Elmhurst, N. Y. Podia Citu Parchurst, Co. 162, W. 25th St.

- ing Blvd., Elmhurst, N. Y. Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass. Reiner Electronics Co., 152 W. 25th St., New York, N. Y. Poller-Smith Bethlehom Pa
- Roller-Smith, Bethlehem, Pa. Shallcross Mfg. Co., 10 Jackson Ave., Collingdale,
- Pa.
- Simpson Electric Co., 5218 W. Kinzie St., Chicago 44 III.
- Star Measurements Co., 442 East 166th St., New

- Star Measurements Co., 442 East 166th St., New York 56, N. Y.
  STERLING MFG. Co., 9205 Detroit Ave., Cleve-land 2, Ohio. SEE ADV. PG. 232.
  Superior Instruments Co., 227 Fulton St., New York 7, N. Y.
  Supreme, Inc., Greenwood, Miss.
  SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244. 240-244.
- Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio Triumph Mfg. Co., 913 W. Van Buren St., Chi-
- TÜ cago
- cago 7, 11. WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Frelinghuysen Aye., Newark 5, N. J. SEE ADV. PG. 193.

#### WASHERS-Insulating

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J.
  AMERICAN LAVA CORP., Chattanooga 5, Tenn. SEE ADV. PG. 97.
  American Radio & Hardware Co., 152 MacQues-ten Parkway, South, Mt. Vernon, N. Y.
  Asheville Mica Co., 900 Jefferson Ave., New-port News, Va.
  Auburn Mfg. Co., Middletown, Conn.
  Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
  BIWAX CORP., 3445 Howard St., Skokie, Ill. SEE ADV. PG. 206.
  Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington, Del.

- mington, Del. CENTRALAB DIV., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. SEE ADV. PGS. 26,
- 27.
- 27.
  Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill.
  CONTINENTAL DIAMOND FIBRE CO., 16 Chapel St., Newark 16, Del. SEE ADV. PGS. 119-122.
  Crowley & Co. Inc., Henry L., 1 Central Ave., West Orange, N. J.
  Electrical Logidation Co. Inc. 12 Vector St.
- West Orange, N. J.
  Electrical Insulation Co., Inc., 12 Vestry St., New York, N. Y.
  Emcloid Co., Inc., The, 1239 Central Ave., Hill-side 5, N. J.
  Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
  Felsenthal & Sons., Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
  Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
  Formica Insulation Co., 4662 Spring Grove Ave.,

- Chicago 7, III. Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati 32, Ohio Franklin Fibre-Lamitex Corp., 12th & French Sts., Wilmington, Del. Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y. Gasket Engineering Co., 2440 Charlotte St., Kan-
- sas City 8, Mo. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
- General Ceramics & Steatite Corp., Keashey,
- N. J. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.
- INSULATION MFRS. CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
- ELECTRONICS BUYERS' GUIDE June, 1949 MID-MONTH

- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, III.
  Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
  Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
  Lamicoid Fabricators, Inc., 4545 Cortland St., Chicago 39, Illinois
  Martindale Electric Co., Box 617, Edgewater Branch, Cleveland 7, Ohio
  Mica Insulator Co., Schenectady 1, N. Y.
  Micacraft Products Inc., 701 McCarter Highway, Newark 5, N. J.
  Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
  MYCALEX CORP. OF AMERICA, 60 Clifton Blvd.,

- York 7, N. Y. MYCALEX CORP. OF AMERICA, 60 Clifton Blvd.,
- MYCALEX CORP. OF AMERICA, 60 Clifton Blvd., Clifton, N. J. SEE ADV. PGS 124, 125.
  Mykroy, Inc., Arlington Heights Airport, Arling-ton Heights, Ill.
  National Gasket & Washer Mfg. Co., 122 E. 25th St., New York 10, N. Y.
  NATIONAL VULCANIZED FIBRE CO., Wilming-ton, Del. SEE ADV. PG. 31.
  Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.

- Parisian Novery Cu., otro Control Control Chicago 9, Ill. Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Philadelphia 44, Pa. Plastic Accessories, Inc., 460 Broome St., New
- York 13, N. Y. Plasticraft Products Co., 20 Hudson St., New
- York 13, N. Y. Precision Fabricators, Inc., Roosevelt Rd., E.
- Rochester, N. Y. Printloid Inc., 95 Mercer St., New York, N. Y. Quadriga Mfg. Co., 213 W. Grand Ave., Chi-cago 11, Ill.
- Rogan Bros., 2500 W. Irving Pk., Chicago 18,
- TH.
- Rogers Corp., Manchester, Connecticut Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
- Smith, Inc., Herman H., 405 44th St., Brook-lyn 20, N. Y. Spaulding Fibre Co., Inc., 310 Wheeler St., Ton-
- awanda, N. Y Star Porcelain Co., 61 Muirhead Ave., Trenton N
- Star Forcian Co., of Multilead Ave., Frenchin 9, N.J.
  Stronghold Screw Products Inc., 216-222 W. Hubbard St., Chicago 10, Ill.
  STUPAKOFF CERAMIC & MFG. Co., Latrobe, Pa. SEE ADV. PG. 78.
  SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.
  Syncor Products Co., Malden, Mass.
  Synthane Corp., Oaks, Pa.
  Tar Heel Mica Co., Plumtree, N. C.
  Taylor Fibre Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  Waterhury Companies, Inc., Waterbury 90, Conn.
  Willard's, Hampden, Mass.
  Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

#### WASHERS-Lock

- Aerolite Electronic Hardware Corp., 24 Cliff St.,
- Jersey City, N. J. ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG. 32
- American Nut & Bolt Fastener Co., 2045 Doerr St., Pittsburgh 12, Pa. Chase Brass & Copper Co., Inc., Waterbury 91,
- Con. Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill. Garrett Co., Inc., G. K., 1421 Chestnut St., Phila. 2, Pa. General Cement Mfg. Co., 919 Taylor Ave., Rock-
- ford, Ill.
- Harper Co., H. M., 2620 Fletcher St., Chicago 18, Ill
- Hobbs Mfg. Co., 26 Salisbury St., Worcester. INSULINE CORP. OF AMERICA, 36-02 35th Ave.,
- Long Island City, N. Y. SEE ADV. PG. 80.

- Lambert Mfg. Co., 639 W. 12th St., Erie, Pa. Lamson & Sessions Co., 1971 W. 85th St., Cleve-land, Ohio
- Locke Incorporated, P. O. Box 57, Baltimore 3,
- Md. National Lock Washer Co., 40 Hermon St., Newark 5, N. J. New England Screw Co., Keene, New Hamp-
- shire
- Penn-Union Electric Corp., 315 State Street, Erie, Pa.
- Philadelphia Steel & Wire Corp., Penn St. & Belfield Avenue, Philadelphia, Pa. Positive Lock Washer Co., 181 Miller St., New-

- Positive Lock Washer Co., 181 Miller St., Newark, N. J.
  St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Cal.
  Shakeproof, Inc., Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  Standard Locknut & Lockwasher Inc. 118 W.
- Standard Locknut & Lockwasher, Inc., 118 W. St. Clair St., Indianapolis 4, Ind. Sterling Bolt Co., 209 W. Jackson Blvd., Chi-
- cago 6, Ill. Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, Ill. Thompson-Bremer & Co., 1640 W. Hubbard St.,

- Thompson-Bremer & Co., 1640 W. Hubbard St., Chicago, Ill.
  United Screw & Bolt Corp., 2513 W. Culler-ton St., Chicago 8, Ill.
  Wrought Washer Míg. Co., 2264 S. Bay St., Milwaukge 7, Wis.

Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. ALLMETAL SCREW PRODUCTS CO., INC., 33 Greene St., New York 13, N. Y. SEE ADV. PG.

American Nut & Bolt Fastener Co., 2045 Doerr ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. SEE ADV. PG. 174.

Auburn Mfg. Co., Middletown, Conn. Bound Brook Oil-Less Bearing Co., Bound Brook,

Chase Brass & Copper Co., Inc., Waterbury 91, Conn. Chicago Expansion Bolt Co., 1338 W. Concord

Chicago Expansion Boit Co., 1988 W. Concord Pl., Chicago 22, Ill. Continental Screw Co., New Bedford, Mass. Corbin Screw Div., Amer. Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn. Federal Screw Products Co., 224 W. Huron St., Chicago 10, IU

General Cement Mfg. Corp., A. W., 43-20 34th St., Long Island City, N. Y.
Fryling Mfg. Co., 639 W. 12th St., Erie, Pa.
Garrett Co., Inc., G. K., 1421 Chestnut St., Phila. 2, Pa.
General Cement Mfg. Co., 919 Taylor Ave., Rockford U.

Greene Mfg. Corp., G. G., Warren, Pa. Harper Co., H. M., 2620 Fletcher Ct., Chicago

HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

Hubbard Spring Co., M. D., Central Ave., Pon-

tiac, Mich. INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. SEE ADV. PG. 80. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. La Magna Mfg. Co., Inc., East Rutherford, N. J. Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio Lacha Lucampartial, P. O. Bay 57. Baltimers 2

Locke Incorporated, P. O. Box 57, Baltimore 3,

Mo.
 National Gasket & Washer Mfg. Co., 122 E. 25th St., New York 10, N. Y.
 Penn Fibre & Specialty Co., 2030 E. Westmore-land St., Phila. 44, Pa.
 Pheol Mfg. Co., 5700 Roosevelt Rd., Chicago Ed. U.S.

50, 111. Precision Fabricators, Inc., Roosevelt Rd., E.

Rochester, N. Y. Quadriga Mfg. Co., 213 W. Grand Ave., Chi-cago 11, Ill.

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WASHERS-Metal

32

N. J.

Chicago 10, Ill.

ford, Ill.

111

Mich.

209

Md.

## WATTMETERS

- Sheffco Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J. St. Louis Screw & Bolt Co., 6900 Broadway, St.

- Park, N. J.
  St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
  STAVER CO., INC., 91 Pearl St., Brooklyn 1, N. Y. SEE ADV. PG. 188.
  Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill.
  Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
  Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, Ill.
  SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. SEE ADV. PG. 231.
  United Screw & Bolt Co., 2513 W. Cullerton St., Chicago 8, Ill.
  Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

#### WATTMETERS

- Associated Research, Inc., 3758 W. Belmont,
- Associated Instantial, and Chicago 18, 111.
   BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. SEE ADV. PG. 217.
   Communications Co., Inc., 300 Greco Ave., Coral
- Gables 34, Fla. ELECTRO-TECH EQUIPMENT CO., 117 Lafayette St., New York 13, N. Y. SEE ADV. PG. 181. Esterline-Angus Co., Inc., P. O. Box 596, In-dianapolis, Ind.
- Fluke Engineering Co., John, Box 755, Spring-

- Fluke Engineering Co., John, Box 755, Spring-dale, Conn.
  GENERAL ELECTRIC CO., Schenectady 5, N. Y. SEE ADV. PGS. 5-18.
  Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
  Heath Co., Benton Harbor, Mich.
  JONES ELECTRONICS CO., M. C., 96 North Main St., Bristol, Conn. SEE ADV. PG. 184.
  Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y.
  Norton Electrical Instrument Co., 59 Hilliard St., Manchester, Conn.
- Norton Electrical Instrument Co., 59 Hilliard St., Manchester, Conn.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y. SEE ADV. PG. 63.
  Rawson Electrical Instrument Co., Inc., 110 Pot-ter St., Cambridge 42, Mass.
  Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
  Roller-Smith, Bethlehem, Pa.
  Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3, Calif.

- Calif.

- Calif. Sensitive Research Instrument Corporation, 9 Elm Ave., Mt. Vernon, N. Y. Simpson Electric Co., 5218 W. Kinzie St., Chi-cago 44, Ill. SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. SEE ADV. PGS. 51, 52. Triplett Electrical Instrument Co., 286 Harmon Road, Bluffton, Ohio WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67. WESTON ELECTRICAL INSTRUMENT CORP., 618 Freingehuvsen Ave., Newark 5. N. J. SEE
- 618 Frelinghuysen Ave., Newark 5, N. J. SEE ADV. PG. 193.

#### 8 WAVEGUIDES—Combination Rigid Flexible

Technicraft Laboratories, Inc., Box 1908, Waterbury, Conn.

#### WAVEGUIDES—Flexible

D-168

- AIRTRON, INC., 101 E. Elizabeth Ave., Linden, N. J. SEE ADV. PG. 146. DeMornay-Budd, Inc., 475 Grand Concourse, New York 51, N. Y.

- York 51, N. Y.
  Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
  Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
  Microwave Equipment Co., North Caldwell, N. J.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.

- Technicraft Laboratories, Inc., Box 1908, Water-
- bury, Conn. TITEFLEX, INC., 500 Frelinghuysen Ave., New-ark 5, N. J. SEE ADV. PG. 231. Waveguide Mfg. & Equipment Co., Inc., 190-A
- Duane St., New York, N. Y.

#### WAVEGUIDES-Rigid

- AIRTRON, INC., 101 E. Elizabeth Ave., Linden, N. J. SEE ADV. PG. 146. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. DeMornay-Budd, Inc., 475 Grand Concourse, New York 51, N. Y. Diamond Instrument Co., North Ave., Wakefield, Marc
- Mass.
- Eastern Metals Industries, 250 W. 54th St., New
- York 19, N. Y. Gorham Co., Bronze Div., Providence 7, R. I. Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y. Industrial Products Co., Danbury, Conn. Kent Co., F. C., 64-72 Howard St., Irvington, N. J.
- N. J.

- Kent Co., F. C., 64-72 Howard St., Irvington, N. J.
  Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
  Microwave Equipment Co., North Caldwell, N. J.
  Network Mfg. Corp., Bayonne, N. J.
  POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 66 Court St., Brooklyn 2, N. Y.
  SEE ADV. PG. 63.
  Prenier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
  Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y.
  RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Canden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers.
  Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
  Schutter, Carl W., Rockville Centre, N. Y.
  Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
  Technicraft Laboratories, Inc., Box 1908, Water-bury, Conn.
  TIEFLEX, INC., 500 Frelinghuysen Ave., Newark F. M. SEE ADV. 9231

- bury, Conn.
  TITEFLEX, INC., 500 Frelinghuysen Ave., Newark
  5, N. J. SEE ADV. PG. 231.
  Waveguide Mfg. & Equipment Co., Inc., 190-A
  Duane St., New York, N. Y.

#### WAXES

See Insulating Compounds

#### WEDGES-Wood Slot

- B-P Specialties Works, Third National Bldg.,
- B-P Speciaties Works, Tintu Tuttonii Dagi, Dayton 2, Ohio
   INSULATION MFRS. CORP., 565 W. Washington Blvd., Chicago 6, Ill. SEE ADV. PG. 137.
   MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. SEE ADV. PG. 54

#### WELDERS-Electronic Controlled

- DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y. Progressive Welder Co., 3050 E. Outer Dr., De-troit. Mich.
- Mich.
- troit, Mich. RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. SEE ADV. PG. 55. Sciaky Bros., 4915 W. 67th St., Chicago 38,
- TH Sheffield Corp., The, Dayton 1, Ohio Vangtronic Corp., The, 237 John St., Bridgeport
- 3, Conn.

## WINDING MACHINES, COIL

See Coil Winding Machines

#### WIRE—Aluminum

- Aluminum Co. of America, Gulf Bldg., Pittsburgh,
- Pa. Hazard Insulated Wire Works Div., The, Okonite
- Co., Wilkes Barre, Pa. North American Philips Co., Inc., 100 E. 42nd St. New York 17, N. Y.

Permanente Products Co., Inc., 1924 Broadway,

1949-1950 DIRECTORY of

Oakland 12, Calif. U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.

#### WIRE—Annunciator

Alpha Wire Corp., 50 Howard St., New York,

- Alpha Wire Corp., 50 Howard St., New York, N. Y.
  American Electric Cable Co., Holyoke, Mass.
  American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
  Birnbach Radio Co. Inc., 145 Hudson St., New York, N. Y.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24.
  Diamond Wire & Cable Corp., Haverstraw, N. Y.
  Goldmark Wire Co., James, The, 75 Murray St., New York 7, N. Y.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Plastie Wire & Cable Corp., Jewett City, Conn.
  Plastiod Corp., 10 Mill Rd., Hamburg, N. J.
  Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif.

#### WIRE—Antenna

Acme Wire Co., New Haven 14, Conn. Alloy Metal Wire Co., Prospect Pk. (Moore Sta.), Pa. Alpha Wire Corp., 50 Howard St., New York,

Alpha Wire Corp., 50 Howard St., New York, N. Y.
American Electric Cable Co., Holyoke, Mass.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Belden Mig. Co., 4647 W. Van Buren St., Chicago 44, Ill.
Birnbach Radio Co., Inc., 145 Hudson St., New York N. Y.

birnback Radio Co., Inc., 145 Hudson St., New York, N. Y.
Brach Mfg. Co., L. S., 200 Central Ave., New-ark, N. J.
BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
Dielectric Materials Co., 5315-17 N. Ravens-wood Ave., Chicago 40, Ill.
Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind.
FEDERAL TELEPHONE AND RADIO CORP., 100

Ind.
 FEDERAL TELEPHONE AND RADIO CORP., 100
 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
 Federal Wire & Cable Corp., Haverstraw, N. Y.
 Flexo Wire Co., Inc., 70 W. First St., Oswego, N. Y.

General Cable Corp., 420 Lexington Ave., New

General Cable Corp., 420 Lexington Ave., New York, N. Y.
HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
Johnson Co., E. F., Waseca, Minn.
New England Electrical Works, Inc., Lisbon, N. H.
Phale Plastics Corp. 25 Foster St., Worcester St.

Phalo Plastics Corp., 25 Foster St., Worcester 8,

Phalo Plastics Corp., 25 Foster St., Worcester S, Mass.
Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
Plastic Wire & Cable Corp., Jewett City, Conn.
Plastoid Corp., 10 Mill Rd., Hamburg, N. J.
Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
Technical Appliance Corp., Sherbourne, N. Y.
Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

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## **ELECTRONIC** and **ALLIED PRODUCTS**

#### WIRE—Asbestos Insulated

- Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn. Alpha Wire Corp., 50 Howard St., New York, N. Y.
- N. 1.
   American Steel & Wire Co., U. S. Steel Corp.
   Subs., Rockefeller Bldg., Cleveland 13, Ohio
   Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
   Boston Insulated Wire & Cable Co., 63 Bay St., Party 25 March
- Boston 25, Mass. Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
- Colicego 30, 10. Coliver Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, 10. Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. J.

- Cords Ltd., 180 Freingnuysen Ave., Newark o, N. J.
  Cossor (Canada), Ltd., 301-301 Windsor St., Halifax, N. S., Canada
  Diamond Wire & Cable Co., Sycamore, Ill.
  Federal Wire & Cable Corp., Haverstraw, N. Y.
  General Cable Corp., 420 Lexington Ave., New York, N. Y.
  GENERAL ELECTRIC CO., Construction Materials Dept., Bridgeport, Conn. SEE ADV. PGS. 5-18.
  Inductive Equipment Co., Gettysburg, Pa.
  Okonite Co., Canal St., Passaic, N. J.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
  Rockbestos Products Corp., 308 Nicoll St., New Haven 4, Conn.
  U. S. Rubber Co., Mechanical Goods Div., 1230

- U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y. Western Insulated Wire Co., 1001 E. 62nd St., Local America J. Coll.
- Los Angeles 1, Calif.

#### WIRE—Ceramic Insulated

- Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Sprague Electric Co., North Adams, Mass.

## WIRE-Copper

- Alpha Wire Corp., 50 Howard St., New York, N. Y.

- N. Y. American Brass Co., Waterbury 88, Conn. American Electric Cable Co., Holyoke, Mass. American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bidg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. Birnbach Radio Co., Inc., 145 Hudson St., New York M. Y.
- York, N. Y. Carol Cable Co., 190 Middle St., Pawtucket, R. I. Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, 11. Cords Ltd., 780 Frelinghuysen Ave., Newark 5,
- CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24. Diamond Wire & Cable Co., Sycamore, Ill. Electric Auto-Lite Co., The, Toledo 1, Ohio Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind
- Ind.
- Federal Wire & Cable Corp., Haverstraw, N. Y. Flexo Wire Co., Inc., 70 W. First\_St., Oswego, N. Y.
- Flexo Wire Co., Inc., 70 W. First St., Oswego, N. Y.
  General Cable Corp., 420 Lexington Ave., New York, N. Y.
  Goldmark Wire Co., James, 75 Murray St., New York 7, N. Y.
  HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Nonotuck Mfg. Co., Holvoke, 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.
  Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
  Robeling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
  ROME CABLE CORP., 330 Ridge St., Rome, N. Y.

- Trenton 2, N. J. ROME CABLE CORP., 330 Ridge St., Rome, N. Y.
- SEE ADY. PG. 38.

ELECTRONICS BUYERS' GUIDE - June, 1949 - MID-MONTH

- WIRE-Copper Insulated
- Accurate Insulated Wire Corp., 25 Fox St., New
- Haven, Conn. Acme Wire Co., New Haven 14, Conn. Alden Products Co., 117 No. Main St., Brockton
- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- N. Y. American Electric Cable Co., Holyoke, Mass. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. Ansonia Electrical Co., 63 Main St., Ansonia, Con.

- Birnbach Radio Co., Inc., 145 Hudson St., New
- York, N. Y. Boston Insulated Wire & Cable Co., 63 Bay St.,

- Boston Insulated Wire & Cable Co., 05 Bay St., Boston 25, Mass. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93. Carol Cable Co., 190 Middle St., Pawtucket, R. I. Chase Brass & Copper Co., Inc., Waterbury 91, Conn. Collyer Insulated Wire Co., 249 Roosevelt Ave.,
- Pawtucket, R. I. Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
- Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Cords Ltd., 780 Frelinghuysen Ave., Newark 5,
- N. J. CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24. Diamond Wire & Cable Co., Sycamore, Ill. Dielectric Materials Co., 5315-17 N. Ravens-wood Ave., Chicago 40, Ill. Electric Auto-Lite Co., The, Toledo 1, Ohio Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind.

- Federal Wire & Cable Corp., Haverstraw, N. Y. General Cable Corp., 420 Lexington Ave., New York, N. Y.

- General Corb., 420 Lexington Ave., New York, N. Y.
  GENERAL ELECTRIC CO., Construction Materials Dept., Bridgeport, Conn. SEE ADV. PGS. 5-18.
  General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
  Goldmark Wire Co., James, 75 Murray St., New York 7, N. Y.
  Hazard Insulated Wire Works Div., The, Okonite Co., Wilkes-Barre, Pa.
  HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
  Inductive Equipment Co., Gettysburg, Pa.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
  Lowell Insulated Wire Co., 171 Lincoln St., Lowell, Mass.
- Mass. New England Electrical Works, Inc., Lisbon, N. H.
- New England Electrical Works, Inc., Lisbon, N. H. North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. Okonite Co., Canal St., Passaic, N. J. Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass
- Mass.
- Mass. Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Plastic Wire & Cable Corp., Jewett City, Conn. Plastoid Corp., 10 Mill Rd., Hamburg, N. J. Rhode Island Insulation Wire Co., Inc., 50 Burn-ham Aug. Constian B. J.

- ham Ave., Cranston, R. I. Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
- ROME CABLE CORP., 330 Ridge St., Rome, N. Y.
- ROME CABLE CORP., 330 Ridge St., Rome, N. Y. SEE ADV. PG. 38.
  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 10. Mass
- 10. Mass.
- 10, Mass.
  Tensolite Corp., Thc, 17 E. 42nd St., New York
  17, N. Y.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
  Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif.
  Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn
- Conn
- Whitaker Cable Corp., Kansas City 16, Mo. Whitney Blake Co., New Haven, Conn.

#### WIRE-Enameled

- Acme Wire Co., New Haven 14, Conn. Alpha Wire Corp., 50 Howard St., New York,

WIRE

- Alpha Wire Corp., 50 Active Co., U. S. Steel Corp. N. Y.
  American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio
  Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
  Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
- York, N. Y. Chase Brass & Copper Co., Inc., Waterbury 91, Conn.
- Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Driver Co., Wilbur B., 150 Riverside Ave., New-ark, N. J.
- ark, N. J. DRIVER-HARRIS CO., 201 Middlesex St., Har-rison, N. J. SEE ADV. PG. 43. Electric Auto-Lite Co., The, Toledo 1, Ohio Essex Wire Corp., 1601 Wall St., Ft. Wayne 6,

Ind.
General Cable Corp., 420 Lexington Ave., New York, N. Y.
Goldmark Wire Co., James, 75 Murray St., New York 7, N. Y.
HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
Inductive Equipment Co., Gettysburg, Pa. Johnson Co., E. F., Waseca, Minn.
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

tuck, Conn.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
National Molding Co., 2141 W. Washington Blvd., Los Angeles 7, Calif.
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.
Rea Magnet Wire Co., E. Pontiac St., Fort Wayne, Ind.

Rea Magnet Wire Co., E. Wayne, Ind. Wayne, Ind. Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J. Trenton 2, N. J.

Alpha Wire Corp., 50 Howard St., New York, N. Y. American Electric Cable Co., Holyoke, Mass. Boston Insulated Wire & Cable Co., 63 Bay St.,

Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass. Callite Tungsten Corp., 540 39th St., Union City, N. J. Cohn Corp., Sigmund, 44 Gold St., New York, N. Y.

Flexo Wire Co., Inc., 70 W. First St., Oswego, N. Y.

N. Y. Goldmark Wire Co., James, 75 Murray St., New York 7, N. Y. Grammes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa. HAYDU BROS., Plainfield, N. J. SEE ADV. PG.

Dog.
 WINE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
 MAKEPEACE CO., D. E., Attleboro, Mass. SEE

New England Electrical Works Inc., Lisbon, N. H.

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. Plastic Wire & Cable Corp., Jewett City, Conn. Secon Metals Corp., 228 E. 45th St., New York 17, N. Y.

17, N. Y.
Shefico Mfg. Co., 116 W. Ruby Ave., Palisades Park, N. J.
Wickwire Spencer Steel Div., The, Colorado Fuel and Iron Corp., The, 500 Fifth Avenue, New York 18, N. Y.
Wilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

Acme Wire Co., New Haven 14, Conn. Alden Products Co., 117 No. Main St., Brockton 64, Mass.

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ADV. PG. 84.

WIRE-Glass Insulated

WIRE—Fine Wire Specialties

## WIRE

- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- N. Y.
  American Electric Cable Co., Holyoke, Mass.
  American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio
  Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
  Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass.
  BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
  Chase Brass & Copper Co., Inc., Waterbury 91, Conn.

- Conn.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  Diamond Wire & Cable Co., Sycamore, Ill.
  Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
  DRIVER HARRIS CO., 201 Middlesex St., Harrison, N. J. SEE ADV. PG. 43.
  Electric Auto-Lite Co., The, Toledo 1, Ohio
  Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind.

- Ind
- Federal Wire & Cable Corp., Haverstraw, N. Y. General Cable Corp., 420 Lexington Ave., New York, N. Y.
- York, N. Y.
  GENERAL ELECTRIC CO., Construction Materials Dept., Bridgeport, Conn. SEE ADV. PGS. 5-18.
  HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
  Okonite Co., Canal St., Passaic, N. J.
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
  Plastoid Corp., 10 Mill Rd., Hamburg, N. J.
  Rockbestos Products Corp., 308 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.
  SEE ADV. PG. 38.

- SEE ADV. PG. 38. Surprenant Mfg. Co., 199 Washington St., Boston
- 10, Mass.
- 10, Mass. Varlex Corp., N. Jay St., Rome, N. Y. Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif. Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn.

#### WIRE-Guy

- Alpha Wire Corp., 50 Howard St., New York 13,
- N. 1.
  American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
  Brach Mfg. Co., L. S., 200 Central Ave., Newark, N. J.
- NJ
- N. J.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, 11.
  CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24.
  Flexo Wire Co., Inc., 70 W. First St., Oswego, N. Y.
- House of Television, 601 W. 26th St., New York, N. Y. Indiana Steel & Wire Co., 700 S. Council St.,
- Muncie, Ind.
- Lowell Insulated Wire Co., 171 Lincoln St., Lowell, Mass.
- Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J. Wickwire Spencer Steel Div., The Colorado Fuel & Iron Corp., 500 Fifth Ave., New York 18, N. Y.

#### WIRE-Hookup

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- Accurate Insulated Wire Corp., 25 Fox St., New Alden Products Corp., 20 Fox St., New Haven, Conn. Alden Products Co., 117 No. Main St., Brockton 64, Mass. Alpha Wire Corp., 50 Howard St., New York, N. Y.

- N. Y.
   American Electric Cable Co., Holyoke, Mass.
   AMERICAN PHENOLIC CORP., 1830 S. 54th
   Ave., Chicago 54, Ill. SEE ADV. PG. 167.
   Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

- Ansonia Electrical Co., 63 Main St., Ansonia, Conn. Belden Mfg. Co., 4647 W. Van Buren St., Chi-
- cago 44, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New
- Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
  Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass.
  BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
  Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
  CORNISH WIRE CO., 15 Park Row, New York 7, N. Y SEE ADV. PG. 24.

- CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24.
  Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
  Diamond Wire & Cable Co., Sycamore, III.
  Dielectric Materials Co., 5315-17 N. Ravens-wood Ave., Chicago 40, III.
  FEDERAL TELEPHONE AND RADIO CORP., 100 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
  Federal Wire & Cable Corp., Haverstraw, N. Y.
  General Cable Corp., 420 Lexington Ave., New York, N. Y.
  General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

- General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. New England Electrical Works, Inc., Lisbon, N. H.
- Phalo Plastics Corp., 25 Foster St., Worcester 8,
- Mass. Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y. Philadelphia Insulated Wire Co., 220 N. 3rd St.,
- Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa. Plastic Wire & Cable Corp., Jewett City, Conn. Plastoid Corp., 10 Mill Rd., Hamburg, N. J. Rhode Island Insulated Wire Co., Inc., 50 Burn-ham Ave., Cranston, R. I. Rockbestos Products Corp., 308 Nicoll St., New Haven & Conn
- Haven 4, Conn. ROME CABLE CORP., 330 Ridge St., Rome, N. Y.

- ROME CABLE CORP., 330 Ridge St., Rome, N. Y. SEE ADV. PG. 38.
  Surprenant Mig. Co., 199 Washington Street, Boston 10, Mass.
  Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y.
  U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.

#### WIRE-Litz

- Anaconda Wire & Cable Co., 25 Broadway, New
- Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. Belden Mfg. Co., 4647 W. Van Buren St., Chi-cago 44, Ill. Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Essex Wire Corp., 1601 Wall St., Ft. Wayne
- 6. Ind. General Cable Corp., 420 Lexington Ave., New
- York, N. Y. Guthman, Inc., Edwin I., 15 S. Throop St., Chi-
- Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, Ill.
  HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
  Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
  Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
  New England Electrical Works, Inc., Lisbon, N. H.
  Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.

- Philadelphia, Pa. Ross Mfg. Co., 860 Washington St., Burlington,
- 10wa STEVENS MFG. CO., INC., GEO., 1850 Henderson St., Chicago, Ill. SEE ADV. PG. 232. Stevens Wire Insulating Co., 462 N. Parkside Ave., Chicago 44, Ill. Wheeler Insulated Wire Co., Inc., Waterbury 91, Com
- Conn.

#### WIRE-Magnet

- Acme Wire Co., New Haven 14, Conn.
  Alpha Wire Corp., 50 Howard St., New York, N. Y.
  American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio

- 1949-1950 DIRECTORY of
  - Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. Belden Mfg. Co., 4647 W. Van Buren St., Chi-cago 44, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.

  - Chase Brass & Copper Co., Inc., Waterbury 91,
  - Conn.

  - Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Electric Auto-Lite Co., The, Toledo 1, Ohio Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind.
  - General Cable Corp., 420 Lexington Ave., New Vork N
  - York, N. Y. GENERAL ELECTRIC CO., Construction Materials Dept., Bridgeport, Conn. SEE ADV. PGS. 5-18. Goldmark Wire Co., James, 75 Murray St., New York 7, N. Y. Guthman, Inc., Edwin I., 15 S. Throop St., Chi-
  - York Guthman, I 1990, Ill.

  - cago, Ill. HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202. Inductive Equipment Co., Gettysburg, Pa. Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. New England Electrical Works, Inc., Lisbon, N. H. North American Philips Co. Inc., 100 East 42nd

  - North American Philips Co., Inc., 100 East 42nd St. New York 17 N. Y North American Philips Co., Inc., 100 East 42114
    St., New York 17, N. Y.
    Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
    Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.

  - Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind. Rockbestos Products Corp., 308 Nicoll St., New
  - Rockbestos Products Corp., 308 Michi 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. SEE ADV. PG. 38.
    Ross Mfg. Co., 860 Washington St., Burlington, Lowa

Wheeler Insulated Wire Co., Inc., Waterbury 91,

Callite Tungsten Corp., 540 39th St., Union City,

Cleveland Tungsten, Inc., 10200 Meech Ave.,

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

Alloy Metal Wire Co., Prospect Pk. (Moore Sta.),

Callite Tungsten Corp., 540 39th St., Union City,

N. J. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149. J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112. Wilson Co., H. A., The, 105 Chestnut St., New-ark 5, N. J.

Alpha Wire Corp., 50 Howard St., New York,

American Brass Co., Waterbury 88, Conn. American Electric Cable Co., Holyoke, Mass. Birnbach Radio Co., Inc., 145 Hudson St., New

York, N. Y. Callite Tungsten Corp., 540 39th St., Union City, N. J.

Chase Brass and Copper Co., Inc., Waterbury 91,

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Flexo Wire Co., Inc., 70 W. First St., Oswego, N. Y.

General Cable Corp., 420 Lexington Ave., New York, N. Y.

2200

Lowa

Conn.

N. J.

Cleveland,

PG. 29.

Υ N.

WIRE—Molybdenum

New York 17, N.

Ohio

WIRE—Nickel Clad Copper

WIRE—Phosphor Bronze

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**ELECTRONIC** and **ALLIED PRODUCTS** 

HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
Little Falls Alloys, Inc., 189 Caldwell Ave., Paterson 1, N. J.
Phosphor Bronze Corp., 2200 Washington Ave., Philadelphia 46, Pa.
Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
Riverside Metal Co., Riverside, N. J.

#### WIRE—Plastic Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.

Alden Products Co., 117 No. Main St., Brock-ton 64, Mass.

Alpha Wire Corp., 50 Howard St., New York, N. Y.

N. Y. American Electric Cable Co., Holyoke, Mass. AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. SEE ADV. PG. 167. American Steel & Wire Co., U. S. Steel Corp. Subs., Rockefeller Bldg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. ANCHOR PLASTICS CO., INC., 533-541 Canal St., New York 13, N. Y. SEE ADV. PG. 200. Ansonia Electrical Co., 63 Main St., Ansonia, Com.

Conn.

Belden Mfg. Co., 4647 W. Van Buren St., Chi-cago 44, Ill.

Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y. Boston Insulated Wire & Cable Co., 63 Bay St.,

Boston Insulated wife & Cable Co., 65 Bay St., Boston 25, Mass.
BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.
Carol Cable Co., 190 Middle St., Pawtucket, R. I.
Collyer Insulated Wire Co., 249 Roosevelt Ave., Pautucket P.

Collyer Insulated Wire Co., 249 Roosevelt Ave., Pavtucket, R. I.
Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Cords, Ltd., 780 Frelinghuysen Ave., Newark 5, N. J.

N. J.
CORNISH WIRE CO., 15 Park Row, New York 7,
N. Y. SEE ADV. PG. 24.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Diamond Wire & Cable Co., Sycamore, Ill.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
Electric Auto-Lite Co., Inc., Toledo 1, Ohio
Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind.

Ind.
 FEDERAL TELEPHONE AND RADIO CORP., 100
 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
 Federal Wire & Cable Corp., Haverstraw, N. Y.
 General Cable Corp., 420 Lexington Ave., New York, N. Y.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. Hazard Insulated Wire Works Div., The, Okonite Co. William Baran Rev. 2007

- Hazard Insulated wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
  HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
  J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
  Lowell Insulated Wire Co., 171 Lincoln St., Lowell Mass

Lowell Insulated with Co., 111 Busice Blud, Lowell, Mass.
 National Molding Co., 2141 W. Washington Blud., Los Angeles 7, Calif.
 Okonite Co., Canal St., Passaic, N. J.
 Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass.

Mass. 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., 10 Mill Rd., Hamburg, N. J.
Rhode Island Insulated Wire Co., Inc., 50 Burnham Ave., Cranston, R. I.
Rockbestos Products Corp., 308 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. SEE ADV. PG. 38.

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Simplex Wire & Cable Co., 79 Sidney St., Cam-

Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
Sprague Electric Co., North Adams, Mass.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England
Surprenant Mfg. Co., 199 Washington St., Boston 10, Mass.
Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y.
U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y.
Whitney Blake Co., New Haven, Conn.

#### WIRE—Platinum

Cohn Corp., Sigmund, 44 Gold St., New York,

N. Y.
 GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG. 149.
 Goldsmith Bros. Smelting & Refining Co., 109
 N. Wabash Ave., Chicago, Ill.
 NEY CO., J. M., 179 Elm St., Hartford; Conn. SEE ADV. PG. 56.
 Bichards Co., Ing. Action. S. 78 World Action Sciences

Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass. Secon Metals Corp., 228 E. 45th St., New York 17, N. Y.

Thwing-Albert Instrument Co., 5351 Pulaski

Ave, Philadelphia 44, Pa.
 Tricon Mfg. Co., 8318 S. Racine Ave., Chicago, Ill.
 Wildberg Bros. Smelting & Refining Co., 742
 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

#### WIRE—Resistance and Filament

Alden Products Co., 117 No. Main St., Brockton 64, Mass.

Alloy Metal Wire Co., Prospect Pk. (Moore Sta.),

Cohn Corp., Sigmund, 44 Gold St., New York, N. Y.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill. Driver Co., Wilbur B., 150 Riverside Ave., New-ark, N. J.

ark, N. J. DRIVER-HARRIS CO., 201 Middlesex St., Har-rison, N. J. SEE ADV. PG. 43. Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y. EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. Goldmark Wire Co., James, 75 Murray St., New York 7, N. Y. Hoskins Mfg. Co., 4445 Lawton Ave., Detroit S. Mich.

Hoskins Mig. Co., 4440 Lawton Ave., Dettoit S. Mich.
J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. SEE ADV. PG. 102.
Legris Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.
Louis Engineering Co., 52 Rubber Ave., Nauga-

Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck, Conn.

North American Phillips Co., 100 E. 42nd St., New York 17, N. Y.
Sprague Electric Co., North Adams, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.

#### WIRE—Shielded

- Accurate Insulated Wire Corp., 25 Fox St., New
- Haven, Conn. Alpha Wire Corp., 50 Howard St., New York, N. Y.
- N. 1. American Electric Cable Co., Holyoke, Mass. American Steel & Wire Co., U. S. Steel Corp. Sub., Rockefeller Bldg., Cleveland 13, Ohio Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. Ansonia Electrical Co., 63 Main St., Ansonia, Conn
- Conn.
- Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New
- York, N. Y. Boston Insulated Wire & Cable Co., 63 Bay St.,

Boston 1.55, Mass. Boston 25, Mass. BRAND & CO., WM., 276 Fourth Ave., New York 10, N. Y. SEE ADV. PGS. 92, 93.

Carol Cable Co., 190 Middle St., Pawtucket, R. I.

Collyer Insulated Wire Co., 249 Roosevelt Ave.,

Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 15 Park Row, New York 7, N. Y. SEE ADV. PG. 24.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada
Diamond Wire & Cable Co., Sycamore, Ill.
Dielectric Materials Co., 5315-17 N. Ravens-wood Ave., Chicago 40, Ill.
Elliot Mfg. Co., 218 Prospect Ave., Bingham-ton, N. Y.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

FEDERAL TELEPHONE AND RADIO CORP., 100
 Kingsland Rd., Clifton, N. J. SEE ADV. PGS. 129, 131, 133, 135.
 Federal Wire & Cable Corp., Haverstraw, N. Y.
 General Cable Corp., 420 Lexington Ave., New York, N. Y.

York, N. Y.
GENERAL ELECTRIC CO., Construction Materials Dept., Bridgeport, Conn. SEE ADV. PGS. 5-18.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
J. F. D. MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. SEE ADV. PG. 112.
Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck, Conn.

New En N. H. England Electrical Works., Inc., Lisbon,

Okonite Co., Canal St., Passaic, N. J. Phalo Plastics Corp., 25 Foster St., Worces-ter 8, Mass.

Phelps Dodge Copper Products Corp., 40 Wall St.,

New York 5, N. Y. Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
Plastoid Corp., 10 Mill Rd., Hamburg, N. J.
Precision Tube Co., Inc., 3828 Terrace St., Phi-ladelphia 28, Pa.
Rome Cable Corp., 330 Ridge St., Rome, N. Y.
Simplex Wire & Cable Co., 79 Sidney St., Cam-bridge 39, Mass.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
Surprenant Mfg. Co., 199 Washington St., Boston 10, Mass.

Mass.
 Tensolite Corp., The, 17 E. 42nd St., New York 17, N. Y.
 Uniform Tubes, Shurs Lane & Lauriston St., Roxborough, Phila., Pa.
 Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif.
 Whitney Blake Co., New Haven, Conn.

Cohn Corp., Sigmund, 44 Gold St., New York,

Flexo Wire Co., Inc., 70 W. First St., Oswego,

N. Y. GENERAL PLATE DIV., Metals & Controls Corp., Attleboro, Mass. SEE ADV. PG, 149, HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG, 202. Little Falls Alloys, Inc., 189 Caldwell Ave., Pater-son J. N. J.

MAKEPEACE CO., D. E., Attleboro, Mass. SEE

ADV. PG. 84.
 North American Philips Co., 100 E. 42nd St., New York 17, N. Y.
 Wilson Co., H. A., The, 105 Chestnut St., Newark 5, N. J.

Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa. Alloy Metal Wire Co., Prospect Pk. (Moore Sta.),

American Steel & Wire Co., U. S. Steel Corp., Subs., Rockefeller Bldg., Cleveland 13, Ohio Carpenter Steel Co., The, 142 West Bern St., Deuting Deutscher St.,

Reading, Pa. Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N. Y. Driver Co., Wilbur B., 150 Riverside Ave., New-ark, N. J.

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WIRE—Silver Plated

WIRE—Stainless Steel

Pa.

DRIVER.HARRIS CO., 201 Middlesex St., Harnison, N. J. SEE ADV. PG. 43.
Electric Auto-Lite Co., Inc., Toledo 1, Ohio
HUDSON WIRE CO., Winsted Div., Winsted, Conn. SEE ADV. PG. 202.
North American Philips Co., Inc., 100 E 42nd St., New York 17, N. Y.
Republic Steel Corp., Republic Building, Cleveland 1, Ohio

1. Ohio

#### WIRE—Tungsten

Callite Tungsten Corp., 540 39th St., Union City, N. J. Cleveland Tungsten, Inc., 10200 Meech Ave.,

Cleveland Tungstein, Inc., Toboo Arten, Inc., Cleveland, Ohio EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. SEE ADV. PG. 128. FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. SEE ADV.

PG. 29. Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.

- 25, N. Y. North American Phillips Co., 100 E. 42nd St., New York 17, N. Y. RADIO CORP. OF AMERICA, RCA Victor Div., Front & Cooper Sts., Camden, N. J. SEE ADV. PGS. 197, Inside Back and Back Covers. SYLVANIA ELECTRIC PRODUCTS, INC., 500 5th Ave., New York 18, N. Y. SEE ADV. PGS. 240-244.
- WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### WIRE RECORDER ASSEMBLIES

Air King Products Co., Inc., 170 53rd St., Brook-lyn, N. Y.

Aurex Corp., 1117 N. Franklin St., Chicago, Ill.
AVIOMETER DIV. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y. SEE ADV. PG. 206.
BRUSH DEVELOPMENT CO., THE, 3405 Perkins Ave., Cleveland 14, Ohio. SEE ADV. PGS. 168, 169.

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Electronic Systems Co., 201 N. Wells Ave., Chi-cago 1, Ill.

Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Lear. Mich

Magnecord, Inc., 360 N. Michigan Ave., Chicago

Magnecord, Inc., 500 IV. Intelligent Prop. 1, Ill. Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa. Precision Audio Products, Inc., 1133 Broadway, New York 10, N. Y. Rowe Industries, 1702 Wayne St., Toledo 9, Obio

Ohio

#### WOOFERS

See Loudspeakers

#### X-RAY EQUIPMENT-Industrial

Central Research Laboratories, Inc., Red Wing, Minn.

- Minn. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. du Pont de Nemours & Co., Inc., E. I., Wilming-ton 98, Del. General Electric X-Ray Corp., 4855 W. McGeoch Ave., Milwaukee, Wis. High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass. North American Philips Co., Inc., 100 E. 42nd St. New York 17, N. Y.

St., New York 17, N. Y.

Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
Peerless X.Ray Labs. & Mig. Corp., 467 10th Ave., New York 18, N. Y.
Picker X.Ray Corp., 300 Fourth Ave., New York 10, N. Y.
St. John X.Ray Laboratory, Califon, N. J.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Triplett & Barton, Inc 831 N. Lake St., Burbank, Calif.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SEE ADV. PGS. 66, 67.

#### X-RAY EQUIPMENT-Medical

X-RAY EQUIPMENT—Medical
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
General Electric X-Ray Corp., 4855 W. McGeoch Ave., Milwaukee, Wis.
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
Liebel-Flarsheim Co., 303 W. Third St., Cincinnati 2, Ohio
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
Peerless X-Ray Labs. & Mfg. Corp., 467 10th Ave., New York 18, N. Y.
Picker X-Ray Corp., 300 Fourth Ave., New York 10, N. Y.
Radiation Counter Laboratories, Inc., 1844 West 21st St., Chicago 8, Ill.

Radiation Counter Laboration (1997)
 21st St., Chicago 8, Ill.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. SE ADV. PGS. 66, 67.

# TRADE NAME INDEX

The following list, provided by manufacturers, comprises the registered trade names of products in or related to the electronic field. It is intended for use in determining the manufacturer's name when only a trade name is known. Addresses can be obtained by referring to the Manufacturers Index on page D-191.

Only coined trade names are listed, as it was deemed unnecessary to include a company name, even though it was a registered trade name, inasmuch as the manufacturer's identity was immediately apparent.

ADVANCE

"A" NICKEL International Nickel Co., Inc. A & A Electricoil Coil Winding Co. ACA Amplifier Corp. of America ACCWIRE Accurate Insulated Wire Corp. AC-2 Automatic Signal Div Eastern Industries, Inc. American Hard Rubber Co. Crosley Corp. ACME-MOLD Acme Wire Co. ACOUSTEEL The Celotex Corp. ACOUSTICEL Brush Development Co. ACOUSTIFIBRE National Gypsum Co. ACOUSTI-CELOTEX The Celotex Corp. ACOUSTIMETAL National Gypsum Co. ACOUSTONE ACOUSTONE United States Gypsum Co. ACRAWAX C Glyco Products Co., Inc. ACROCEL Acromark Co. ACROCUT Acromark Co. ACRO-ETCH Acromark Co. ACROGRAVE Acromark Co. ACROFLEX Anchor Plastics Co., Inc. ACRO-INK Acromark Co Acromark Co. ACRO PLAC Acromark Co. ACRO-PRINTER Acromark Co. ACROSNAP Acro Electric Co. ACROSOUND Acro Products Co. ACROTOOL Acromark Co. ACROVISION Acro Products Co. ACRYWELD ACRYWELD American Phenolic Corp. ACRYLOID Rohm & Haas Co. ACTIVAPOR Airadio Inc. ACTRON Radionic Transformer Co. ADAPTORS ABC Radio Labs ABC Radio Labs ADC Audio Development Co. ADJUSTOHM Ward Leonard Electric Co. ADJUST-A-CONE Quam Nichols Co. ADJUST-A-VOLT Standard Electrical Products Co. ADLAKE Adams & Westlake Co.

Driver-Harris Co. AECO American Elec. Cable Co. AERIOTRON Westinghouse Electric Corp. AEROCOM Aeronautical Communications Equipment Co. AERO COMMUNICATION Erie Radio Labs., Inc. AERO-GUN Shalleross Mfg. Co. AEROLENE Aerovox Corp. AERO-MAGNETTE Heinemann Electric Co. "AERONAUT" PRODUCTS Aeronautical Radio Mfg. Co. AEROPOINT Aero Needle Co. AERO SEAL Breeze Corpns., Inc. AERO-THREAD Aircraft Screw Products Co., Inc. AEROTROL Cook Electric Co. AGASTAT American Gas Accumulator Co. AGWADAG Acheson Colloids Corp. AICO American Insulator Corp. AIDEX Aldine Paper Co., Inc. AIDRITE Aldine Paper Co., Inc., AIRACOUSTIC Johns-Manville Sales Corp. AIR-CHAMP E. A. M. Corp., The AIRCO Air Reduction Sales Co. AIR-COM Aeromotive Equipment Corp. AIRCORE Communication Products Co., Inc. Electronic Specialty Co. AIR INDUCTORS Barker & Williamson AIR-LOOP Franklin Mfg. Corp., A. W. AIR-O-LINE Brown Instrument Co. AIR-RAY AJAX Sherwin-Williams Co. AKRA-OHM Shallcross Mfg. Co. Pass & Seymour, Inc. Aluminum Company of America ALCROHM Magnetic Metals Co. ALDEX Aldine Paper Co. ALECO American Lens Co., Inc. ALFERON Driver-Harris Co. ALGCO Auburn Manufacturing Co. ALL-HYDRAULIC Hydraulic Press Mfg. Co.

"ALL-RELAY" North Electric Mfg. Co. ALL-WEATHER RADIOGUIDE Radio Navigational Instrument Corp. ALMET ALME I Alloy Metal Wire Co. ALNOR Illinois Testing Labs., Inc. ALPHATRON Alpha Laboratories ALPHATRON National Research Corp. ALPO Standard Varnish Works ALRAY Alloy Metal Wire Co. ALROK Aluminum Co. of America Automatic Switch Co. ALSILOY Doehler-Jarvis Corp. ALSIMAG American Lava Corp. ALUMATREET Farrelloy Co. ALUMAWELD Johnson Mfg. Co., Inc. ALUMILITE Aluminum Co. of America ALUMON Enthone, Inc. ALUMOX Enthone, Inc. ALZAK Aluminum Co. of America AMINCO American Instrument Co. ALUMINUM OILITE Amplex Div. Chrysler Corp. ALUNDUM Norton Co. AMAR-FLUX Ensign Industries, Inc. AMARON Ensign Industries, Inc. AMAR-WELD Ensign Industries, Inc. AMBERLITE Rohm & Haas Co. AMBEROL Rohm & Haas Co. AMBERYL Vaco Products Co. AMCO American Solder & Flux Co. AMCON American Condenser Co. AMECO American Electronics Corp. AMERBESTOS American Steel & Wire Co., U. S. Steel Corp., Sub. AMERCLAD American Steel & Wire Co., U. S. Steel Corp., Sub. AMERFLEX AMERFLEX Marco Industries AMERFLEX Searle Aero Industries, Inc. AMERGLASS American Steel & Wire Co. U. S. Steels Corp., Sub. AMERICAN Manning, Maxwell & Moore, Inc.

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AMERICAN BEAUTY American Electrical Heater Co. AMERICAN BRAND AMERICAN BRAND Snyder Mfg. Co. AMERICAN ELECTRIC The Kelley-Koet Mfg. Co., Inc. AMERICAN-PHILLIPS American Screw Co. AMERINE American Insulator Corp. AMERITE RESINS American Resinous Chemical Co. AMEROID American Plastics Corp. AMERSTRAND American Steel & Wire Co., U. S. Steel Corp., Sub. AMERTRAN American Transformer Co. AMINCO American Instrument Co. AMMOGAS Westinghouse Electric Corp. General Cement Mfg. Co. AMOIL American Condenser Co. AMPACET American Molding Powder & Chemical Corp. AMPEC Centralab Div. Globe Union, Inc. AMPHENOL American Phenolic Corp. AMPLICALL Rauland-Borg Corp. AMPLIMUSE Crystal Research Labs., Inc. AMPLIPHONE Eastern Electronics Corp. AMPLISET Bristol Co., The Walco Sales Co. AMPLITUBE Eastern Amplifier Corp. AMPLUG Electrodyne Co. AMPTROL Friez Instrument Div. Bendix Aviation Corp. AMPYROL American Steel & Wire Co., U. S. Steel Corp. Sub. AMRAD Crosley Corp. AMRECON American Relay & Controls, Inc. American Steel & Wire Co., U. S. Steel Corp. Sub. ANACONDA American Brass Co. ANADEL Joseph Dixon Crucible Co. "ANCO" Automatic Nut Co., Inc. AN-COR-LOL Laminated Shim Co., Inc. ANKOSEAL Ansonia Electrical Co. ANNOUNC-O-RAY Detect-O-Ray Co. ANTELCO Automatic Electric Co. ANTEN-A-CATOR Gordon Specialties Co., ANTI LINK American Nut & Bolt Fastener Co. Sorensen & Co. APECO American Photocopy Equipment Co. APELCO Applied Electronic Corp. APIMELA Cantol Wax Products Co. APW American Platinum Works. AQUADAG Acheson Colloids Corp. AQUALITE National Vulcanized Fibre Co. AQUALUX Westinghouse Electric Corp. AQUA-NIL Standard Electrical Products Co. AQUAPLATE Bache & Co., Semon AQUIFLUX Special Chemicals Co.

ARCHO Amalgamated Radio Television Corp. ARCOZON Arco Co. ARC-RITE Mellaphone Corp. ARCTURUS Standard Arcturus Corp. ARISTA Coronet Radio & Television Corp. ARKLESS Economy Fuse & Mfg. Co. ARL Applied Research Labs. ARLAB Radionic Transformer Co. ARLAVOX Radionic Transformer Co. ARMITE Spaulding Fibre Co., Inc. ARRAZIN Hood Rubber Co. ARRESTONE Armstrong Cork Co. ARVIN Noblitt Sparks Industries ASBESTOPAK Felt Products Mfg. Co. Automatic Switch Co. ASHCROFT Manning, Maxwell & Moore, Inc. ATC Automatic Temperature Control Co., Inc. ATCOTRAN Automatic Temperature Control Co., Inc. ATOMEER Maico Co., Inc. American Television & Radio Co. AUBESTON Auburn Manufacturing Co. AUDAX Audak Co. Magnecord, Inc. AUDIGAGE Branson Instruments, Inc. AUDIODISCS Audio Devices, Inc. AUDITONE United States Gypsum Co. AUDIOID Cook Labs. AUDIO-LINE Audio Equipment Sales AUDIO-RULE Audio Equipment Sales AUDIOPOINTS Audio Devices, Inc. AUDIOTAPE Audio Devices, Inc. AUDITION Reeves Soundcraft Corp. AUDOGRAPH Gray Mfg. Co. AURICON AURICUN Berndt-Bach, Inc. AUROSAL Baker & Co. AUTHOTONE CHIMES Auth Elec. Specialty Co. AUTOCROMATIC Actor Co. H. W AUTO-DRVAIRE Communication Products Co., Inc. Wortightung Floring Communication Westinghouse Electric Corp. AUTOMATIC TERMINATOR Aircraft-Marine Products, Inc. AUTOMIX Westinghouse Electric Corp. AUTOPLATER Tracerlab, Inc. AUTOSCALER Tracerlab, Inc. Bristol Co., The AUTO-SONIC Vendo Co. AUTO-SYN Folio Eclipse-Pioneer Div., Bendix Aviation Corp. AUTOTROL Westinghouse Electric Corp. AUTOTUNE Collins Radio Co. AUTOVALVE Westinghouse Electric Corp. AUTRASTAT

Ward Leonard Electric Co.

AVTEX Hood Plastics, Inc. AWEBCO Anchor Webbing Co. AXIFLO Westinghouse Electric Corp. "B8" Peck & Harvey BAACH—INTERNATIONAL International Machine Works BABY-LISTENER Lyman Electronic Corp. BADGER Reliance Automatic Lighting Co. BALAC Conant Laboratories BALANCED LAG Pierce Renewable Fuses, Inc. BALLALIOR Sandwick-Bowen Corp. BANDBOX Crosley Corp. BANTAM GT Hytron Radio & Electronics Corp. BANTAM JR. Hytron Radio & Electronics Corp. BARANM Ward Leonard Elec. Co. BAR-COL Barber Colman Co. BARCOMBO Electronic Enterprises, Inc. BAREX BAREX King Laboratories, Inc. BAROHM Ward Leonard Electric Co. BARRYMOUNTS Barry Corp., The BASELINER Globe Products Corp. BASS REFLEX Jensen Radio Mfg. Co. BEACHCOMBER Lincoln Electronics Corp. BECHAMINE Reichhold Chemicals, Inc. BECKMAN National Technical Lab. BECO Brown Engineering Co. BECO Westinghouse Electric Corp. BEE Buchanan Electrical Products Corp. American Cyanamid Co. Plastics Div. BELCO Bogue Electric Co. BELFONE BELFONE Bell Sound Systems, Inc. BELFONE MESTRO Bell Sound Systems, Inc. BELL-TIME Industrial Timer Corp. BEN HAR Bentley, Harris Mfg. Co. BENELEX Masonite Corp. BEPCO Buchanan Electrical Products Corp. BERGER BERGER Republic Steel Corp. BERKELEY DECIMAL Berkeley Scientific Co. "BEST PRODUCTS" Cossor (Canada) Ltd. BESTO-WIRE Bhade Jeland Insulated Rhode Island Insulated Wire Co. BIBLETONE Bibletone Records, Inc. B.I.W. Boston Insulated Wire & Cable Co. BIMORPH Brush Development Co. BINAC Eckert-Mauchly Computer Corp. BINRACK Hall Co., Gordan L. BL Browning Laboratories, Inc. BLACK DIAMOND Dunton Co., M. W. BLUDWORTH MARINE National-Simplex-Bludworth, Inc. Marine Division BLUE BEAVER

Condenser Corp. of America. BLUE BELL

Western Electric Co., Inc.

BLUE STREAK American Electric Cable Co. BOARDMASTER Universal Drafting Machine Co. BOAS-ALLIED Allied Lab. Instrument, Inc. BOLT MAN, THE Pawtucket Mfg. Co. BONALOG Bonney Forge & Tool Works BOND Olin Industries, Inc. BONDERITE Parker Rust Proof Co. BOND-ROD Sherman Mfg. Co., H. B. BOVIE BOVIE Liebel-Flarsheim Co. BOXSEAL Paisley Products Inc. BRADLEY De Jur-Amsco Corp. BRANDES Cannon Co., C. F. BRANTRONIC Branston Electric Mfg. Co. BRAZO Linde Air Products Co. Unit of Union Carbide & Carbon Corp BREWSTER Maguire Industries BRILLIANTONE Acton Co., H. W. BRINELCO Brinnell Co., The BRISTO Bristol Co., The BROADCASTER Reeves Soundcraft Corp. BRONCO Western Insulated Wire Co. BRONCO 40 BRONCO 40 Western Insulated Wire Co. BRONCO 60 Western Insulated Wire Co. BRONZOCHROME Eutectic Welding Alloys Co. BROWN DEVIL Ohmite Mfg. Co. BRYANT Westinghours, Flucture C Westinghouse Electric Corp. BUDGET BUDGET Aircraft Marine Products Inc. BUG, THE Vibroplex Co., Inc. BUILT IN WATCHMAN Westinghouse Electric Corp. Westingnouse Electric Corp. BULLDOG Phelps Dodge Copper Products Corp. BULLS-I-UNITS Kirkland Co., H. R. BUNDYWELD Bundy Tubing Co. BUSHEND Buchanan Electrical Products Corp. BUSS BUSS Bussmann Mfg. Co. BUTACITE E. I. du Pont de Nemours Co., Inc. BUTAPRENE Firestone Tire & Rubber Co. BUTTON MICAS Frie Registra Corre Erie Resistor Corp. BUTYL Esso Standard Oil Co. B&W Barker & Williamson BUZZ-TIME Industrial Timer Corp. BYOHMETER RMS Electronics, Inc. C & C McColpin-Christie Corp. CMSZ ALLOY Electro Metallurgical Co. Unit of Union Carbide & Carbon Corp. CALLIFLEX Callite Tungsten Corp. CALLINITE Callite Tungsten Corp. CALIVOLTER Calidyne Co., The CAL LUX Callite Tungsten Corp. CALIFORNIA KILOWATT Kluge Electronics Inc. CALLMASTER Lyman Electronic Corp. CALORIA Esso Standard Oil Co.

CALORIMETER Whiteman, R. A. CAMCO Camburn, Inc. CANDOHMS Muter Co. CANNON-BALL Cannon Co., C. F. CAPACILOGS Wheelco Instruments Co. CAPACITROLS Wheelco Instruments Co. CAPE COD Submarine Signal Div. Raytheon Mfg. Co. CAPEHART Farnsworth Television & Radio Corp. Special Products Co. CARBIC Linde Air Products Co. Unit of Union Carbide & Carbon Corp. CARBOFILM Wilkor Products, Inc. CARBOLITE Linde Air Products Co. Unit of Union Carbide & Carbon Corp. CARBOMITE Continental Carbon, Inc. Continental Carbon, Inc. CARBONYL General Aniline & Film Corp. CARDAX Electro-Voice, Inc. CARDIETTE Sanborn Co. CARDIOFAX Electrofax Corp. CARDIOSCRIBE General Electric X-Ray Corp. CARDIOTRON Electro-Physical Labs., Inc. CARDYNE Electro-Voice, Inc. CARILLON DYNAMIC Miller Mfg. Co., M. A. CARTRII-DRY Pyramid Electric Co. CASCADE Audio Industries CASCADE Linde Air Products Co. Unit of Union Carbide & Carbon Corp. CASCAMITE CASCAMITE The Borden Co., Chemical Division CASCO The Borden Co., Chemical Division CASCOPHEN The Borden Co. The Borden Co., Chemical Division CASCOREZ The Borden Co., Chemical Division CASTORDAG Acheson Colloids Corp. CATABOND CATABOND Catalin Corp. of America CATAPAK Catalin Corp. of America CATAVAR Catalin Corp. of America CAT'S EYE Ess Instrument Corp. CAVALCADE Molded Insulation Co Molded Insulation Co. Aircraft Control Div. CCC CHICAGO Chicago Condenser Corp. ccŏ Bliley Electric Co. CECOTITE Cook Electric Co. CELAB CELAB Clark Electronic Labs CELASCREEN Celanese Corp. of America CELCON Celanese Corp. of America CELECTRAY Tagliabue Corp., C. J. CELLO-BOND Paisley Products, Inc. CELLUFOAM Masonite Corp. CELLULOID Celanese Corp. of America CELORON Continental Diamond Fibre Co. CENCO Central Scientific Co.

CENCO HYPERVAC Central Scientific Co. CENTRALINE Central Paper Co., Inc. CERAMICON Erie Resistor Corp. CERAMICAPS Muter Co. CEREX Monsanto Chemical Co. Plastics Div. CEROC 200 Sprague Electric Co. CETRON Continental Electric Co. CHALLENGER Division Lead Co. CHAMPION Sewell, Inc., Norman M. CHAMPION No. 180 Division Lead Co. CHANALYST Radio Corporation of America CHAN-L-MOUNT Lord Mfg. Co. CHARGALYZER McColpin-Christie Corp. CHARGOMETER Electronic Development Co. CHARGR-O-MATIC Hertner Electric Co. CHASS-EZ General Cement Mfg. Co. CHEERIO Crosley Corp. CHEMACO Koppers Co. CHEMI-GLAS Radiocrafters CHEMIGUM Goodyear Tire & Rubber Co. CHINALAK Dolph Co., John C. CHROMARFLASH Triumph Mfg. Co. CHROMAX Driver-Harris Co. CHROMEL Hoskins Mfg. Co. CHRONO-SPRAY Paragon Electric Co. CHRONOTRON Eclipse Pioneer Div. Bendix Aviation Corp. CHRONOVOX Radio Development & Research Co. Driver-Harris Co. CINAUDAGRAPH Aireon Mfg. Corp. CIMET National Lead Co. CINEMAPHONE SOS Cinema Supply Co. CIRCLE ESS Stewart Mfg. Corp., F. W. CIRCLET CIRCLET Trumbull Electric Mfg. Co. CIRCUITMASTER Fordham Mfg. Co. CIRCUTROLS Kollsman Instrument Div. of Square D Co. Alpha Wire Corp. CLAM PIPE Mueller Electric Co. CLASSIC Jensen Industries, Inc. CLASSIC POINT Eldeen Co., The CLEARSITE Economy Fuse & Mfg. Co. U. S. Television Mfg. Corp. CLETALOY Cleveland Tungsten, Inc. CLETRON Cleveland Electronics, Inc. CLEVE-TUNG Cleveland Tungsten, Inc. CLIMAX Driver-Harris Co. Ferranti Electric, Inc. СМН Chicago Metal Hose Corp.

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AXITUBE Precision Tube Co., Inc. COAXWITCH Bird Electronic Corp. COBANIC Driver Co., Wilbur B. CODUR Maas & Waldstein Co. Connecticut Hard Rubber Co. COHARDITE Connecticut Hard Rubber Co. Connecticut Hard Rubber Co. COLLARO Micro-Sonic Corp. COLONIAL Pyramid Products Co. COLORMIKE St. Louis Microphone Co. COLORTOP Trico Fuse Mfg. Co. COMCO COMCO Communications Co., Inc. COMET Driver-Harris Co. COMMULAC Martindale Electric Co. COMMUNOPHONES Bogen Co., David COMMUTATOR RESURFACERS Ideal Industries. Inc. Ideal Industries, Inc. COMPAR Goodyear Tire & Rubber Co. COMPARITOL Scherr Co., Inc., George COMPLAC Poinsettia, Inc. COMPO Bound Brook Oil-Less Bearing Co. COMPO Muter Co COMPREGNITE Borden Co., The, Chemical Div. COMTONE COMTONE Communications Co., Inc. CONCERT Jensen Industries, Inc. CONCRETITE American Resinous Chemical Co. CONDENS-O-WELD Westinghouse Electric Corp. CONDUCTALUTE Sauereisen Cements Co. Sauereisen Cements Co. CONFIDENCER Aviometer Corp. CONNECTICUT WINDER Connecticut Specialties Co. CONNSONATA Conn Ltd., C. G. CONPERNIK Westinghouse Electric Corp. CONSOWED Consolidated Water Power & Paper Co. CONTROLEX Eagle Signal Corp. CONTROL PANEL Ewart & Koch CONTROLITE Ward Langard Flor Ward Leonard Electric Co. CONVECTRON Eclipse Pioneer Div. Bendix Aviation Corp. CONVERS-0-CALL National Intercommunicating Systems COOLER-PROOF Paisley Products Inc. COOLIDGE TUBE General Electric X-Ray Corp. COPOLENE American Phenolic Corp. COPRENE Maas & Waldstein Co. COREPROOFED Magnetic Metals Co. COREX Standard Varnish Works CORKOUSTIC Armstrong Cork Co. CORONOX Westinghouse Electric Corp. COROX Westinghouse Electric Corp. CORRIB Ohmite Mfg. Co. CORULITE Premax Products Div. Chisholm-Ryder Co., Inc. CORWICO Cornish Wire Co. COSMALITE Cleveland Container Co., The

CO-SPIRAL Stephens Mfg. Corp. COTO Coto-Coil Co., Inc. COTTONITE Acme Wire Co. COUNTOMATIC Instrument Development Labs. COUPLATE Centralab Div. Globe Union Inc. COX Commercial Research Labs., Inc. CO-X Boston Insulated Wire & Cable Co. COXPROX Bradley Labs. CRAFTSMEN Radio Craftsmen, Inc. CRAPO Indiana Steel & Wire Co. CREME-0-WAX General Cement Mfg. Co. CRESCENDON Crosley Corp. CROLITE Crowley & Co., Inc., Henry L. CROLOY CROLOY Crowley & Co., Inc., Henry L. CROMALOY Linde Air Products Co. Unit of Union Carbide & Carbon Corp. CROTHANE Crowley & Co., Inc., Henry L. CRUCIBLE WELD Westinghouse Electric Corp. CRYSCON Crystal Research Labs, Inc. CRYSTALEAR Brush Development Co. CRYSTALIGNED Magnetic Metals Co. Magnetic Metals Co. CRYSTOGRAPH Offner Electronics, Inc. CSP C S P Westinghouse Electric Corp. C T S Chicago Telephone Supply CUNNINGHAM Radio Corp. of America Tube Division CUPALOY Wastinghouse Electric Corp. Telephone Supply Corp. CUPALUY Westinghouse Electric Corp. CUPRON Driver Co., Wilbur B. CUSHIONTONE Armstrong Cork Co. CUSTOMODE Jensen Mfg. Co. CYCLE-PROGRESS Automatic Temperature Control Co CYCLELOG The Foxboro Co. CYCLO-RAY Friez Instrument Div. Bendix Aviation Corp. CYCLO-FLEX Wilson & Co., G. C. CYCLOTROL Minneapolis-Honeywell Regulator Co. DACO Dato Dayton Acme Co. D 54 Mallory & Co., Inc., P. R. "D" NICKEL The International Nickel Co., Inc. DAG DAG Acheson Colloids Corp. DAKA-WARE Davies Molding Co., Harry DALBAR **Electronic Enterprises** DALE Electronic Development Co. DALMOTRON Dalmo Victor Co. DAMASCITE Amplex Div. Chrysler Corp. DAVENOIL Daven Co. DAVEY Vibroscope Co. DAVOHM Daven Co.

DC 4

DC\* Silicones

Dow Corning Corp.

Dow Corning Corp.

DC 200 and DC 500 Dow Corning Corp. DC 703 Dow Corning Corp. DC 801, DC 802, DC 803, DC 804 Dow Corning Corp. Dow Corning Corp. DC 993 and DC 996 Dow Corning Corp. DC 2103 Dow Corning Corp. DCS DCS Mathieson Alkali Works DE ARMOND Rowe Industries DECATRAN Melco Products, Inc. DECO Development Engineering Co., Inc., The DECOHM DECOHM Davis Electric Co. DE-FROST-IT Paragon Electric Co. DEHYDRA Wappler, Inc. DE-ION Westinghouse Electric Corp. DEKADHESE Technical Specialties Co. DEKA-XTAL Scientific Radio Products Co. DELMAR Globe Electronics, Inc. DELTAMAX Allegheny Ludlum Steel Corp. DEMCO Dormitizer Electric & Mfg. Corp. DEOXO Baker & Co. DENSITE West Virginia Pulp & Paper Co. Pulp Products Dept. DEPTHOMETER National Simpler Bludworth Long National-Simplex-Bludworth, Inc. Bludworth Marine Division DESCO Dietz Design & Mfg. Co. DESPARD Pass & Seymour, Inc. DETECT-A-FIRE Fenwal, Inc. DETECTOMETER Dillon & Co., Inc., W. C. DETERMOHM Ohmite Mfg. Co. DETROLA International Detrola Corp. DEW POINTER Illinois Testing Labs., Inc. DIABO Tibbetts Industries, Inc. Sangamo Electric Co. DIACONE 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. Tetrad Corp. DIAMOND G Garrett Co., Inc., G. K. DIAMOND H Hart Mfg. Co. DIAMOND PRODUCTS Garrett Co., Inc., George K. DIAPHLEX Cook Electric Co. DICO Diamond Instrument Co. DICTAPE Sound Recorder and Reproducer Corp. Magnograph Corp. DIEFLEX Insulation Mfrs. Corp. DIEGRAF Grafo Colloids Corp. DIE-LESS O'Neil-Irwin Mfg. Co. DIELITE Wirt Co. DI-FAN Andrew Co. DILECTENE Continental Diamond Fibre Co.

DILECTO Continental Diamond Fibre Co. DIMMERETTE Ward Leonard Electric Co. DIPMASTER Aeroil Products Co. DIPWITE Special Chemicals Co. DIPWRAP Paisley Products Inc. DISCALOY Westinghouse Electric Corp. DISCOHM Ward Leonard Electric Co. DIVCO Division Lead Co. DIVIDOHM Ohmite Mfg. Co. DOBAR Dobeckmun Co., The Industrial Products Div. DOBRO Valco Mfg, Co. DOLER Doehler-Jarvis Corp. DOLFLEX Dolph Co., John C. DOLITE Doehler-Jarvis Corp. Solar Mfg. Corp. Associated Research Inc. DOPLEX DOPLEX Dobeckinun Co., The Industrial Products Div. DOISMETER Instrument Development Labs DOT FASTENERS United-Carr Fastener Corp. DOUBLE DIAMOND H B. Instrument Co. H-B Instrument Co. DOWMETAL Dow Chemical Co. D. R. C. Dayco Radio Corp. DRIMETER Fielden Electronics Inc. DRI-N-TITE Horn Co., Inc., A. C. DRIOX Linde Air Products Co. Unit of Union Carbide & Carbon Corp. DRITHERM North American Electric Lamp Co. DUAL DANDEE Aerovox Corp. DURANITE Aerovox, Corp. Gorrell & Gorrell DUART Maas & Waldstein Co. DUBLER Precision Plastic Products Inc. DUBL-X Telrex, Inc. DUCO E. I. du Pont de Nemours & Co., Inc. DUCON Dual-Remote Control Co. Maas & Waldstein Co. E. I. du Pont de Nemours & Co., Inc. DUOCARB Driver Co., Wilbur B. DUOCRE X DUOCRE X Horn Co., Inc., A. C. DUODIAL Helipot Corp. DUO-FLEX Dumore Co., The DUO-PULSE Automatic Temperature Control Co., Inc. DUOSCALE Tencebe Let Tracerlab, Inc. DUO-SEAL Welch Scientific Co., W. M. DUO-SPEED V-M Corp. DUPLEX Altec Lansing Corp. DURALON U. S. Stoneware Co., The DURA-FLEX Interstate Mfg. Corp. DURASHIELD Plastic Fabricators Co. DURATAPE Rahm Instruments, Inc.

DURATIP Weller Mfg. Co. DURATRON Hofmann Corp., C. L. DUREX General Lead Batteries Co. DURITE Borden Co., The, Chemical Div. DURO Rogers Corp. DUROID Rogers Corp. DUTCH BOY National Lead Co. DX'ER Babcock Radio Engineering Inc. DX MASTERSPEAKERS DX Radio Products Co., Inc. DYKANOL Condenser Corp. of America DYNACOIL Crosley Corp. DYNA-LINK Yardeny Laboratories, Inc. Foxboro Co., The DYNAMASTER Bristol Co., DYNAPHONE The Ansley Radio Corp. DYNATONE Ansley Radio Corp. DYNATONE Crosley Corp DYNETRIC Westinghouse Electric Corp. DYNOGRAPH Annis Co., R. B. DYNOGRAPH Offner Electronics, Inc. E. A. D. Eastern Eastern Air Devices, Inc. "E" NICKEL The International Nickel Co., Inc. EAGLE-EYES Larrimore Sales Co. EARSET Telex, I EASY-FLO Inc. Handy & Harman E C A E C A Electronic Corp. of America ECCO Triad Transformer Mfg. Co. ECHOPHONE Hallicafters Co. ECKCO Economy Fuse & Mfg. Co. ECONACOUSTIC National Gypsum Co. EDGEOHM Ward Leonard Electric Co. EDIN Electronic Supply Co. EDIPHONE Edison Inc., Thomas A. EDIPROBE Electronic Designs, Inc. EDUCATOR Operadio Mfg. Co. Electronic Enterprises Inc. EFFARSEE Fishwick Radio Co. Electronic Instrument Co. Electronic Instrument Co. Elitel-McCullough, Inc. EJECT-0-MATIC Multi-Products Tool Co. EKOTAPE Webster Electric Co. Webster Electric Co. EL EL Electrons, I ELASTOBOND Inc. Paisley Products, Inc. ELASTRON Industrial Synthetics Corp. ELCOFONE Loral Electronics Corp. ELECTONE Northeastern Engineering, Inc. ELECTOY Electronic Labs, Inc. ELECTR O VANE Brown Instrument Co. ELECTREX Gorrell & Gorrell

ELECTRICORD Pacific Electricord Company ELECTRITE West Virginia Pulp & Paper Co. Pulp Products Dept. ELECTRIX U. S. Rubher Co. ELECTRO-CAL Industrial Electronics, Inc. ELECTROCAM Westinghouse Electric Corp. Lassing Engineering Co., Electronics Div. ELECTRO-EAR American Earphone Co. ELECTROHEMOMETER Fisher Scientific Co. ELECTRO-LARYNX Aurex Corp. ELECTROLIMIT Pratt Whitney Div., Niles-Bement-Pond Co. ELECTROLONE Harris Mfg. Co. ELECTROMANOMETER Sanborn Co. ELECTRO-MATIC Automatic Signal Div. Eastern Industries, Inc. ELECTROMAX Leeds & Northrup Co. ELECTROMET ELECTROMET Electro Metallurgical Division Union Carbide & Carbon Corp. ELECTRON BELL Riggs & Jeffreys, Inc. ELECTRONA-BOND Electronic Chemical Engineering Co. ELECTRONAMIC ELECTRONAMIC Precision Apparatus Co. ELECTRONA-SEAL Electronic Chemical Engineering Co. ELECTRONE TONE Electronic Chemical Engineering Co. ELECTRONIC FEATHER Westinghouse Electric Corp. ELECTRONIK Brown Instrument Co. Brown Instrument Co ELECTRONIK Minneapolis-Honeywell Regulator Co. ELECTRONOFIRE Electronic Chemical Engineering Co. ELECTRONOMETER Precision Apparatus Co. ELECTROPHOT Adair & Rhamstine ELECTROPHOTOMETER Fisher Stream ELECTROSE ELECTROTEMP Westinghouse Electric Corp. ELECTROTHERM Thermionic Engr. Corp. ELECTROX Schauer Machine Co. ELENCO Electronic Enterprises, Inc. ELEPHANT Phosphor Bronze Corp. ELIM-O-STAT Solar Mfg. Co. ELINCO Electric Indicator Co. ELINCOR Electronic Indicator Corp. ELKALOY P. R. Mallory & Co., Inc. ELKONITE P. R. Mallory & Co., Inc. ELKONIUM P. R. Mallory & Co., Inc. ELMET North American Philips Co., Inc. ELVANOL E. I. du Pont de Nemours & Co., Inc. EMC Electric Motor Corp. EMDECO 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. ENAMELITE Acme Wire Co. ENDURO Republic Steel Corp.

NDUR-PRENE General Insulated Wire Works, Inc. ENNJAY Esso Standard Oil Co. ENPO Piqua Machine & Mfg. Co. EONITE U. S. Rubber Co. EOPRENE U. S. Rubber Co. EPCO Etched Products Corp. EPLAB Eppley Lab., Inc., The EQUALOAD Keystone Carbon Co., Inc. ERSIN MULTICORE British Industries Corp. FSC0 Electric Specialty Co. ESC0 Electric Switch Corp. ESIC0 Electric Soldering Iron Co. ESNA ESNA Elastic Stop Nut Corp. Of America ETHOCEL Dow Chemical Co. ETHYLON American Phenolic Corp. ETCO Electronic Transformer Co., Inc. EUREKA Morse Co., Frank W. EUTEC-SILVER-WELD Eutectic Welding Alloys Corp. EUTECHROM Eutectic Welding Alloys Corp. EUTECROD EUTECROD Eutectic Welding Alloys Corp. EUTECTOR EUTECTRODE EUTECTRODE EUTECTRODE EVABRITE Bache & Co., Semon EVALAST Bache & Co., Semon EVEN-BREAK Electric Eve Equipment Co. EVEN-BREAK Electric Eye Equipment Co. EVENRAY Fostoria Pressed Steel Corp. EVERLASTING Harper Co., The, H. A. EVELVN Building C Rubicon Co. EVEREADY National Carbon Co., Inc. EVERLOCK Thompson-Bremer & Co. EXACT-PHOTO Dubte Depreducing Equin Photo Reproducing Equip. Co. EXAMETER Solar Mfg. Corp. EXIDE Electric Storage Battery Co. EXPLAINETTE Operadio Mfg. Co. E-Z E-Z Pyramid Products Co. E-Z CODE Western Lithograph Co., E-Z Code Div. E-Z CUE Amplifier Corp. of America FARATRON Lumenite Electric Co. FARCO Farrelloy Co. FARLITE Farley & Loetscher Mfg. Co. Paisley Products, Inc. FASTAX Western Electric Co., Inc. FASTENEERING Central Screw Co. FASTICK Paisley Products, Inc. FATHOMETER Submarine Signal Div., Raytheon Mfg. Co. FAX Radio Inventions, Inc. FAXIMILE Radio Inventions, Inc. FAXPAPER Radio Inventions, 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. FEMCO Farmers' Engineering & Mfg. Co. FENOX Bakelite Corp. FERRAMICS General Ceramics & Steatite Corp. FERRET FERRET Coastwise Electronic Co., Inc. FERROTUNE S-W Inductor Co. FIBERGLAS Owens-Corning Fiberglas Corp. FIBRACOUSTIC Johns-Manville Sales Corp. FIBRINOMETER Allied Elec. Instrument Co. Allied Elec. Instrument Co. FIBESTOS Monsanto Chemical Co., Plastics Div. FIBRETONE Johns-Manville Sales Corp. FIDELITONE Permo, Inc. FIFTY FOUR Cardwell Mfg. Corp., Allen D. FILMGRAPH Miles Reproducer Co., Inc. FILMSCRIBER Miles Reproducer Co., Inc. FILNIC GRIDNIC Driver-Harris Co. FILPEC Centralab Div., Globe Union Inc. FILTERETTE Deutschmann Corp., Tobe FILTERNOYS Continental Carbon, Inc. FILTERVOLT Insuline Corp. of America FIREBALL Farmer's Engineering & Mfg. Co. FIRE DEVIL Littelfuse, Inc. FIREYE Combustion Control Corp. FISHERFONE Fisher Research Lab. FIVER Crosley Corp. FLAME Mettler Co., Lee B. FLAME-OTROLS Wheelco Instrument Co. FLAME-WARDEN Combustion Research Laboratories, Inc FLASH FLASH Baker-Phillips Co. FLATACK Paisley Products Inc. FLATWRAP Paisley Products Inc. FLECTROL Yardeny Laboratories, Inc. FLEXAGUIDE Airtron Inc. FLEX-A-POWER Trumbull Electric Mfg. Co. FLEXARC Westinghouse Electric Corp. FLEXARM Art Specialty Co. FLEXFLAT Paisley Products Inc. FLEXIFONE Operadio Mfg. Co. FLEXILUGS Frankel Connector Co. FLEXISPLICES Frankel Connector Co. FLEXITIP Weller Mfg. Co. FLEXI-TROL Wilson & Co. G. C. FLEXITONE Operadio Mfg. Co. FLEXLOC Standard Pressed Steel Co.

FLEX0 Art Specialty Co.

FLEX-0-TENSION

Rumac Mfg. Co.

Eagle Signal Corp.

FLEXOPULSE

FLEX-SOK Stupakoff Ceramic & Mfg. Co. FLEX-STAFF Pfanstiehl Chemical Co. FLEXTACK Paisley Products Inc. FLIGHTWEIGHT Bendix Radio Corp. FLIPON Westinghouse Electric Corp. FLOTROL Lorain Products Corp. FLOWRATOR Fischer & Porter Co. FLUORADEX Westinghouse Electric Corp. Westinghouse Electric Corp. FLUORO-RECORD Fairchild Camera & Instrument Corp. FLUOROSPOT Westinghouse Electric Corp. FLUOROVUE Westinghouse Electric Corp. FLUSH-LITE Littelfuse, Inc. FLUTO Pass & Seymour Inc. FLUTOLIER Pass & Seymour Inc. FLUX GATE Eclipse-Pioneer Div., Bendix Aviation Corp. FLUXRITE National Lead Co. FM-G FM-G General Controls Co. F. N. A. Paisley Products, Inc. FORDMICA Ford Radio & Mica Corp. FORMVAR Shawinigan Products Corp. FORTICEL Celanese Corp. of America FORTISAN Celanese Corp. of America "49" ALLOY Magnetic Metals Co. FOSTERITE Westinghouse Electric Corp. FOTOLECTRIC Worner Electronic Devices F P INDUCTUNER Mallory & Co., Inc., P. R. FRAHM FRAHM Biddle Co., James G. FREE-CUT INVAR "36" Carpenter Steel Co. FREED-EISEMANN Freed Radio Corp. FREE-VANE The Bristol Co., 7 FREQUEMATIC Federal Telephone & Radio Corp. FROST Chicago Telephone Supply Corp. FURNATRON Westinghouse Electric Corp. Westingnouse Electric Colp. FURZEHILL American British Technology, Inc. FUSETRONS Bussmann Mfg. Co. FUSITE HERMETICIANS Contenti Electric Products Co. Cincinnati Electric Products Co. FUSTATS Bussmann Mfg. Co. FYBERGLASS Eraser Co., Inc., Industrial Products Div. FYBEROID Wilmington Fibre Specialty Co. G-C General Cement Mfg. Co. G-MAX Flight Research Engineering Corp. G-METER Schottland, Frederick D. GALVANOID Wickwire Spencer Steel, Div., Colorado Fuel & Iron Corp. GALVEX Wickwire Spencer Steel, Div., Colorado Fuel & Iron Corp. GAMMATRON Heintz & Kaufman Ltd. GARCEAU Electro-Medical Lab., Inc.

GARIT Garfield Mfg. Co. GELVA Shawinigan Products Corp. GEMCOTE Gemloid Corp. GEMFLEX Gemloid Corp. GEMGLEEN Gemloid Corp. GEMLIKE Gemloid Corp. GEMLITE Gemloid Corp. GEMLOID Gemloid Corp. GEMSTONE Knoedler Chemical Co. GEMWELD Gembold Corp. Genenoid Corp. GENEMOTOR Carter Motor Co. GENERAL BRAND General Dry Batteries, Inc. GENERALITIES Fostoria Pressed Steel Corp. GENEVALOC Bendix Aviation Corp., Pacific Div. GEN-RAL GEN-RAL Muter Co. GEON Goodrich Chemical Co., B. F. GIBSILOY GIBSILOY Gibson Electric Co. GIBSON-SPRINGS Associated Spring Corp. GLAMORTONE Crosley Corp. GLASOHM Clarostat Mfg. Co., Inc. GLASS SEALING "42", "426", "49" Carpenter Steel Co. GLASTIC Laminated Plastics, Inc. GLIDER Shure Brothers GLOBAL Molded Insulation Co., Aircraft Control Div. GLOBAR Carborundum Co. GLO-TECH Fischer & Porter Co. GLYDAG Acheson Colloids Corp. GOLD-SEAL Miller, B. F. GOLDEN-TONE Five Star Radio Co. GON-SET Waterproof-Electric Co. GOODELL Minnesota Electronics Corp. GOOD-RITE Goodrich Chemical Co., B. F. GOTHAM Shevers Inc., Harold GOTHARD Johnson Co., E. F. Erie Resistor Corp. GRACOIL Gramer Co., The GRAFOIL GRAFOIL Brush Development Co. GRAFOLUX Grafo Colloids Corp. GRAFO CONCENTRATE Grafo Colloids Corp. GRALAB Dimco-Gray Co. GRANODIZING American Chemical Paint Co. GRAPHALLOY Graphite Metallizing Corp. GREENOHM Clarostat Mfg. Co., Inc. GRENZ Westinghouse Electric Corp. GRIDNIC Driver-Harris Co. GRIP-HOLD J. F. D. Mfg. Co. **GRIP-POINT** Vaco Products Co. GRIP TIGHT Paisley Products, Inc. GRIPMASTER Walker Co., George

GRIPPER Scovill Mfg. Co., Waterville Screw Prods. Div. GRIPTITE Stevens-Walden, Inc. GRIP-X Rattan Mfg. Co., The GRIZZLY U. S. Rubber Co. GUEST TELEVISION Industrial Television, Inc. GUITAN Rowe Industries Garfield Mfg. Co. GYRO Sperry Gyroscope Co. GYROPILOT Sperry Gyroscope Co. GYROSYN Sperry Gyroscope Co. GYRO-TENNA Public Operating Co. HABIRLENE Phelps Dodge Copper Products Corp. HABIRSHAW Phelps Dodge Copper Products Corp. HAFTSON Haft & Sons, Inc. HALLOWELL HALLOWELL Standard Pressed Steel Co. HALOWAX Union Carbide & Carbon Corp. HAMM CRYSTALS Nebel Lab., R. E. HAMMERTONE Maas & Waldstein Co. HANDI-GLOW Industrial Devices Inc. HANDI-MIKE Universal Microphone Co. HANDI-PHONE HANDI-PHONE Murdock Mfg. Co., Wm. J. HANDI-TALKIE HANDI-TALKIE Motorola, Inc. HANDY ANDY Rattan Mfg. Co., The HANDY-FLUX Handy & Harman HANDYVAR Martindale Electric Co. HAR-CAM Harvey Radio Labs., Inc. HARTRON Hart & Co., Inc., Frederick HARVEL Irvington Varnish & Insulator Co, HARVEY Harvey Wells Electronics, Inc. HARVEY Peck & Harvey HASCROME HASCROME Havnes Stellite Co., Unit of Union Carbide & Carbon Corp. HASTELLOY Havnes Stellite Co., Unit of Union Carbide & Carbon Corp. HAYSTELLITE Havnes Stellite Co., Unit of Union Carbide & Carbon Corp. HAZEGAGE HAZEGAGE Ess Instrument Co. HC Nebel Lab., R. E. HEAD Industrial Electronics, Inc. HEALTHAIRE Johnson Fan & Blower Corp. HEATEX Acme Wire Co. HEATHKIT Heath Co. HEETMASTER Aeroil Products Co. Aircraft Screw Products Co., Inc. HELIOFLASH No. 124 MacLeod & Hanopol HELIOS Keuffel & Esser Co. HELIO-THERM Airadio Inc. **HELISCOPE** Crosley Corp. HEMIT Garfield Mfg. Co. HERCO Hercules Electric & Mfg. Co., Inc. HERCULES Acromark Co.

HERCULES Rubicon Co. HERECROL Heresite & Chemical Co. HERMETICIAN Fusite Corp. HERMICO Hermetic Seal Products Co. HETROFOIL Mullen Mfg. Co., James HEX-LOK Boots Aircraft-Nut Corp. HEX LOX Prestole Corp. HEX-SCRU Stronghold Screw Products HEYCO Heyman Mfg. Co. HI-FLUX Annis Co., R. B. HI-G General Controls Co. HIGH PERMEABILITY '49" Carpenter Steel Co. HIKAPS Centralab, Div. Globe Union, Inc. HI K CERAMICONS Erie Resistor Corp. HI-LOAD United Insulator Co., Ltd. HINJON Thomas & Betts Co., Inc. HIPERCO Westinghouse Electric Corp. HIPERNIK Westinghouse Electric Corp. HIPERSIL Westinghouse Electric Corp. HI-Q Electrical Reactance Corp. HI-TEMP Rome Cable Corp. HI VOLT Industrial Devices, Inc. HYVOKAPS Centralab, Div. Globe Union, Inc. • HOBBY-FLEX Dumore Co., The HOLD-HEET Busel Russell Electric Co. HOLD-TITE U. S. Rubber Co. HOLLYTRAN Transformer Engineers HOLTITE Continental Screw Co. HOMAC Hose-McCann Telephone Co., Inc. HOMCHARGER Automatic Electrical Devices Co. HOMEASE Bogue Electric Mfg. Co. HOM-0-ZONE Automatic Electrical Devices Co. HORNAC Horn Co., Inc., A. C. НР HP Hewlett-Packard Co. H. R. S. Dine and Co., Inc., F. E. HUMIDIGRAPH Bristol Co., The HUMIDOLAIN Star Porcelain Co. HURLETRON Electric Eye Equipment Electric Eye Equipment Co. HUSEITE Huse Liberty Mica Co. HUSHATONE Brush Development Co. HUSKY Price Electric Corp. HYCAR Goodrich Chemical Co., B. F. HYDENT Burndy Engineering Co. HYDEX HYDEX Jensen Mfg. Co. HYDRAMOTOR General Controls Co. HYDRAULIC White Rodgers Electric Co. HYDROGRAF Grafo Colloids Corp. Grafo Colloids Corp. HYDROSEC U. S. Rubber Co. HY-EFF Taylor Mfg. Co. HYFLEX Irvington Varnish & Insulator Co.

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/FLUX Indiana Steel Products Co. HYHERVAC Central Scientific Co. HYLINK Burndy Engineering Co. HYLUG Burndy Engineering Co. HYMU Magnetic Metals Co. HYMU "80" Carpenter Steel Co. HYPASS Sprague Electric Co. HYPER Radio Music Corp. HYPER-MAG Radio-Music Corp. HYPERSONIC Brush Development Co. HYPEX Jensen Mfg. Co. Associated Research, Inc. HYPRESS Burndy Engineering Co. HYSPAR Midland Paint & Varnish Co. HY-Q 75 Hytron Radio & Electronics Corp. HYTEMCO Driver-Harris Co. HYTOOL Burndy Engineering Co. HYVAC Central Scientific Co. HYVOL Aerovox Corp. ICA Insuline Corp. of America ICE-STIK Paisley Products, Inc. ICONIC Altec Lansing Corp. IDECO International Derrick & Equipt. Co. ILLINI-HYCAPS Illinois Condenser Co. ILLITRON Illinois Tool Works, Electronics Div. IMC Insulation Mfrs. Corp. IMCO Interstate Mfg. Corp. IMCOR Insulation Mfrs. Corp. IMMERSATHERM Mercoid Corp. IMPREGNITE Standard Varnish Works INCA Phelps Dodge Copper Products Corp. INCELOID American Products Mfg. Co. INCO International Nickel Co., Inc., The INCONEL Alloy Metal Wire Co. INCONEL The International Nickel Co., Inc. INCREVOLT Sorensen & Co. INDALLOY Indiana Steel Products Co. INDCO Industrial Condenser Corp. INDERON Plywood Co., C. W. INDUCTOROIDS De Coursey Engr. Lab. INDUCTOTHERM General Electric X-Ray Corp. INDUCTUNER Mallory & Co., Inc., P. R. INDUR Reilly Tar & Chemical Corp. INDUSTRIAL TELECEIVERS Industrial Television, Inc. INERTAIRE Westinghouse Electric Corp. INERTEEN Westinghouse Electric Corp. INET Industrial Electronics & Transformer Co. INFERNOCOTE Wirt Co. INMANCO Insulation Mfrs. Corp. INPUTROLS Wheelco Instruments Co.

IN-RES-CO Instrument Resistors Co. INSA-LUTE Sauereisen Cements Co. INSANOL Westinghouse Electric Corp. Insl-x Co., Inc. INSL-X Centro Research Laboratories, Inc. INSPECTOR Larrimore Sales Co. INSTAGRAPH Bristol Co., The INSTANSOLDER Cole Radio Works Sanborn Co. INSULAZED Magnetic Metals Co. INSUROK The Richardson Co. INTELIN Federal Telephone & Radio Corp. INTERCEPTOR Shur-Antenna-Mount, Inc. INTERLINK Federal Telephone & Radio Corp. INTER-VIEWER Larrimore Sales Co. INTERVOX Radio Labs. Co. INTUC Insulating Tube Co. INVAR "36" Carpenter Steel Co. IONOTRON U. S. Radium Corp. IPOA Inland Plastic of America, Inc. IRIS American Scientific Co. IRMCO Islip Radio Mfg. Corp. IRN 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. ISOMODE M. B. Mfg. Co. ISOPLANE Motorola, Inc. ITELITE I-T-E Circuit Breaker Co. IVI-FLEX Irvington Varnish & Insulator Co. Commercial Radio Sound Corp. JAGABI JACKLEAN Biddle Co., James G. **JECO** Jarvis Electronics Corp. JERKIT Littelfuse Inc. JETFLEX Cook Electric Co. JIFFY Minerallac Electric Co. JK James Knights Co. J. M. Paisley Products, Inc. JODA Davis Plastics Co., Joseph J-T Jefferson-Travis, Inc. JUPITER GUM Paisley Products, Inc. K 42 B Westinghouse Electric Corp. "K" MONEL The International Nickel Co., Inc. "KR" MONEL The International Nickel Co., Inc. The International Nickel Co., Inc. K-TRAN Automatic Mfg. Co. KAISER ALUMINUM

Permanente Products Co., Inc. KANTARK

Positive Lock Washer Co.

Trico Fuse Mfg. Co. KANTLINK

KANT LINK American Nut & Bolt Fastener Co. KAPPA Wright & Sons Co., William E. KARADIO Eckstein Radio & Television Co. KARBOMET Driver-Harris Co. KARMA Driver-Harris Co. KARRO PAK Felt Products Mfg. Co. KATHANODE Gould Storage Battery Corp. KATOLIGHT Kato Engineering Co. KAYGREY Rogers Corp. KAYPAR Rogers Corp. KAYROK Rogers Corp. KELLER POLYGRAPH Associated Research, Inc. KELEKET Kelly-Koett Mfg. Co., Inc., The KEMGO Markem Machine Co. KENEX Westinghouse Electric Corp. Keystone Electronics Co. KEN-RAD Westinghouse Electric Corp. KIC Kemet Labs. Co., Inc. KERATYM Horn Co., Inc., A. C. KILOVOLTER C-B Mfg. Co. KING Electric Heat Control Co., The KING JUKE Eldeen Co., The KINGMARKWELL Markem Machine Co. KINSETTE Kinsey Radio Mfg. Co. KITCHENAIRE Radio Craftsmen KITCHENOLA Radio Craftsmen KLAMP-TITE I-T-E Circuit Breaker Co. KLEEN-LINE Farmers' Engineering & Mfg. Co. KLEER-VU American Kleer-Vu Plastics American Kleer-Vu I KLIPLOK Trico Fuse Mfg. Co. KLIPXIT Vaco Products Co. KLIXON Spencer Thermostat Co. KLYDONOGRAPH Westinghouse Electric Corp. KNIGHT Allied Radio Corp. KNOCKOMETER Sperry Gyroscope Co., Inc. KODAGRAPH Fortmon Viola Co Eastman Kodak Co. KODAK Eastman Kodak Co. KOHINOOR Waldes Kohinoor, Inc. KOILED KORD Kellogg Switchboard & Supply Co. Westinghouse Electric Corp. KOOLOHM Sprague Electric Co. KORECT-OHM Eastern Electronics Corp. KOTAL U. S. Rubber Co. KOTRON Standard Arcturus Corp. KOVAR Stupakoff Ceramic & Mfg. Co. KOVAR Westinghouse Electric Corp. KOVAR-ZIP Waldes Kohinoor, Inc. KP-81 Pierson Electronic Corp. KRISTON Goodrich Chemical Co., B. F. KROME KOAT

General Cement Mfg. Co.

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KRYSTAL KOAT General Cement Mfg. Co. KULGRID Callite Tungsten Corp. Centralab, Div. Globe Union, Inc. KWIKFLUX Special Chemicals Co. KWIKHEAT Sound Equipment Corp. "L" NICKEL The International Nickel Co., Inc. LABVOLT Electrodyne Co. LACKON Sun Dial Corp. La Magna Mfg. Co., Inc. LAMICOID Mica Insulator Co. LAMICOID Insulating Fabricators, Inc. LAMICORES Magnetic Metals Co. Lamicold Fabricators American Cyanamid Co., Plastics Div. LAMINUM Laminated Shim Co., Inc. LAMIPACKS Magnetic Metals Co. Franklin Fibre-Lamitex Corp. LAUXEIN Monsanto Chemical Co., Plastics Div. LAVA Kirchberger & Co., Inc., M. LAVITE Steward Mfg. Co., D. M. LAVOLAIN Star Porcelain Co. LAUXITE Monsanto Chemical Co., Plastics Div. LAYTEX U. S. Rubber Co. LEAD-ALL Rumac Mfg. Co. LEAD-A-MATIC Rumac Mfg. Co. LEARADIO Lear, Inc. LEATHAFLEX Paisley Products, Inc. LECTROVISION Transvision, Inc. LECTRO-LEVEL Alco Valve Co. LEDEX Leland, Inc., George H. LEE-BUILT Lee Spring Co. LEESONA Universal Winding Co. Conn Ltd., C. G. Leland Electric Co. LEROY Keuffel & Esser Co. White Rodgers Elec. Co. LEXEL Dobeckmun Co., The LIBERTY American Communication Co. Micro Switch Div. LIFE-LIKE Arc Radio Corp. LIFE-LINE Westinghouse Electric Corp. LIFE LITE Ultra-Violet Products, Inc. LIFETIME Reynolds Metals Co. LIGHT WATCHMAN Ripley Co., Inc. LIGHTNING BUG Vibroplex Co., Inc. LIGNOTITE Paisley Products, Inc. LIGNOTOX Paisley Products, Inc. LIMITROLS Wheelco Instruments Co. LIMITRON Arma Corp.

LIN-DE Linde Air Products Co. Unit of Union Carbide & Carbon Corp. LINDOX LINDOX Linde Air Products Co. Unit of Union Carbide & Carbon Corp. LINE STARTER Westinghouse Electric Corp. LITE-MASTER Art Specialty Co. LITE-O-STAT Viewlex, Inc. LITTLE DEVIL Ohmite Mfg. Co. LITTLEFONE Doolittle Radio, Inc. LITTLE GIANT MAGNETS Crucible Steel Co. of America LOABOND Catalin Corp. of America LOAD CARRIERS Market Forge Co. LOAD LIFT Market Forge Co. LOAD-MOBILE Market Forge Co. LOAD MOVERS Market Forge Co. LOAD PAC Market Forge Co. LOAD SKIDS Market Forge Co. LOAD-VEYOR Market Forge Co. LOALIN Catalin Corp. of America LOCALITIES Fostoria Pressed Steel Corp. LOCKETITE Locke Incorporated LOCKSEAM Superior Tube Co. LOCK-TITE Thomas & Betts Co., Inc. LOCK-TITE Continental Screw Co. LOGE LECTERN Loge Sound Engineers, J. M. LOHM Driver-Harris Co. Magnetic Metals Co. LOOPOHM Ward Leonard Electric Co. LOXIT Hobbs Mfg. Co. Eckstein Radio & Television Co. LUCERO Driver-Harris Co. LUCITE du Pont de Nemours & Co., Inc., E. I. Plastics Dept. LUG-CLIP Littelfuse, Inc. LUKENWELD Lukens Steel Co. LUMARITH Celanese Corp. of America LUMETRON Photovolt Corp. LUSTAN Esso Standard Oil Co. LUSTERIZED American Electric Cable Co. LUSTERKNOBS Beach Manufacturing Inc. LUSTREX Monsanto Chemical Co. Plastics Div. LUSTROM Monsanto Chemical Co. Plastics Div. LUXATHERM Branston Electric Mfg. Co. LUXIFLUX Special Chemicals Co. LUXOMETER Electronic Mechanical Products Co. LUXTAR LENS Viewlex, Inc. LUXTRON Bradley Labs. LYRIC Rauland-Borg Corp. MAESTRO Reeves Soundcraft Corp. MAETRO POINT

MAFORCO Market Forge Co. MAGI-CALL McGrade Manufacturing Co., Inc., E. W. MAGIC DOOR Stanley Works, The MAGICORE Crowley & Co., Inc., Henry L. MAGICTONE Radio Development & Research Co. MAGIC WAND Ward Products Corp. Div of The Gabriel Co. MAGMOTOR Carter Motor Co. MAGNAC MAGNAC Magnetic Devices, Inc. MAGNECORDER Magnecord, Inc. MAGNEMATIC Amplifier Corp. of America MAGNERAMA Amplifier Corp. of America Amplifier Corp. of America MAGNE RIBBON Amplifier Corp. of America MAGNESCOPE Amplifier Corp. of America MAGNESONIC Sound Recorder and Reproducer Corp. MAGNESYN Eclipse-Pioneer Div., Bendix Aviation Corp. MAGNE TAPE Amplifier Corp. of America MAGNETONE Bruch Development C Brush Development Company, The MAGNETRONIC Cook Electric Co MAGNETTE Heinemann Electric Co. MAGNILASTIC Cook Electric Co. MAGNISET Bristol Co., The MAGNO Driver-Harris Co. MAIL-A-VOICE Brush Development Co. MAKALOT Interlake Chemical Co. MALTESE Bache & Co., Semon MARFORCO Market Forge Co. MARK-TIME Rhodes Inc., M. H. MARR Rattan Mfg. Co., The MARVAL Walco Sales Co. MASCO Simpson Mfg. Co., Inc., Mark MASTERLINE Electrical Specialty Co. MASTERLOUIT Kellogg Switchboard & Supply Co. MASTERPHONE Kellogg Switchboard & Supply Co. MASTERPRO Rek-O-Kut Co. Arkwright Finishing Co. MAXIMAR General Electric X-Ray Corp. MAXMIXER Special Products Co. MAXISCOPE General Electric X-Ray Corp. M. B. C. Ray-O-Vac Co. MEASURAY Sheffeld Corp. Sheffield Corp. MEDIQUARTZ Dallons Labs. MEDISINE Dallons Labs. MEDITHERM Dallons Labs. MEFCO Production Engrg. Co. MEG-METER Winslow Co., Inc., The MEGA-MARKER Kay Electric Co. MEGA-MATCH Kay Electric Co. MEGA-NODE Kay Electric Co. MEGA-PIPPER Kay Electric Co. MEGA-PULSER Kay Electric Co.

Eldeen Co., The

**MEGA-SWEEP** Kay Electric Co. MEGALIGNER Kay Electric Co. MEGALYZER Kay Electric Co. MEGALYZER JR. Kay Electric Co. MEGATENNA Kay Electric Co. MEGAVAC Central Scientific Co. MEGGER Biddle Co., James G. MEGOHMER Sticht Co., Inc., Herman H. MEISSNER Maguire Industries MELATINE Ciba Co., Inc. MELCO Melrath Supply & Gasket Co. MELMAC American Cyanamid Co., Plastic Div. MELODIER Waters Conley Co. MELODISC Home Recording Products Corp. MEMCO Maryland Electronic Mfg. Corp. MERCTRON Ebert Engineering & Mfg. Co. MERCU-TROL MERCU-TROL Mack Electrical Devices, Inc. MERCURYSTAT Westinghouse Electric Corp. MERITONE Autocrat Radio Co. MERITONE International Merit Products Corp. MERIT POINT Eldeen Co. The Eldeen Co., The MEROLA Cor Crosley Corp. MERRYMAKER Crosley Corp. METAL MIKE Sperry Gyroscope Co. Div. of the Sperry Corp. METAL SHIELDED WIRE Uniform Tubes METALAST Elematic Equipment Corp. METALASTIC Cock Electric Co. METALCOTE American Resinous Chemical Co. METALIX METALIX North American Philips Co., Inc. METALSEAL Brush Development Company, The METAMETER Bristol Co., The METAPHONE Bristol Co. The Bristol Co., The METAVANE Bristol Co., The METCLAD METCLAD I-T-E Circuit Breaker Co. METERMAX Leeds & Northrup Co. METEROL Automatic Temperature Control Co. METL-CAN Pyramid Electric Co. MET-L-FLEX Robinson Aviation, Inc. METRO-LITE Viewlex, Inc METRONOMA Inc. Crystal Research Labs. Inc. METROTHERM General Controls Co. MICABOND Continental Diamond Fibre Co. MICA-GLAS National Electric Coil Co. MICANITE Mica Insulator Co. MICARTA Westinghouse Electric Corp. MICO Mica Insulator Co. MICRO New Hampshire Ball Bearings MICROACT Bristol Co., The MICRODISC Wagner Recorder Mfg. Corp. MICRODRILL Teletronics Laboratory, Inc.

MICRODYNE Audak Co. MICROFLASH General Radio Co. MICROFLEX Eagle Signal Corp. MICROLINE Sperry Gyroscope Co. MICRO-MATCH Jones Electronics Co., M. C. MICROMAX Leeds & Northrup Co. MICRO-MIKER Kalbfell Labs. MICROMOTORS Redmond Co., Inc. MICRO-POT Gibbs Div. George W. Borg Corp. MICRO-PULSER Kay Electric Co. MICROSEN Manning, Maxwell & Moore, Inc. MICROSIL MICROSIL Magnetic Metals Co. MICROTORQUE Giannini & Co., Inc. MICRO-TROLLER Westinghouse Electric Corp. MICROVAC Stokes Machine Co., F. J. MICROVOLTER Ferris Instrument Co. MICRO WEAVE Holliston Mills Inc., The MIDGETROL P. R. Mallory & Co., Inc. MIDOHM MIDOHM Driver-Harris Co. MIDWAY Cardwell Mfg. Corp., Allen D. MIGHTY MIDGET Sperman Metal Specialties MIJAKON Fact & Co. John F. Fast & Co., John E. MIKASUB MIKASUB Fast & Co., John E. MIKESTER Art Specialty Co. MILLISEC RELAY Stevens-Arnold, Inc. MINALITE Wastingtonson Florent Westinghouse Electric Corp. MINATROL Westinghouse Electric Corp. MINERALIGHT Ultra-Violet Products, Inc. MINIGRAPH Westinghouse Electric Corp. MINI-AMP Industrial Devices, Inc. MINI MAX National Carbon Co. MINIMOTOR Alni Corp MINISCALER Atomic Instrument Co. MINI-SHIELD Staver Co., Inc. MINI-SIGNAL Premier Crystal Labs., Inc. MINI-SPRING Staver Co., Inc. MINI-VOLT Industrial Devices, Inc. MINICAP Solar Mfg. Corp. MINSTRFI MINSTREL Crosley Corp. MINSUA MINSUA Keuffel & Esser Co. MIRRAGRAPH Western Electric Co., Inc. MIRROR TONE Meck Industries, John M. L. S. Paisley Products Inc. MOBILPHONE Gross Electronics, Inc. MODIFIED HILO Driver Co., Wilbur B. MODUFLOW Minneapolis-Honeywell Regr Minneapolis-Honeywell Regulator Co. MODULITE Berndt-Bach, Inc. MOLDARTA Westinghouse Electric Corp. MOLDITE National Moldite Co. MOLDLOCK American Brass Co.

MOLDTEX Racon Electric Co. MOLECULE SQUEEZER Robinette Co., W. C. Robinette Co., W. C. MONEL The International Nickel Co., Inc. MONISEAL Magnetic Metals Co. MONISEAL "444" Carpenter Steel Co. MON-KEY MONOBLOCK MUN-KEY MONOBLOCK Winchester Electronics Co. Electric Eye Equipt. Co. MONOCOIL Elliott Mfg. Co. MONOBAR Tiblette Industries Inc. Tibbetts Industries, Inc. MONODRUM Gorrell & Gorrell MONOMOTORS Redmond Co., Inc. MONOPHONE MUNUPHUNE Automatic Electric Co. MONOPLEX Shure Brothers MONOSET Bristol Co., The MONO SET Telex Inc Telex, Inc MONOTUBE Tuttle & Kift MONTE CARLO MONTE CARLO Televista Corp. of America MORTEX Moore Co., Howard J. Globe Industries MOTORFLEX Martindale Electric Co. MOTORLITE Ward Leonard Electric Co. Ward Leonard Electric Co. MOTOR WATCHMAN Westinghouse Electric Corp. MOT-0-TROL Westinghouse Electric Corp. MOTRON Robinette Co., W. C. MPB Miniature Precision Bearings, Inc. Miniature Precision B M-SCOPE Fisher Research Lab. MUCHROHM Magnetic Metals Co. MUFFLETONE The Celotex Corp. MULTI-ANALYST Electronic Instrument Electronic Instrument Co., Inc. MULTIBREAKER Square D Co. MULTICARDIOTRON MULTICARDIOTRON Electro-Physical Labs. MULTICORE British Industries Corp. MULTICOUPLER Amy, Aceves & King, Inc. MULTIFAX Western Union Telegraph Co. MULTIFLEX Eagle Signal Corp. MULTI-LOW-RANGE Dillon & Co., Inc., W. C. MULTI-MASTER Precision Apparatus Co. MULTIMET Havnes Stellite Co. Unit of Union Carbide & Carbon Corp. MULTIMETER Rawson Electrical Instrument Co. MULTIPLANE MULTIPLANE Lord Mfg. Co. MULTIPLUG Allied Elec. Instrument Co. MULTI-RECTIFIER Green Electric Co., Inc. MULTISCALER Atomic Instrument Co. MULTI-SWAGE PROCESS Bead Chain Mfg. Co., The MULTITROL Ward Leonard Electric Co. Ward Leonard Electric Co. MULTIVIDEO Industrial Television, Inc. MULTIVISION Industrial Television. Inc. MULTIVISION SCREEN House of Television MULTIVOLT Ohmite Mfg. Co. MULTRASCOPE

Peerless Labs.

MULTRATHERM Peerless Labs. MUSIKING Hollywood Radio Cabinet Co. MU-SWITCH The Chase-Shawmut Co. MYCALEX 400 Mycalex Corp. of America MYCALEX 410 Mycalex Corp. of America MYCALEX K Mycalex Corp. of America MYKA PLAST United Condenser Corp. MYKROY Electronic Mechanics, Inc. MYSTAPHONE Taybern Equipment Co. MYSTERY Taybern Equipment Co. 999 "PLUS" Handy & Harman NA-ALD Alden Products Co. NALCO National Lead Co. NALCO North American Electric Lamp Co. NASAT Westinghouse Electric Corp. NATIONAL Valco Mfg. Co. NATVAR National Varnished Products Corp. NAUGAHYDE U. S. Rubber Co. NEILLITE Watertown Mfg. Co. NEMCO National Electronic Mfg. Co. N. E. M. S. National Electrical Machine Shops, Inc. NEOLAY U. S. Rubber Co. NE-0-LITE General Cement Mfg. Co. Radio Development & Research Co. NEPEC Centralab Div. Globe Union Inc. NEUTRASEAL Cook Electric Co. NEVERSLIP Division State Philadelphia Steel & Wire Co. NEY-ORD Ney Co., J. M. NICAD Nickel Cadmium Corp. NICHROME Driver-Harris Co. NILSTAIN Driver Co., Wilbur B. NILVAR Driver-Harris Co. NIREX Driver-Harris Co. NITE-T-LITE Littelfuse, Inc. NITRON Monsanto Chemical Co. Monsanto Chemical Co. Plastics Div. NIXON CA Nixon Nitration Works NIXON CN Nixon Nitration Works NIXON EC Nixon Nitration Works NOARK Federal Electric Products Federal Electric Products Co. NOBATRON Sorensen & Co., Inc. NOBLELOY NOBLELOY Continental Carbon, Inc. NOFLAME-COR Cornish Wire Co. NO FOME L & R Mfg. Co. NOISERASER Minnesota Electronics Corp. NOKORODE Dunton Co., D. W., The NOMU Magnetic Metals Co. NON-LINK Positive Lock Washer Co. NORELCO North American Philips Co., Inc. NORLOC Norton Lahs., Inc.

NORTHEAST Delco Appliance Div. General Motors Corp. Midland Paint & Varnish Co. NO-SPAT Keystone Carbon Co., Inc. N. U. National Union Radio Corp. NU-BLAC Star Porcelain Co. NUCAMITE National Union Radio Corp. NUCLEOMETER Radiation Counter Labs., Inc. NUKEMITE Nukem Products Corp. NU PAMITE National Union Radio Corp. NWL Nothelfer Winding Labs. NYLOK Production Engrg. Co. NYLON du Pont de Nemours & Co., Inc., E. I. NYLONITE Plastic Wire & Cable Corp. NYLON-ZIP Waldes Kohinoor Inc. OAKWOOD Weaver Specialty Co. OHIOHM Ohio Carbon Co. OHMOID Wilmington Fibre Specialty Co. OHM-SPUN States Co. OILDAG Acheson Colloids Corp. OILITE Amplex Div. Chrysler Corp. CKOBESTOS Okonite Co. OKOGLASS Okonite Co. OKOLENE Okonite Co. OKOLITE Okonite Co. OKOPRENE Okonite Co. OKOSEAL Okonite Co. 1000 SPAR Standard Varnish Works OPACIFIER Titanium Alloy Mfg. Co. OPTIMATIC Minneapolis-Honeywell Regulator Co. OPTO-MATIC OPTO-MATIC Trico Fuse Mfg. Co. ORACO Oak Ridge Antennas Div. of Video Television Inc. ORTHOCHROM Rohm & Haas Co. ORTHOLITE Rohm & Hass Co. ORTHOSONIC Electronic Labs., Inc. Electronic Labs., Inc. 05150 Westinghouse Electric Corp. OSTERMOTORS Oster Mfg. Co., John OSCILLO-RECORD Fairchild Camera & Instrument Corp. OUNCER United Transformer Corp. OXWELD Linde Air Products Co. Unit of Union Carbide & Carbon Corp. OZALID General Aniline & Film Corp., Ozalid Div. OZOTEST Thermionic Engr. Corp. PAISOL Paisley Products, Inc. PAISTEX Paisley Products, Inc. PAISTIC Paisley Products, Inc. PAISTICK Paisley Products, Inc. PALINEY Ney Co., J. M. PAL Palnut Co., Inc.

PANADAPTOR Panoramic Radio Products, Inc. PANALYZOR Panoramic Radio Products, Inc. PANAMUSE Farnsworth Television & Radio Corp. PANATROPE Brunswick Radio & Television Div., Radio & Television, Inc. PANDEX Westinghouse Electric Corp. PANELTONE Ansley Radio Corp. PANELYTE St. Regis Paper Co., Panelyte Div. PANTO Preis Engraving Machine Co. PANT-0-JECTOR Engineers Specialties Div. Universal Engraving & Colorplate Co. PANT-0-SCRIBER Engineers Specialties Div. Universal Engraving & Colorplate Co. PAPERITE Acme Wire Co. PARACORE U. S. Rubber Co. PARA-FLUX Radio Music Corp. PARAGON Keuffel & Esser Co. PARAGUTTA Western Electric Co., Inc. PARAPLEX Rohm & Haas Co. PARAVOX Paraphone Hearing Aid, Inc. PARKERIZING Parker Rust Proof Co. PARCO LUBRIZING Parker Rust Proof Co. PARLON Hercules Powder Co. PASSMOUR Pass & Seymour, Inc. PATHFINDER Submarine Signal Div., Raytheon Mfg. Co. PATTERSON LUMINESCENT du Pont de Nemours & Co., Inc., E. I. PEDIGREED Western Electric Co., Inc. PEERLESS Altec Lansing Corp. PEERLESS National Vulcanized Fibre Co. PEL-X Holliston Mills, Inc., The PEM Penn Engineering & Mfg. Corp. PENACOLITE Koppers Co., Inc. PERBUNAN Esso Standard Oil Co. PERCO Pioneer Electric & Research Corp., The PERFECT-O-CUT PERFECT-O-CUT Tablet & Ticket Co. PERKINS Westinghouse Electric Corp. PERMACELL U. S. Rubber Co. PERMALITIES University Microphene Co. Universal Microphone Co. PERMALLOY Arnold Engineering Co. PERMANITE Foote Mineral Co. PERMANITE I-T-E Circuit Breaker Co. PERMA-POWER General Transformer Corp. PERMATUNE S-W Inductor Co. PERMAZINC Locke Incorporated PERMINVAR Western Electric Co., Inc. PHANO Dixon Crucible Co., Joseph PHASEFORMER Eastern Specialty Co. PHENOCOTE Wirt Co. PHENOL FIBRE Taylor Fibre Co. PHENOLITE National Vulcanized Fibre Co. PHENROK Fabricon Prods., Inc. PHILHARMONIC

Espey Mfg. Co., Inc.

ALMOR Urison Brothers PHIL-TROL Phillips Control Corp. PHONOCORD Packard-Bell Co., Inc. Packard-Bell Co., Inc PHONOLA Waters Conley Co. PHONOPHRAGMS Magnetic Metals Co. PHONO POINT Eldeen Co., The PHOS-COPPER Wastinghouse Electric Westinghouse Electric Corp. PHOTACT PHOTACI Keuffel & Esser Co. PHOTO-ARC Peerless Photo Products PHOTOCOPYER American Photocopy Equipt. Co. PHOTOLUX Westinghouse Electric Corp. PHOTOMATIC Western Electric Co., Inc. PHOTO-TROLLER Westinghouse Electric Corp. PHOTOTRONIC Weston Electrical Instrument Weston Electrical Instrument Co. PHOTOX Westinghouse Electric Corp. PHOTRONIC Weston Electrical Instrument Co. PIEZO-RAY Commercial Research Labs., Inc. PILOTONE Pilot Radio Corp. PILOTROL Bailey Meter Co. PINCOR PINCOR Pioneer Gen-E-Motor Corp. PLASKON ALKYD Plaskon Div., Libbey-Owens-Ford Glass Co. PLAST-CORIRON Plastics Metals Division The National Radiator Co. PLASTACFIF PLASTACELE du Pont de Nemours & Co., Inc., E. I. PLASTICLEAN House of Television PLASTICON PLASTICON Plastic Wire & Cable Corp. PLASTI-GRIP Aircraft-Marine Prods., Inc. PLASTIK FOIL Peerless Roll Leaf Co., Inc. Peerless Roll Leat Co., Inc. PLASTIMOLD Emerson Radio & Phonograph Corp. PLAST-IRON Plastics Metals Division The National Radiator Co. PLASTITE Whitney Blake Co. Whitney Blake Co. PLAST-MAGNETITE Plastic Metals Division National Radiator Co., The PLAST-MANGANESE Plastic Metals Division National Radiator Co., The PLAST-NICKEL Plastic Metals Division National Radiator Co., The PLAST-0-DIP Aeroil Products Co. PLASTO PAK Standard Varnish Works PLAST-SILICON Plastic Metals Division National Radiator Co., The PLAST-SPONGE PLAST-SPONGE Plastic Metals Division National Radiator Co., The PLAST-STEEL Plastic Metals Division National Radiator Co., The PLAX PAK Plax Corp PLAYBACK Reeves Soundcraft Corp. PLAYBOY Crosley Corp. PLAYTIME Crosley Corp. PLENTI-POWER Westinghouse Electric Corp. PLEXENE Rohm & Haas Co. PLEXICON Erie Resistor Corp. PLEXIGLAS Rohan & Haas Co.

PLIABOOK Paisley Products, Inc. PLIASTIC Paisley Products, Inc. PLIATAB Paisley Products, Inc. Goodyear Tire & Rubber Co. PLIOGRIP Goodyear Tire & Rubber Co. PLIOLITE Goodyear Tire & Rubber Co. PLIOLITE Resistoflex Corp. PLIOTHERM Goodyear Tire & Rubber Co. PLIO-TUF Goodyear Tire & Rubber Co. PLIOVIC Goodyear Tire & Rubber Co. PLYA-SEAL FLA-SCAL Fafnir Bearing Co. PLYMOUTH Meck Industries, John PLYOPHEN Reichhold Chemicals, Inc. PN PN Brush Development Co. POCKETSCOPE Waterman Products Co., Inc. POLECTRON General Aniline & Film Corp. POLICARB Driver Co., Wilbur B. POLIMERATOR Short Wave Plastic Forming Co. POLYCO Polymer Corp., The POLYFLEX Plax Corp. Plax Corp. POLYMET Cosmic Radio Corp. POLY-PENDANCE Standard Transformer Corp. POLYPHONIC SOUND Electronic Sound Engineering Co. POLYPHONIC SOUND Universal Broadcast Equipment Corp. POLY PLASTIC FULY PLASTIC Standard Varnish Works POLY RANGER Sensitive Research Instrument Co. POLYTHENE du Pont de Nemours & Co., Inc., E. I. POLY-VISO Sanborn Co. POLYWELD American Phenolic Corp. PORTA-POWER General Transformer Corp. PORTAPOWER Electronic Labs., Inc. PORTENTIOTROLS Wheelco Instruments Co. PORTOPHONE Harris Mfg. Co. POTENTIOTIALS Wheelco Instruments Co. POST-LITE Littelfuse, Inc. POWDIRON Bound Brook Oil-Less Bearing Co. POWER-FLEX Dumore Co., The POWER VOICE Taybern Equipment Co. POWERSTAT Superior Electric Co. POWMINCO Powhatan Mining Co. POW-R-FUL Western Cable Battery Co., Inc. PRECIPITRON Westinghouse Electric Corp. PRECISIONAIRE Sheffield Corp. PRECISIONER Maico Co., Inc. PRECISION-GAUGED PRECISION-GAUGED Precision Products Co. PREGWOOD Formica Insulation Co. PREMIER-TONE Premier Metal Etching Co. PRESET Bristol Co., The PresSURE Buchanan Electrical Products Corp. PRESSUREGRAPH Electro Products Labs., Inc. PRESTEEL Worcester Pressed Steel Co.

PRESTITE Westinghouse Electric Corp. PREST-0-LITE Linde Air Products Co. Unit of Union Carbide & Carbon Corp. PREST-0-WELD Linde Air Products Co. Unit of Union Carbide & Carbon Corp. PRESSWOOD Masonite Corp. PRMCO Ports Mfg. Co. PROGAR Langevin Co., Inc. PROKAR Sprague Electric Co. PROMATIC General Control Company PROMCO PROMCO Progressive Míg. Co. PROPELLAIR Robbins & Myers, Inc. PROTECTOGLO Minneapolis-Honeywell Regulator Co. PROTECTORELAY Minneapolis-Honeywell Regulator Co. PROTECTRON Brinnell Co. The Brinnell Co., The PROTELGRAM North American Philips Co. PROVAC Electronic Designs, Inc. PRYSTAL PRYSTAL Catalin Corp. of America P & S Pass & Seymour, Inc. PULSING DRIVE Yardeny Laboratories, Inc. PURATONE Brack Mar. Comp. 102 Brach Mfg. Corp., L. S. PUREBON Pure Carbon Co. PURETUNG Callite Tungsten Corp. PUROX Linde Air Products Co. Unit of Union Carbide & Carbon Corp. PWC Plastic Wire & Cable Corp. PYGMY Vulcan Electric Co. PYLETS Pyle-National Co. PYRALIN du Pont de Nemours & Co., Inc., E. I. Plastics Dept. PYREX Corning Glass Works Pyrometer Instrument Co. PYROCON Illinois Testing Labs., Inc. PYRODYN Skydyne, Inc. PYROLANCE Illinois Testing Labs., Inc. PYROMASTER Bristol Co., The PYROTESTER Electro-Tech Equipment Co. PYROTRON Bailey Meter Co. PYROVAC Eitel-McCullough, Inc. Guthman Inc., Edwin I. Q-MAX Q-LACE Communication Prods. Co., Inc. QUADRILINE Radio Engrng. Labs., Inc. QUARTZ Q Millen Mfg. Co., James QUELARC Pyle-National Co. QUICKLAG Westinghouse Electric Corp. QUICK-LOCK Simmons Fastener Corp. QUIETONE Condenser Corp. of America QUIK-CALL Motorola, Inc. QUIK-SHOT Kemode Mfg. Co. QUINORGO Johns-Manville Sales Corp. QUINTERRA Johns-Manville Sales Corp.

"R" MONEL The International Nickel Co., Inc. RACON BROADBAND Racon Electric Co. RAD-A-COR Magnetic Core Corp. RADAIR Bassett Inc., Rex RADALARM Communications Co., Inc. RADEX Boston Insulated Wire & Cable Co. RADIART RADIART Maguire Industries, Inc. RADIOCARB A Driver Co., Wilbur B. RADIO EAR Myers & Sons, E. A. RADIOGUIDE Padio Neurotional Instr Radio Navigational Instrument Corp. RADIO INDUCTOGRAPH Inductograph Lab. RADIOHM Driver-Harris Co. RADIOHMS Centralab Div. Globe Union, Inc. RADIOTONE Ellinwood Industries RAD-O-RECORDER Makan, Inc. RAILITE Amplex Div. Chrysler Corp. RANCOSTAT Ranco, Inc. RANGE LUGS Frankel Connector Co. RANGE MASTER Bradshaw Instruments Co. RANGER Electronic Specialty Co. RANGER RANGER J. F. D. Mfg. Co. RANGER Westinghouse Electric Corp. RANGERECORD Rangertone, Inc. RANGERECORDER Bangertone, Inc. Rangertone, Inc. RANGESPLICES Frankel Connector Co. RANGETAPS RANGETAPS Frankel Connector Co. RATOSIGHTS Fisher & Porter Co. RATOSLEEVES Fisher & Porter Co. RATOTRONIC Fisher & Porter Co. RAYCHRONIX Radioactive Products, Inc. RAYCHRONDETER Radioactive Products, Inc. Radioactive Products, Inc. RAYDIST Hastings Instrument Co. RAYFUSER Radioactive Products, Inc. RAYMERSION Frumbull Electric Mfg. Co. RAYONIC Waterman Products Co., Inc. RAYSONDE Friez Instrument Div. Bendix Aviation Corp. RAYPHOTO Times Facsimile Corp. RAYTHEON-BELMONT Belmont Radio Co., Div. Raytheon Mfg. Co. R B & W Russell, Burdsall & Ward Bolt and Nut Co. RDR Radio Development & Research Co. REACTRON United Condenser Corp. READO Crosley Corp. RECEPTRON Howard Mfg. Corp. RE-CIRK-IT Heinemann Electric Co. RECO Rectifier Engrng. Co. RECO Reynolds Electric Co. REC-O-PAD Whe-Gro Co. RECORD-A-CALL Crystal Devices Co., Inc. RECORDALL Miles Reproducer Co., Inc.

RECORDETTE Wilcox-Gay Corp. RECORDIO Wilcox-Gay Corp. RECORDIOPOINT Wilcox-Gay Corp. RECORDISES Recordisc Corp. RE-CORD-O-FONE Bell Sound Systems, Inc. RE-CORD-O-FONE Whe-Gro Co. RECTOMATIC Westinghouse Electric Corp. RECTOPLATER Mallory & Co., Inc., P. R. RECTOSTARTER McColpin-Christie Corp. RECTOX Westinghouse Electric Corp. RECTROL Electro-Tech Equipment Co. REDFLASH Vaco Products Co. RED HEAD Girdler Corp. Thermex Div. RED LETTER Ruby Chemical Co. RED STREAK Brown-Bridge Mills, Inc. REFRACTALOY Westinghouse Electric Corp. REGOHM Electric Regulator Corp. REGULITE Ward Leonard Electric Co. REKORDER Gorrell & Gorrell RELATROL Automatic Temperature Control Co. RELAYMATIC Kellogg Switchboard & Supply Co. RELIO U. S. Rubber Co. REMACO Clarkstan Corp. REMBRANDT Remington Radio Corp. REMOTE-0-CABLE J. F. D. Mfg. Co. REN Nebel Lab., R. E. REPCO REPCO Hollywood Radio Cabinet Co. RESIGUM Paisley Products Inc. RESIMENE Monsanto Chemical Co. Plastics Div. RESINOX Monsanto Chemical Co. Plastics Div. RESI-RAP Paisley Products Inc. RESISTOL Collyer Insulated Wire Co. RETRAX Aviometer Div. of Roanwell Corp. REVERSIT Rattan Mfg. Co., The REX Davis & Murphy REXFLEX Chicago Metal Hose Corp. Hamilton Kent Mfg. Co., Inc. Chicago Metal Hose Corp. Westinghouse Electric Corp. REXWELD Chicago Metal Hose Corp. REZISTAL Crucible Steel Co. of America RHINOBESTOS Westinghouse Electric Corp. RHOMAX Magnetic Metals Co. RHOMU Magnetic Metals Co. RHONITE Rohm & Haas Co. **RIB FLEX** Ward Leonard Electric Co. RIBOHM Ward Leonard Electric Co. RIGFAST Oak Ridge Antennas Div. of Video Television, Inc.

RING-SEAL Viking Products Sales Co. RINKOLIN Standard Varnish Works R. I. P. Westinghouse Electric Corp. RITEOHM Ohmite Mfg. Co. RITE-SPOT Hall Co., Gordon L. R & M Robbins & Myers, Inc. R M B Landis Gyr, Inc. RME RME Radio Mfg. Engineers, Inc. ROBOLITES Universal Microphone Co. ROBOTPHONE St. Louis Microphone Co. ROBOTROL Delivers Automatic Lighting Reliance Automatic Lighting Co. ROGER Aviometer Div. of Roanwell Corp. ROL-TOP Boots Aircraft Nut Corp. ROTO-BEAM Gordon Specialties Co. ROTO BEAM Kings Electronics Co. ROTO-COUNT Automatic Temperature Control Co., Inc. ROTO FORMER Westinghouse Electric Corp. E. F. Johnson Co. 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 General Lead Batteries Co. ROYAL U. S. Rubber Co. ROYAL CORD U. S. Rubber Co. ROYAL GOLD U. S. Rubber Co. ROYAL JEWEL Jensen Industries, Inc. Jensen Industries, Inc. ROYAL MASTER U. S. Rubber Co. ROYALITE U. S. Rubber Co. R P C Resistance Products Co. R S M C Radio Specialty Mfg. Co. RTL Peirce Wire Recorder Corp. RUBALT Hague & Co., Inc., Alfred U. S. Rubber Co. RUBSEC U. S. Rubber Co. RUB-TEX Bibberly Richardson Co. RUBYFLUID Ruby Chemical Co. RUCCO Ruby Chemical Co. RUF KOAT General Cement Mfg. Co. RUSH Eraser Co., Inc. RUST-BAN Esso Standard Oil Co. R V Clarkstan Corp. RYERTEX Ryerson & Son, Inc., Joseph T. SAFE-T Rumac Mfg. Co. SAFE-T-PLUG Littelfuse Inc. SAFE-T-SPARKY Littelfuse Inc. SAFLEX Square D Co. SAFLEX Monsanto Chemical Co. SANACOUSTIC Johns-Manville Sales Corp.

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ANFORD-BENNET Rubicon Co. SARAN Dow Chemical Co. SAT-N-DIP Frederick Gumm Chemical Co., Inc. SAUTER TIME SWITCHES Cramer Co., Inc., R. W. SAV-A-SHAFT SAV-A-SHAFT National Union Radio Corp. S/B Vaco Products Co.. SCALE-O-MATIC Technical Associates SCOTTIE Remler Co., Ltd. SEALDOHM Daven Co. SEALDTITE Solar Mfg. Co. SEALEX General Ceramics & Steatite Corp. SEALNUT Radio Frequency Labs., Inc. SEAL-0-FLANGE Communication Prods. Co., Inc. SEALTEMP Solar Mfg. Corp. SEAMASTER Dine & Co., Inc., F. E. SECO SECO American Plastic Products SELECTO-CALL Federal Telephone & Radio Corp. SELECT-0-PHONE Kellogg Switchboard & Supply Co. SELECTOR Do All Co Do All Co SELECTRON Do All Co. SELECTRONICS Selenium Corp. of America SELECTRO-PLATERS Green Electric Co., Inc. SELETRON Radio Receptor Co. SELFLUBE Keystone Carbon Co., Inc. SEMS Lamson & Sessions Co. SEMS Manufacturers Screw Products SENSATHERM Mercoid Corp. SENSITROL Weston Electrical Instrument Co. SENSITRON Weston Electrical Instrument Co. SENTINEL SENTINEL Photobell Company SENTINEL Westinghouse Electric Corp. SERVOBOARD Servo Corp. of America SERVOGLIGHT Servo Corp. of America SERVOGRAPH Servo.Tek Products Co. Servo-Tek Products Co. SERVOSCOPE SERVOSCOPE Servo Corp. of America SERV-RITE Gordon & Co., C. S. SHADOWCONTROL Autotron Co., The SHADOWCOUNT Autotron Co., The SHADOWCOUNT Autotron Co., The SHADOWMASTER Autotron Co., The SHANNON GLOW Shannon Luminous Materials Co. SHUR GRIP Parker-Kalon Corp. SHURITE J B T Instruments Inc. SIECO Sherman Industrial Floatennics C Sherman Industrial Electronics Co., Inc. SIGHT METER Weston Electrical Instrument Co. SIGNALINER Feiler Engineering Co. SILASTIC Dow Corning Corp. SILCAZ Electro Metallurgical Co. Unit of Union Carbide & Carhon Corp. SILENTBLOC The General Tire & Rubber Co. Silentbloc Div. SILENT SENTINEL Westinghouse Electric Corp. SILFLEX

SIL-FOS Handy & Harman SILKENITE Acme Wire Co. SILVALOY Linde Air Products Co. Unit of Union Carbide & Carbon Corp. SILVERCOTE Little Falls Alloys, Inc. SILVERMIKE SILVERMIKE Condenser Corp. of America SILVER-Q Decimeter, Inc. SILVERSTAT Westinghouse Electric Corp. SILVERTONE Colorida Parlia Comp Colonial Radio Corp. SIMPAC SIMPAC Westinghouse Electric Corp. SIMPLI-FLEX Radiart Corp, The SIMPLYTROL Assembly Prods., Inc. SIXTY Shure Brothers SKANASCOPE Skaneateles Mfg. Co., Inc. Spencer-Kennedy Labs., Inc. SKORESIN SKUKESIN Skoning Corp. S.K.S. Paisley Products, Inc. SKY BEAM Lyte Parts Co. SKYFONE Hallingthe C Hallicrafters Co. SKYGUIDE Philco Corp. SKY-KING J. F. D. Mfg. Co. SKYPLY Skydyne, Inc. SKY-WEIGHT Continental Electronics, Ltd. SLIDEOHM Aerovox Corp. SLIPSTICK Decimeter, Inc. SLIPSYN Westinghouse Electric Corp. SLO-BLO Littelfuse, Inc. SMOKGAGE Ess Instrument Co. SMUTBATH Special Chemicals Co. SMZ Electro Metallurgical Co. Unit of Union Carbide & Carbon Corp. SOLDALOY Mallory & Co., Inc., P. R. SOLDER MASTER Hexacon Electric Co. Hexacon Electric Co. SOLDERLITE Weller Mfg. Co. SOLISTRAND Aircraft-Marine Prods., Inc. SOLITE Solar Mfg. Corp. SOLO-PAK Ailen-Howe Electronics Corp. Allen-How Electronics Corp. SOLOTRON Modern Hearing Aids Laboratory, The SOLU-BRIDGE Industrial Instruments, Inc. SONACTOR Kay Electric Co. SONA-GRAPH Kay Electric Co. SONALATOR Kay Electric Co. SONCERA SONCERA Poinsettia, Inc. SONIC EAR Taybern Equipment Co. SONODYNE Shure Brothers SONO-PROBE Augent Electronics ASS Aircraft Electronics Associates, Inc. SONDTONE Sonotone Corp. Chaslyn Co. SOUNDCASTER Operadio Mfg. Co. SOUNDEX Proctor Soundex Corp. SOUND CELL Brush Development Co. SOUND ISOLATION BLANKET Johns-Manville Sales Corp.

SOUNDMIRROR Brush Development Co. SOUNDTRAP Miles Reproducer Co., Inc. SOUNDVIEW Tech-Master Products Co. SPARKFLASH Triumph Mfg. Co. SPARTON Gilner Mfg. Co. SPARX McMurdo Silver Co., Inc. SPAULDITE Spaulding Fibre Co., Inc. SPAULDO Spaulding Fibre Co., Inc. SPECO Special Prods. Co. SPECOIL SPECOIL Special Prods. Co. SPECORAK Special Chemicals Co. SPECPLATER Special Chemicals Co. SPEC-POWER National Spectrographic Labs., Inc. SPECTABLE Special Chemicals Co. SPECTRIFIER SPECTRIFIER Special Chemicals Corp. SPEECH MASTER Jensen Mfg. Co. SPEED CLAMPS Tinnerman Products Inc. SPEED CLIPS Tinnerman Products Inc. Peck & Harvey SPEED IRON Weller Mfg. Co. SPEED LITES Kluge Electronics, Inc. SPEED NUTS Tinnerman Products Inc. SPEEDOMAX Leeds & Northrup Co. SPEED-X Johnson Co., E. F. SPEKALUMINITE Special Chemicals Corp. Special Chemicals Co. SPEKWITE Special Chemicals Co. SPEKYELLO Special Chemicals Co. SPENCER SPENCER American Optical Co. SPERRY DUPLEX Sperry Gyroscope Co. Div. of The Sperry Corp. SPERRY REFLECTOGAGE Sperry Products, Inc. SPERRY REFLECTSCOPE Sperry Products, Inc. SPIN-HEX Vaco Products Co. SPINTITE Stevens-Walden Inc. SPIRALOCK Production Engrg. Co. Production Engrg. Co. SPIRALON Surprenant Mfg. Co. SPIRASHIELD Muter Co. SPOTTING SCOPE Argus, Inc. SPRAY SPRAY Paisley Products Inc. SPRING-LIFE Cook Electric Co. SPRINGLOCK Simmons Fastener Corp. SQUEEZ-GRIP C-O Two Fire Equipt. Co. SQUEEZE-LOCK Buchanan Electrical Produ SUDELZE-LOCK Buchanan Electrical Products Corp. STABILFLO Foxboro Co., The STABILINE Superior Electric Co. STABILOG Foxboro Co., The STAC0 Standard Electrical Products Co. STA-KON Thomas & Betts Co., Inc.

New York Solder Co.

Standard Transformer Corp.

STANCOR

STANDARD

Varflex Corp.

STANDARD ARROW National-Simplex-Bludworth, Inc. STANDARD BINNACLE National-Simplex-Bludworth, Inc. STANDATROL Bailey Meter Co. STANDLAC Standard Varnish Works STANDO Sticht Co., Herman H. STANELCO Standard Telephones & Cables Ltd. STANTEL Standard Telephones & Cables Ltd. STANTOX STANTOX Standard Varnish Works STAN-TRAN Stanwyck Winding Co. STARBIRD Meletron Corp. STAR J Haynes Stellite Co. Unit of Union Carbide & Carbon Corp. STARKLINE Stark Sound Engr. Corp. STARTIX Eclipse Machine Div., Bendix Aviation Corp. STATISCOPES Minerallac Electric Co. STA-TRAN Stanwyck Winding Co. STEELKLAD Sheboygan X-Ray Co. STEELSET Fish-Schurman Corp. STEEL-SET Paisley Products, Inc. STERILAIRE Ultra-Violet Products Inc. STERILAMP Westinghouse Electric Corp. STERILZONE Dallons Labs. "STERLING CABLES" Cossor (Canada) Ltd. STETHERTRON Maico Co., Inc. STETHOSCOPE Feiler Engineering Co. STIKON Ruge-DE Forest, Inc. Ruge-DE Forest, Inc STILBEST Linick Chemical Co. STOKATIMER Mercoid Corp. STONEHART STONEHART Titeflex, Inc. STRATOGRAPH Panoramic Radio Corp. STRATOLLNET Sbure Brothers STRATOPAX Cook Electric Co. STRATOSCOPE Panoramic Radio Corp. Panoramic Radio Corp. STRATOTONE Globe Electronics Inc. STRATOVISION Westinghouse Electric Corp. STRESSITE Amplex Div. Chrysler Corp. STRING-A-LITE Mines Equipment Co. STRIPMASTER Ideal Industries, Inc. STRIPOHM Ward Leonard Electric Co. STRIPSOL Paisley Products, Inc. STROBOCONN Conn. Ltd., C. G. STROBODYNE Sperry Gyroscope Co. Div. of The Sperry Corp. STROBOFLASH General Radio Co. STROBOFLOW Flowmeter Corp. of America STROBO-LITE Avia Prods. Co. STROBOLUX General Radio Co. STROBOTAC General Radio Co. STROWDER Automatic Electric Co. STRUX du Pont de Nemours & Co., Inc., E. I. Plastics Dept.

STURTEVANT Westinghouse Electric Corp. STYRALOY Dow Chemical Co. STYRAMIC Monsanto Chemical Co. STYROL AC Standard Varnish Works STYRON Dow Chemical Co. SUB-CYCLE Lorain Products Corp. SUNFLASH SUNFLASH Kemlite Labs. SUNSWITCH Ripley Co., Inc. SUPER-BEAM J. F. D. Mfg. Co. SUPEREX Solar Mig. Co. SUPER EX. Telrex, Inc. SUPERFLAKE Superior Flake Graphite Co. SUPERGAIN Lyte Parts Co. SUPER-GLO Cardy-Lundmark Co. SUPERMALLOY Arnold Engineering Co. SUPER-OILITE Amplex Div. Chrysler Corp. SUPER PRO Hammarlund Mfg. Co. SUPER Q Guthman, Inc., Edwin I. SUPERSEC U. S. Rubber Co. SUPERSONIC REFLECTOSCOPE Sperry Products Inc. SUPER TRACER Provident Flactronics Precision Electronics SUPER-VIEW Brach Mfg. Corp., L. S. SUPERWIRE Audar Inc. SUPER X Western Brass Mills Div. of Olin Industries SUPREME Aim Industries SUPREME Phonograph Needle Mfg. Co., Inc. SUPRO Valco Mfg. Co. SURE FLUX New York Solder Co. SURFACE-ANALYZER Brush Development Co. SURFEX Pass & Seymour, Inc. SWEATLES SWEATLES Paisley Products Inc. SWEET Jensen Industries, Inc. SWELTERPROOF Aviometer Div. of Roanwell Corp. SWING-WA Trumbull Electric Mfg. Co. SWITCH-LITE Littelfuse, Inc. SWITCH-0-LITE Hoffman Engrng. Corp. SYLPLAST Sylvan Plastics, Inc. SYLVALOY Driver Co., Wilbur B. SYMPHONY SYMPHONY Hollywood Radio Cabinet Co. SYMPHONY MASTER Monitor Products Co. SYNCHRO-LINK Yardney Laboratories, Inc. SYNCHRO-METER Bailey Meter Co. SYNCHRON Hansen Mfg. Co. SYNCHRONIZED Self Winding Clock Co. Self Winding Clock Co. Crosley Corp. SYNCHROTROL Westinghouse, Electric Corp. SYNCHRO-VALVE Bristol Co., The SYNCROGEARS U. S. Electrical Motors, Inc. SYNCTRON Dormitzer Electric & Mfg. Corp. SYNKOTE

SYNRUB U. S. Rubber Co. SYNTHINOL Rome Cable Corp. SYNTHITE Dolph Co., John C. SYNTHOGRAPHIC Synthane Corp. SYNTHOLVAR Varflex Corp. SYNVAREN Synvar Corp. SYNVARITE SYNVARITE Synvar Corp. SYNVAROL Synvar Corp. SYROCOWOOD Syracuse Ornamental Co., Inc. Electronic Devices Co. T 9 20th CENTURY Eidson Electronic Co. TABBY Division Lead Co. TACO Technical Appliance Corp. TAG Tagliabue Corp., C. J. TANGLE-PROOF Hobbs Mfg. Co. TAKK-TRON Takk Corp. TAP Continental Screw Co. TAPE-O-GRAPH Audio Industries TAPE RECORDER TAPE RECORDER Ampex Electric Corp. TAPE TACK Paisley Products Inc. TAPE TITE Paisley Products Inc. TAPER-TONE Acton Co., H. W. TARRYTRON Cook Electric Co. TATTELITE Littlefues Inc. Littelfuse, Inc. TECO Televista Corp. of America TEFLON du Pont de Nemours & Co., Inc., E. I. Plastics Dept. TEFSILON Boston Insulated Wire & Cable Co. TEGIT Garfield Mfg. Co. TEKTOR TEKTOR Fielden Electronics Inc. TEL-A-COR Magnetic Core Corp. TELAMP Miles Reproducer Co., Inc. TELANTUNE Crystal Devices Co., Inc. TELAPDOACH TELAPPROACH American District Telegraph Co. TELEBEAM Marino Radio Co. TELECLEAR House of Television TELEDELTOS Western Union Telegraph Co. TELEDIPHONE Thomas A. Edison, Inc. TELEFAX Western Union Telegraph Co. TELEFILTER House of Television TELEHOME Webster Electric Co. TELEKRYPTON Western Union Telegraph Co. TELEMARK Leupold & Stevens Instruments TELEMETROSCOPE Deutschmann Corp., Tobe TELEMIKE Miles Reproducer Co., Inc. TELEPAGE Webster Electric Co. TELEPHOTO Acme Telectronix Div. of NEA Service, Inc. TELEPLATE Whitney Blake Co. TELEPRENE Whitney Blake Co. TELESET

Telex, Inc.

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Plastoid Corp.

**ZSONIC** J. S. Television Mfg. Corp. (ELESPATCH Webster Electric Co. TELESPEAKER Telex, Inc. TELESYMPHONIC U. S. Television Mfg. Corp. TELETALK Webster Electric Co. TELETHERM Westinghouse Electric Corp. TELETORQUE Kollsman Instrument Div. of Square D Co. TELETRAP Crystal Devices Co., Inc. TELETYPE Western Electric Co., Inc. TELETYPESETTER Western Electric Co., Inc. TELEVAC Fredericks Co., Geo. E. TELEVOX TELEVOX Westinghouse Electric Corp. TELE-ZOOM Garod Radio Corp. TELOPTICAN Gray Mfg. Co. TEL-TENNA Provision Plantia Declarate Precision Plastic Products Inc. TELVAR Audar, Inc. TELVUER Television Projects, Inc. TEMCO Transmitter Equipt. Co., Inc. TEMP COP Micro Switch, Div. of First Industrial Corp. TENITE Tennessee Eastman Corp. Div. Eastman Kodak TENITE 1 Tennessee Eastman Corp. Div. Eastman Kodak Tennessee Eastman Corp. Div. Eastman Kodak TENNA-ROTOR Alliance Mfg. Co. TENNASTUB TENITE II Crystal Devices Co., Inc. TENSIOMETER Saxl Instrument Co. TENSITE Driver Co., Wilbur B. TENS-0-TROL Dillon & Co., Inc., W. C. TERMALINE Bird Electronic Corp. TERMAND Buchanan Electrical Products Corp. TERVAN Esso Standard Oil Co. TESCO TESCO Eastern Specialty Co. TESTLITE-FUSPUL Dante Electric Mfg. Co. TEST-0-LITE Brach Mfg. Corp., L. S. TEST-MASTER Province Amagaztus Co. Precision Apparatus Co. TETCO Electric Tachometer Co. TEXTOLITE General Electric Co. THERA-RAY Edin Electronics Co. THERMALARM Eastern Specialty Co. THERMALL LaRose & Associates, W. T. THERMALOAD Monitor Controller Co. THERM-A-NEERING Westinghouse Electric Corr Westinghouse Electric Corp. THERMATRON Radio Receptor Co. THERMEX Girdler Corp. Thermex Division THERMITE Thermionic Engrg. Corp. THERMO-CONTAX Rahm Instruments, Inc. THERMO-GRIP Ideal Industries, Inc. THERMOGUARD Westinghouse Electric Corp.

THERMOLAIN Star Porcelain Co. THERMOLAST Elematic Equipt. Corp. THERMO-LO Farrelloy Co. THERMOMETAL Wilson Co., The, H. A. THER-MONIC Induction Heating Corp. THERMOPLAX Cutler-Hammer, Inc. THERMOSEN Sorensen & Co. THERMO-SNAP Spencer Thermostat Co. THERMOSWITCH Ferwal, Inc. THERM-OTROLS Wheelco Instruments Co. THERMOVERTER Bristol Co., The THER-MU-TROL Mu Switch Co. Mu Switch Co. THINEX THINEX Dixon Crucible Co., Joseph THRED-LOCK Continental Screw Co. THREDMOUNT National Union Radio Corp. THROTTLTROLS Whoele Instruments Co. Wheelco Instruments Co. THRURAY Sperry Products, Inc. TICONDEROGA Dixon Crucible Co., Joseph TI-MATIC Westinghouse Electric Corp. TIME AID TIME AID Paragon Electric Co. TIMEFAX Times Facsimile Corp. TIME-MASTER TIME-MASTER Dictaphone Corp. TIME-0-GRAF Gibbs Div. George W. Borg Corp. TIME-0-LITE Industrial Timer Corp. TIM-0-LUX Sidward Mfg. Co., Inc. TINOL American Solder & Flux Co. TINY GLOW Industrial Devices, Inc. Industrial Devices, Inc. TINY TIM Shure Brothers TIREX Simplex Wire & Cable Co. TISCO Taylor-Wharton Iron & Steel Co. TITAN General Lead Batteries Co. Thomas & Betts Co., Inc. TITE-BITE Thomas & Betts Co., Inc. TITEGRIP TITE-BIND Dante Electric Mfg. Co. TITONE TITONE Sonotone Corp. TITRALOG Consolidated Engineering Corp. TITRIMETER Fisher Scientific Co. TITROMETER Precision Scientific Co. TOCCO TOCCO Ohio Crankshaft Co., Tocco Div. T. W. Paisley Products Inc. TOCCOTRON Ohio Crankshaft Co., Tocco Div. TOK FONE Regal Electronics Corp. TOM THUMB Automatic Radio Mfg. Co., Inc. TONG TEST Columbia Electric Mfg. Co. TONG TEST Martindale Electric Co. TOPHET TOPHET Driver Mfg. Co., Wilbur B. TORKOTHERM Tork Clock Co. TORQUE DRIVE Electro-Voice, Inc. TORKMASTER Tork Clock Co., Inc. TORRIDAL Capacitron Co. TORSIOGRAPH

Commercial Research Labs., Inc.

TORSIOMETERS Commercial Research Labs., Inc. TOUCH-TIMER Kay Electric Co. T P I Radio Development & Research TRACEX H-W Mfg. Co. TRADIO-ETTE Tradio, Inc. TRADIOVISION Tradio, Inc. TRAFF-O-MATIC Automatic Signal Div., Eastern Industries, Inc. TRAIL BLAZER Meck Industries, John TRANCORS Lenkurt Electric Co., Inc. TRANSAXIL Mettler Co., Lee B. TRANSERT Halwig Co. TRANSFAX Eastman Kodak Co., Industrial Photographic Salas Div TRANSFILTER Brush Development Co. TRANSFLEX Irvington Varnish & Insulator Co. TRANSITE Johns-Manville Sales Corp. TRANSITONE Philco Corp. TRANS-METER Electronic Specialty Co. TRANSMIKE Signal Electronics, Inc. TRANSVERTER Hertner Electric Co. TRAVERTONE Armstrong Cork Co. TRIGNITRON Electronic Power Co., Inc. TRIG Rostan Corp. TRI-LOK Boots Aircraft Nut Corp. TRIMAIR Cardwell Mfg. Corp., Alan D. TRIMTHERM General Controls Co. TRI-O-MATIC V-M Corp. TRI-O-SPEED V-M Corp. TRIONIC Clarkstan Corp. TRIPLOC TRIPLOC Pyle-National Co. TRONEX Wheaton Co., T. C., Industrial Div. TRUARC Waldes Kohinoor Inc. TRU-COPY-PHOTE Photo Reproducing Equip. Co. TRU FIDELITY Thordarson Electric Mfg. Div. Maguire Industries, Inc. TRU-FLEX Peerless Photo Products Peerless Photo Products TRU-GRAF Peerless Photo Products TRU-OHM Model Engrng. & Mfg. Co. TRUSCON Republic Steel Corp. TRU-SONIC Stephens Mfg. Corp. TRYLON Wind Turbine Co., Tower & Antenna Div. TUBE-MASTER Precision Apparatus Co. TUBE-U-LAR Pyramid Electric Co. TUFFERNELL Westinghouse Electric Corp. TUFFY Insulation Mfg. Corp. TUFLEC Laminated Plastics Inc. TUNACORE Stanwyck-Webb Magnetic Core Corp. TURBO Brand & Co., Wm. TURBO PRENE Brand & Co., Wm. TURBOTHERM Brand & Co., Wm. TURQUOISE Eagle Pencil Co.

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THERMO-HUMIDIGRAPH

Bristol Co., The

TURY International Products Corp. TWINTACTS Weston Electrical Instrument Co. TWIN-TRAX Amplifier Corp. of America TWINKORD Ansonia Electrical Co. TWINSET Telex, Inc. TWINSULATION TWINSULATION U. S. Rubber Co. TWISTAB National Union Radio Corp. TWIST-LOCK Harvey Hubbell, Inc. TWIST-MOUNT Duronid Electric Co Pyramid Electric Co. TYGON U. S. Stoneware Co., The TYLOX TYLOX Hamilton Kent Mfg. Co., Inc. TYMIT Tork Clock Co. TYNEE-DRY Pyramid Electric Co. TYPE-O-WRITER Kellogg Switchboard & Supply Co. TYPHONITE ELDORADO Dixon Crucible Co., Joseph TZUCOPY PHOTE General Photo Products Co., Inc. U. H. C. A. Commodore Record Co. ULTRACOMPACT United Transformer Co. ULTRAPHONE Gross Electronics, Inc. ULTRASON Televiso Products, Inc. ULTRASONORATOR Crystal Research Labs., Inc. ULTRATONE Audio Industries Monsanto Chemical Co., Plastics Div. UNBRAKO Standard Pressed Steel Co. Standard Fressed Oster Cl. UNDARK U. S. Radium Corp. UNIBALLASTS National Union Radio Corp. UNICLOSED U. S. Electrical Motors, Inc. UNICON United Condenser Corp. UNI-CRIMP Sherman Mfg. Co., H. B. UNIDYNE UNIDYNE Shure Brothers UNI-FLEX Dumore Co., The UNILATOR United Insulator Co., Ltd. UNIONMELT Linde Air Products Co., Unit of Union Carbide & Carbon Corp. UNIPLEX Shure Brothers Shure Brothers Andrew Co. Bristol Co., The UNITRAD Crosley Corp. Eckert-Mauchly Computer Corp. UNIVERSAL Mueller Electric Co. UNIVERSAL Davis & Murphy UNIVIBES National Union Radio Corp. UPSON Republic Steel Corp. URAC American Cyanamid Co., Plastics Div. URELITE I-T-E Circuit Breaker Co. UST U. S. Television Mfg. Corp. USALITE Stupakoff Ceramic & Mfg. Co. USALITE U, S. Electric Mfg. Corp. USBLUCO BOARDMASTER U. S. Blue Print Paper Co. USEMENT U. S. Rubber Co. USEX U. S. Rubber Co.

USEX ABBOSEALED U. S. Rubber Co. USKORONA U. S. Rubber Co. USPRENE U. S. Rubber Co. USRUB U. S. Rubber Co. Carnegie-Illinois Steel Corp. U.S.S. AMERICAN American Steel & Wire Co. UTC UTC United Transformer Corp. UTILASTIC Paisley Products, Inc. UTILIPHONE Electronic Labs., Inc. UTILISCOPE Farnsworth Television & Radio Corp. VACOMBO Vaco Products Co. VACOPAK Vacolite Co. VACTITE VACTU-PAK Allen-Howe Electronics Corp. VACTU-PHONE Allen-Howe Electronics Corp. VAGABOND Lincoln Electronics Corp. VALVRATORS Fischer & Porter Co. VAN de GRAAFF High Voltage Engineering Corp. VANGTRONIC WELDER Electronic Power Co., Inc. VARGLAS Varflex Corp. VARIATEN Shallcross Mfg. Co. VAGABOND Shallcross Mfg. Co. VARIDRIVES U. S. Electrical Motors, Inc. VARIMATCH United Transformer Corp. VARIAC General Radio Co. VARIPOWER United Transformer Corp. VARITRAN United Transformer Corp. VARITRONIC Electronic Equipment Corp. VARI-VOLT Halldorson Co., The VAR-X Electronic Development Co. VAW John Fluke Engineering Co. **VEECO** Vacuum Electronic Engineering Co. VEE-D-X LaPointe-Plascomold Corp. VEGIMAL Paisley Products, Inc. VELOMETER Illinois Testing Labs., Inc. VELVETONE Flock Process Co. VENDLITES Drake Mfg. Co. VERICON Remington Rand, Electronic Division VERITHIN Eagle Pencil Co. VERSALITE U. S. Rubber Co. VERSATEX Shure Brothers VIBESTON U. S. Rubber Co. VIBRALOC VIBHALOC Topping Mfg. Co. VIBRAPAK Mallory & Co., Inc., P. R. VIBRASHOCK Robinson Aviation, Inc. VIBROGROUND Associated Research Inc. Associated Research Inc. VIBRO-ISOLATOR Korfund Co., Inc. VIBROMETER Televiso Products, Inc. VIBROMIKE Brush Development Co. VIBROTEST Associated Research, Inc. VICTRON Victor Electric Products, Inc.

VIDEAMP Crystal Devices Co., Inc. VIDEOCOUPLER Mallory & Co., Inc., P. R. VIDEOLA Tech-Master Products Co. VIDEOTRONS National Union Radio Corp. VIEWLITE Viewlex Inc. VIEWMATIC Viewlex Inc. VIMLITE Celanese Plastics Corp. VINYL Alpha Wire Corp. VINYLITE Bakelite Corp. VINYLSEAL Bakelite Corp. VINYON Bakelite Corp. VIPOWER Radiart Corp., The VISABLE PROOF Electric Heat Control Co., The VISAEL AME VISAFLAME Mercoid Corp. VISCOR Weston Electrical Instrument Co. VISIBEAM Burnett Service Co. Ewart & Koch VISICODE Westinghouse Electric Corp. VISI-LIMIT Wilmotte Mfg. Co. VISITRON Rauland Corp. VISO-CARDIETTE Sanborn Co. Enjay Co., Inc. VISTAWAX Cantol Wax Prods. Co. VISUAL GAGE Sheffield Co. VITAMIN Q Sprague Electric Co. VITAVOX Radionic Transformer Co. VITROHM Ward Leonard Electric Co. VITROLAIN Star Porcelain Co. VIZ Molded Insulation Co., Aircraft Control Div. VOCAL-AIRE Dilks Co. VOICE OF THEATRE Altec Lansing Corp. VOICEWRITER Edison Inc., Thomas A. VOLSTAT Industrial Transformer Corp. VOLTALAC Standard Varnish Works VOLTAPE Respro, Inc VOLTASCOPE Polarad Electronics Co. VOLTBOX A-C Superior Electric Co. VOLTIPLIER Techno-Scientific Co. VOLTOHMYST Radio Corporation of America VOLTROL Acme Electric Corp. Industrial Synthetics Corp. VOMAX McMurdo Silver Co., Inc. VOYCALL Lake Mfg. Co. VUELITE Monsanto Chemical Co., Plastics Div. VUEPAK Monsanto Chemical Co., Plastics Div. VUE SCOPE Celomat Corp. VULCATEX Horn Co., Inc., A. C. VULCOID Continental Diamond Fibre Co. Corning Glass Works WABLQUIST Nilsson Electrical Laboratory, Inc. WAHLOUIST Nilsson Electrical Laboratory, Inc.

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LCO Electrovox Co., Inc. WALDES TRUARC Waldes Kohinoor, Inc. WALSCO Schott Co., Walter L. WATCHMASTER American Time Products, Inc. WATCRWITE Bache & Co., Semon WAXMASTER Aeroil Products Co. W. B. G. Foote, Pierson & Co., Inc. W. D. C. Paisley Products Inc. WEDGE-GRIP Sherman Mfg. Co., H. B. WEDGE-GN Thomas & Betts Co., Inc. WEDGE Ingulation Mfrs. Corp. WEIGER-WEED Fansteel Metallurgical Corp. WEI& Co., J. H. WEILETTE Weil & Co., J. H. WEILINE Weil & Co., J. H. WEILINE Weil & Co., J. H. WELDRAWN Superior Tube Co. WELDOMATIC Westinghouse Electric Corp. WELD-O-TIMER Westinghouse Electric Corp. WELD-O-TROL Westinghouse Electric Corp.

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WESTREX Western Electric Co., Inc. WHEELOCK Signal Engineering & Mfg. Co. WINCHESTER Olin Industries, Inc. WINCO Wincharger Corp. WIPERMALLOY United Transformer Corp. WIPERMALLOY United Transformer Corp. WIREMASTER Precision Audio Prods., Inc. WIRE-NUTS Ideal Industries, Inc. WIREPHONE Molded Insulation Co., Aircraft Control Div. WIREMASTER Molded Insulation Co., Aircraft Control Div. WIREWATT Ohmite Mfg. Co. WIREWAY Wire Recording Corp. WISSO Wickwire Spencer Steel Div., The Colorado Fuel & Iron Corp. WMECO Waveguide Mfg. & Equipt. Co., Inc., The WOOD GLU Paisley Products Inc. WOODWELDER Syracuse Ornamental Co., Inc. WOODWELDER Short Wave Plastic Forming Co. WOODWIN Wood Electric Co., Inc., C. D. WRIGHTFLOR Taylor Mfg. Co.

XACTEMP Gordon Co., Claud S. XACTLINE Gordon Co., Claud S. XCELITE Park Metalware Co. XENOFLASH Triumph Mfg. Co. X-PRESS Cook Electric Co. X-THERMOTROL Gasket Engineering Co. X-TROL Gasket Engineering Co. YES Yates Engineering Service Z ANGLE Technology Instrument Corp. "Z" NICKEL The International Nickel Co., Inc. ZENEL Bonney Forge & Tool Works ZERO READER Sperry Gyroscope Co. Div. of The Sperry Corp. ZIPCORD U. S. Rubber Co. ZIPOHMS Muter Co. ZIP-IN American Phenolic Corp. ZIRCONARC Fish-Schurman Corp. ZIRMET Foote Mineral Co. ZYROX Halowax Products Division, Unit of Union Carbide & Carbon Corp.

# **1949-1950 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 Products, Inc., 2131-35 Stoner Ave., W. Los Angelees 25, Calif.
   A B C Radio Laboratories, 3334 N. New Jersey
- St., Indianapolis 5, Ind. A & M Woodcraft, Inc., 419 W. 49th St., New
- York 19, N. Accurate Insulated Wire Corp., 25 Fox St., New
- Haven 1, Conn. Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
- Ace Mfg. Corp., 1255 E. Erie Ave., Philadelphia, Pa.
- Acheson Colloids Corp., Port Huron, Mich. Ackerman-Johnson Co., 625 W. Jackson Blvd.,
- Chicago, Ill.
- Chicago, Ill. Acklin Stamping Co., 1923 Nebraska Ave., To-ledo 7, Ohio Acme Battery Co., 59 Pearl St., Brooklyn, N. Y. Acme Electric Corp., Cuba, N. Y. Acme Electric Heating Co., 1217 Washington St., Boston, Mass. Acme Folding Box Co., Inc., 141 E. 25th St., New York, N. Y. Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio Acme Wire Co., New Haven 14, Conn. Acro Electric Co., 1316 Superior Ave., Cleveland, Ohio

- Ohio
- Acro Products Co., 5330 Baltimore Ave., Phila.,
- Acro Frontets Corp., 21-20 33rd Ave.,
  Pa.
  Acro Transformer & Mfg. Corp., 21-20 33rd Ave.,
  Long Island City 6, N. Y.
  Acromark Co., 9-13 Morrell St., Elizabeth 4, N. J.
  Actom Co., Inc., H. W., 370 7th Ave., New York
  1, N. Y.
  Phanetine, 314 Beaubien St., Detroit
- 1, N. Y. Adair & Rhamstine, 314 Beaubien St., Detroit 26, Mich. Adam Electric Co., Frank, St. Louis, Mo. Adams & Westlake Co., Michigan St., Elkhart,
- Ind
- Adaptol Co., 120 New Lots Ave., Brooklyn, N. Y. Adel Precision Products Corp., 10777 Van Owen St., Burbank, Calif. Admiral Corp., 3800 Cortland St., Chicago 47,
- TH.
- Advance Electric & Relay Co., 1260 W. Second St., Los Angeles, Calif. 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 Instrument Co., 2021 N. Lincoln St., Burbank, Calif.
- Aero Needle Co., 619 N. Michigan Ave., Chicago 11, Ill. Aeroil Products Co., Wesley St., South Hacken-
- sack, N. J. Aerolite Electronic Hardware Corp., 24 Cliff St., Jersey City, N. J. Aerolux Light Corp., 653 11th Ave., New York
- Aerolux L 19, N.
- Y
- Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla. Aeronautical Radio Mfg. Co., 155 First St., Min-eola, N. Y.
- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
- Aim Industries, 41 Union Sq., New York 3, N. Y. Air Associates, Inc., Teterboro, N. J. Air Champ Mfg. Co., 19 Fourth Ave., Brooklyn 17, N. Y.

- 17, N. Y. Air-King Products Co., Inc., 170 53rd St., Brook-Ivn, N. Y. Airborne Electronics Co., Metropolitan Airport Hanger No. 3, Van Nuys, Calif. Airborne Instruments Lab., Inc., 160 Old Coun-try Rd., Mineola, N. Y. Aircraft Electronics Associates, Inc., 1031 New Britein Ave. Hartford 10 Conn
- Britain Ave., Hartford 10, Conn. Aircraft Marine Products, Inc., 1523 N. Fourth
- St., Harrisburg, Pa.

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- Aircraft Radio Corp., Boonton, N. J. Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa
- Pa. Aireon Mfg. Corp., 1401 Fairfax Trafficway, Kan-sas City 15, Kansas Airlectron, P. O. Box 151, Caldwell, N. J. Airpax Products Co., 1024 Greenmount Ave., Bal-
- timore 2, Maryland Airplane & Marine Instruments, Inc., Clearfield, Pa.
- Pa.
  Airtron, Inc., 101 E. Elizabeth Ave., Linden, N. J.
  Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 26, Calif.
  Ajax Electrothermic Corp., Ajax Park, Trenton,
- Nº J
- Aladdin Radio Industries, Inc., 501 W. 35th St., Chicago 16, Ill.
- Alco Valve Co., 865 Kingsland, St. Louis 5, Mo. Alden Products Co., 117 No. Main St., Brockton 64, Mass.
- Aldine Paper Co., Inc., 535 5th Ave., New York 17, N. Y.
- Alfax Paper & Engineering Co., 40 Riverside Ave., Brockton 27 E. B., Mass.
  All American Tool & Mfg. Co., 1014 W. Fuller-ton St., Chicago 14, Ill.
  All Weather Springs, 140 Cedar St., New York 6 N Y
- 6, N. Y.
- 6, N. Y.
  Allegheny Ludhum Steel Corp., Pittsburgh, Pa.
  Allen Co., L. B., Inc., 6751 Bryn Mawr Ave., Chicago 31, Ill.
  Allen-Bradley Co., 136 W. Greenfield Ave., Mil-waukee 4, Wis.
  Allen-Howe Electronics Corp., Peabody, Mass.
  Allen Mfg. Co., Hartford, Conn.
  Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio

- Ohio Allied Control Co., Inc., 2 East End Ave., New
- York 21, N. Y. Allied Radio Corp., 833 W. Jackson Blvd., Chi-
- cago 7, Ill. Allied Recording Products Co., 21-09 43rd Ave.,
- Long Island City 1, N. Y. Allis-Chalmers Mfg. Co., Milwaukee 1, Wis. Allis Co., Louis, 427 E. Stewart St., Milwaukee 7, Wis.
- Allmetal Screw Products Co., Inc., 33 Greene St.,
- New York 13, N. Y. Alloy Metal Wire Co., Prospect Park (Moore Sta.), Pa.
- Alpha Laboratories, Box 184, Belmar, N. J. Alpha Metals, Inc., 363 Hudson Ave., Brooklyn 1, N.
- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- Altec Lansing Corp., 161 Avenue of the Americas, New York 13, N. Y.
- Aluminum Co. of America, Gulf Bldg., Pitts-

- Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa.
  Amalgamated Electronics, Clinton Corners, N. Y.
  Ambroid Co., 305 Franklin St., Boston 10, Mass.
  American Brass Co., Waterbury 88, Conn.
  American Bridge Co., U. S. Steel Corp. Sub., Frick Bldg., Pittsburgh, Pa.
  American British Technology Inc., 57 Park Ave., New York 16, N. Y.
  American Chemical Paint Co. Ambler Pa
- American Chemical Paint Co., Ambler, Pa
- American Chronoscope Corp., 316 W. First St., Mt. Vernon, N. Y.
- American Communications Corp., 306 Broadway, New York 7, N. Y.
   American Condenser Co., 4410 Ravenswood Ave., Chicae 40, 211

- American Condenser Co., 4410 Ravenswood Ave., Chicago 40, Ill.
  American Cyanamid Co., Plastics Div., 38 Rocke-feller Plaza New York 20, N. Y.
  American Diathermy Productions, 11240 W. Olympic Blvd., Los Angeles 25, Calif.
  American Electric Cable Co., Holyoke, Mass.
  American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.

American Electroneering Co., 2112 S. La Brea Ave., Los Angeles, Calif. American Electronics Corp., 226 No. Fourth St.,

- Columbus, Ohio American Emblem Co., Inc., P. O. Box 116 R,
- Ministrian Emission Co., Inc., F. O. Box 116 R, Utica, N. Y. American Gas Accumulator Co., 1029 Newark
- American Gas Accumulator Co., 1029 Newark Ave., Elizabeth, N. J.
  American Gem & Pearl Co., 6 West 48th St., New York 19, N. Y.
  American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
  American Instrument Co., 8030 Georgia Ave., Silver Spring Md

- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
  American Insulator Corp., New Freedom, Pa.
  American Insulator Corp., New Freedom, Pa.
  American Kleer-Vu Plastics, 57 Thames St., Brooklyn 6, N. Y.
  American Lava Corp., Chattanooga 5, Tennessee
  American-Marietta Co., Adhesive, Resin & Chem-ical Div., 3400-13th Ave., SW, Seattle 4, Washington
  American Microphone Co., 370 So. Fair Oaks Ave.
- American Microphone Co., 370 So. Fair Oaks Ave., Pasadena 1, Calif.

- Pasadena 1, Calif. American Molding Powder & Chemical Corp., 44 Hewes St., Brooklyn 11, N. Y. American Nut & Bolt Fastener Co., 2045 Doerr St., Pittsburgh 12, Pa. American Optical Co., Scientific Instrument Div., Box A, Buffalo 15, N. Y. American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
- Chicago 20, 111. American Photocopy Equipment Co., 2849 N. Clark St., Chicago, III. American Platinum Works, N.J.R.R. Ave. at Oliver St., Newark 5, N. J. American Products Mig. Co., Oleander & Dublin St., New Orleans 18, La. American Padia Co. 611 F. Garfield American
- American Radio Co., 611 E. Garfield Ave., Glen-
- American Radio Co., 011 L. Guineta I. C., dale, Calif.
  American Radio & Hardware Co., 152 MacQues-ten Pkway, South Mount Vernon, N. Y.
  Anierican Relay & Controls Inc., 4900 W. Flournoy St., Chicago 44, Ill.
  American Resinous Chemical Co., 103 Foster St. Peabody, Mass.
- St., Peabody, Mass. American Rolling Co., 368 Curtis St., Middle-town, Ohio

- town, Ohio American Scientific Co., P. O. Box 1, High Bridge Station, New York 52, N. Y. American Screw Co., Providence, R. I. American Solder & Flux Co., 2152 E. Norris St., Phila. 25, Pa. American Steel & Wire Co., U. S. Steel Corp. Subsidiary, Rockefeller Bldg., Cleveland 13, Obio
- Ohio
- Ohio 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 Corp., Springfield 1, Mass. American Time Products, Inc., 580 Fifth Ave., New York 19, N. Y.

New York 19, N. Y. American Transformer Co., 178 Emmett St., Newark, N. J. Amerline, 1753 N. Honore St., Chicago 22, Ill. Amersil Co., Inc., Hillside, N. J. Amglo Corp., 4234 Lincoln Ave., Chicago 18, Ill. Amperex Electronic Corp., 25 Washington St., Brooklyn 1, N. Y. Amperite Co., 561 Broadway, New York 12, N. Y. Amper Electric Corp., 1155 Howard Ave., San Carlos, Calif.

Amplex Div., Chrysler Corp., 1155 Howard Ave., San Carlos, Calif. Amplex Div., Chrysler Corp., Detroit 31, Mich. Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.

Amy, Aceves & King Inc., 11 W. 42nd St., New York 18, N. Y. Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

York 4, N. Y. Anchor Plastics Co., Inc., 533-541 Canal St., New York 13, N. Y.

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nor Webbing Co., P. O. Box 1624, Providence, R. I.

Anderson, Arthur R., 110 Woodbury Ave., Springdale, Conn.

- aale, Conn. Anderson & Sons, Inc., Westfield, Mass. Andrea Radio Corp., 2701 Bridge Plaza, North, Long Island City, N. Y. Andrew Corp., 363 E. 75th St., Chicago 19, Ill. Annis Co., R. B., 1101 N. Delaware St., Indianapolis Ind
- Annis Co., R. B., 1101 N. Delawate St., Indianapolis, Ind. Ansco Div., General Aniline & Film Corp., Binghamton, N. Y. Ansonia Electrical Co., 63 Main St., Ansonia,

Conn. Antenna Research Lab., Inc., 797 Thomas Lane, Columbus 9, Ohio

- Columbus 9, Ohio
  Anton Electronic Laboratories, Inc., 1226-1238
  Flushing Ave., Brooklyn 6, N. Y.
  Applied Physics Corp., 40 South Oak Knoll Ave., Pasadena 1, Calif.
  Applied Research Labs., 4336 San Fernando Rd., Glendale 4, Calif.
  Applied Science Corp. of Princeton. The. P. O.

- Giendale 4, Calif. Applied Science Corp. of Princeton, The, P. O. Box 44, Princeton, N. J. Aray Mfg. and Supply Co., 3107 Pine St., St. Louis 3, Missouri Arc Radio Corp., 634 Myrtle Ave., Brooklyn, N. Y.
- Arch Gear Works, Inc., Quincy, Mass. Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio Arco Transformer & Electrical Co., 1602 S. Hanna
- St., Fort Wayne, Ind.

- St., Fort Wayne, Ind. Arcturus Engineering Corp., 1755 Glendale Blvd., Los Angeles 26, Calif. Arcturus Radio & Television Corp., 54 Clark St., Newark, N. J. Argus, Inc., Ann Arbor, Mich. Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
- Arlington Electric Products Inc., 500 W. 52nd St., New York 19, N. Y. Arma Corp., 254 36th St., Brooklyn 32, N. Y. Armco Steel Corp., 703 Curtis St., Middletown, Ohio
- Armstrong Cork Co., Lancaster, Pa. Arnold Engineering Co., 147 E. Ontario St., Chi-
- cago 11, Ill. Arro Expansion Bolt Co., Boone Ave., Marion, Ohio

- Ohio Art-Lloyd Metal Products Corp., 2973 Cropsey Ave., Brooklyn 14, N. Y. Art Roll Leaf Stamping Co., 3610 Palisade Ave., Union City, N. J. Art Specialty Co., 3245 W. Lake St., Chicago, Ill. Art Wire & Stamping Co., 227 High St., Newark 2, N. J.

- 2, N. J.
  Asheville Mica Co., 900 Jefferson Ave., Newport News, Va.
  Askania Regulator Co., 240 E. Ontario St., Chi-cago 11, Ill.
  Assembly Products, Inc., Chagrin Falls 6, Ohio.
  Associated Production Co., 2655 W. 19th St., Chicago 8, Ill.
  Associated Research, Inc., 3758 W. Belmont, Chi-cago 18, Ill.
  Astatic Corp., The, Conneaut, Ohio
  Atlas Metal Stamping Co., Castor & Kensington Avenues, Philadelphia 24, Pa.
  Atlas Resistor Co., 423 Broome St., New York, N. Y.
  Atlas Sound Corp., 1443 39th St., Brooklyn 18. Atlas Sound Corp., 1443 39th St., Brooklyn 18,

- N. Y. Atlas Tack Corp., Pleasant St., Fairhaven, Mass. Atomic Instrument Co., 160 Charles Street, Boston, Mass. Auburn Button Works Inc., 48 Canoga St., Auburn, N. Y.
- Auburn Mfg. Co., Middletown, Conn. Audak Co., 500 Fifth Ave., New York, N. Y. Audar Inc., Argos, Indiana

- Audio Development Co., 2833 13th Ave., S., Minneapolis 7, Minn.
- Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y
- Audio Equipment Co., 80-20 45th Ave., Elmhurst,
- Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y.

Audio Industries, Michigan City, Ind.

- Audio Products Co., 2101 West Olive Ave., Burbank, Calif.
- Aurex Corp., 1117 N. Franklin St., Chicago, Ill. Austin Co., O., 335 Throop Ave., Brooklyn 21, N. Y.
- Auto Engraver Co., Inc., 1776 Broadway, New York, N. Y.

Autocall Co., The, Shelby, Ohio

ocrat Radio Co., 3855 N. Hamilton Ave., Chi-III.

- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, 111. Automatic Mfg. Corp., 60 Governeur St., Newark,
- NJ. Automatic Metal Products Co., 315 Berry St.,

- Automatic Michael Construction of the second seco
- Automatic Temperature Control Co., Inc., 5212
- Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
  Autoscrew Co., 216-222 W. 18th Street, New York, N. Y.
  Autotron Co., The, Danville, Ill.
  Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
  Aviometer Div. of Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y.
  B & C Insulation Products, Inc., Lincoln High-way, Iselin, N. J.

- way, Iselin, N. J. B-P Specialties Works, Third National Bldg., Day-
- ton 2, Ohio Babcock Radio Engineering Inc., 6164 Sepulveda
- Blvd., Van Nuys, Calif. Bace Television Corp., Green & Leuning Sts., South Hackensack, N. J.
- South Flackettsack, N. J. Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y. Baer Co., N. S., 9 Montgomery St., Hillside, N. J. Bailey Co., Inc., 21 Water Street, Amesbury,
- Mass. Bailey Meter Co., 1044 Ivanhoe Road, Cleveland 10, Ohio Baird Asosciates, Inc., 33 University Rd., Cam-

- Baird Asosciates, Inc., 33 University Rd., Cant-bridge 38, Mass. Bakelite Corp., 30 East 42nd St., New York 17, N. Y. Baker Co., Inc., 113 Astor St., Newark 5, N. J. Baldor Electric Co., 4353 Duncan Ave., St. Louis, Ma Mo.
- Ballantine Laboratories, Inc., Boonton, N. J. Bamberger Corp., A., 44 Hewes St., Brooklyn 11, N. Y.
- N. Y. Barber Colman Co., Rockford, Ill. Barber Colman Co., Rockford, Ill. Barber & Howard, East Ave., Westerly, R. I. Barber Labs., Alfred W., 34-04 Francis Lewis Blvd., Flushing, N. Y. Barclay Instruments Div., The Patent Button Co., Waterbury 88, Conn. Bardwell & McAllister Inc., P. O. Box 1310, Holly-wood, California Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa. Barnes-Gibson Raymond Div., Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich. Barreca Products Co., Inc., 84 Bowery, New York 13, N. Y.

- 13. N. Y. Barrett Co., Leon J., P. O. Box 378, Worcester 1,
- Mass. Barrett Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y. Barry Corp., The, 179 Sidney St., Cambridge,

- Barry Corp., The, 179 Sidney St., Cambridge, Mass.
  Bassett Inc., Rex, 307-11 N. W. 1st Ave., Ft. Lauderdale, Fla.
  Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.
  Beach Precision Parts Co., Boonton, N. J.
  Beach-Russ Co., 50 Church St., New York 7, N. Y.
  Read Chain Manufacturing Co., The, 110 Mountain
- N. Y. Bead Chain Manufacturing Co., The, 110 Mountain Grove St., Bridgeport 5, Conn. Beaver Gear Works. Inc., Rockford, Ill. Beede Electrical Instrument Co., Inc., Penacook,
- N. H. Belden Mfg. Co., 4647 W. Van Buren St., Chicago
- Beilden Mig. Co., 4041 W. Van Barten European Sig. 44, III.
  Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio
  Bell Telephone Laboratories, Inc., 463 West St., New York 14, N. Y.

- Belmont Radio Co., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Ill.
- Bendix Aviation Corp., Pacific Div., 11600 Sher-man Way, North Hollywood, Calif.
- Bendix Aviation Corp., Red Bank Division, Red Bank, N. J.
- Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
- Bentley-Harris Mfg. Co., Conshohocken, Pa. Berkeley Scientific Co., 6th & Nevin, Richmond, Calif.
- Berndt-Bach, Inc., 7377 Beverly Blvd., Los Angeles 36, Calif.

Beryllium Corp., The, Reading, Pa.

Best Manufacturing Co., Inc., 1200 Grove St., Irvington 11, N. J.

- Bestcraft Products, 14 Delancey St., New York, N. Y.
- Beta Electronics Co., 1762 Third Ave., New York 29. N.
- Bibletone Records, Inc., 354 4th Ave., New York 10, N. Y. Biddle Co., James G., 1316 Arch St., Philadelphia
- 7, Pa. Bird Co., Richard H., 1 Spruce St., Waltham,
- Mass. Bird Electronic Corp., 1800 E. 38th St., Cleveland
- 14, Ohio
- 14, Ohio
  Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
  Birtcher Corp., 5087 Huntington Drive, Los Angeles 32, Calif.
  Bittermann Electric Co., Box 665, Canaan, Conn.
  Biwax Corp., 3445 Howard St., Skokie, Ill.
  Black Bear Co., Inc., 620 Fifth Ave., New York 20 N Y.

Blaw-Knox Co., Farmers Bank Bldg., Pittsburgh,

ra.
Biley Electric Co., Union Station Bldg., Erie, Pa.
Blum & Co., Julius, 532 W. 22nd St., New York 11, N. Y.
Board Products Co., 4206 W. Lake St., Chicago 24, 10

Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, Ill. Boehme Inc., H. O., 915 Broadway, New York,

Boesch Mfg. Corp., Danbury, Conn. Bogen Co., David, 663 Broadway, New York 12, N. Y.

Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

Bomac Laboratories, Beverly, Mass. Bond Electric Corp., Div. of Olin Industries Inc., New Haven 4, Conn.

Bond Electronics Corp., 88 Franklin Place, Sum-mit, N. J.

mit, N. J.
Bonney Forge & Tool Works, Allentown, Pa.
Boom Electric & Amplifier Co., 1227 W. Washington Blvd., Chicago 7, Ill.
Boonton Molding Co., Boonton, N. J.
Boonton Radio Corp., Boonton, N. J.
Booth Co., Arthur E., 307 E. 3rd St., Los Angeles, Calif.
Board furget Nut Corp. New Canaan, Conp.

Angeles, Calif. Boots Aircraft Nut Corp., New Canaan, Conn. Borden Co., The, Chemical Div., 350 Madison Ave., New York 17, N. Y. Borden Co., Chemical Div., Durite Plastics, 5000 Summerdale Ave., Philadelphia 24, Pa. Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J. Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass.

Boston 25, Mass. Boulin Instrument Corp., 65 Madison Avenue, New York 16, N. Y. Bound Brook Oil-Less Bearing Co., Bound Brook,

N. J. Bowers Battery & Spark Plug Co., Reading, Pa. Bowser Inc., Refrigeration Div., 420 Lexington Ave., New York, N. Y. Brach Mfg. Corp., L. S., 200 Central Ave., New-ark, N. J.

ark, N. J. Bradley Labs., 82 Meadow St., New Haven, Conn. Bradshaw Instruments Co., 348 Livingston St., Brooklyn 17, N. Y. Brainin Co., C. S., 233 Spring St., New York 13,

N. Y. Brand & Co., Wm., 276 Fourth Ave., New York

Brand & Co., Will, 210 Fold if Ave., Rev 2016
 To, N. Y.
 Brandywine Fibre Co., 15th & Poplar Sts., Wil-mington, Del.
 Branson Instruments, Inc., 436 Fairfield Ave., Stamford, Conn.

Branston Electric Mfg. Co., 61-65 Gill Pl., Buffalo 13, N. Y. Breeze Corpns., Inc., 41 S. Sixth St., Newark 7,

N. J. Brelco Electronics Corp., 55 Vandam St., New

York 13, N. Y. Breon Laboratories, 1520 Evergreen Rd., Wil-

liamsport, Pa. Bridgeport Hardware Mfg. Corp., Iranistan Ave., Bridgeport, Conn. Bright Star Battery Co., 200 Crooks Ave., Clifton, N. J.

British Industries Corp., 315 Broadway, New York

Brociner Electronics Lab., 1546 Second Ave., New York 28, N. Y.

Brociner-Mass Instruments, Inc., 1546 Second Ave., New York 28, N. Y.

Brook Electronics, Inc., 34 DeHart Place, Eliza-

Brinnell Co., The, Granby, Conn. Bristol Co., The, Waterbury 91, Coun.

Brown- Bridge Mills, Inc., Troy, Ohio

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N.Y.

- Brown Products Co., 98-11 65th St., Forest Hills,
- N. Y. Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon Brown Instrument Co., Wayne & Roberts Aves., Philadelphia 44, Pa. Browning Laboratories, Inc., 750 Main St., Win-
- Philadeiphia 44, Pa.
  Browning Laboratories, Inc., 750 Main St., Winchester, Mass.
  Bruning Co., Inc., Charles, 4754 Montrose Ave., Chicago 41, Ill.
  Brunswick Radio & Television Div., Radio & Television, Inc., 244 Madison Ave., New York, N.Y.
- N. Y. Brush Beryllium Co., The, 3714 Chester Ave.,
- Cleveland 14, Ohio Brush Development Company, The, 3405 Perkins
- Ave., Cleveland 14, Ohio Buchanan Electrical Products Corp., 1290 Central
- Ave., Hillside, N. J. Buchmann Spark-Wheel Corp., 4-20 47th Ave., Long Island City 1, N. Y. Buck Engineering Co., 37-41 Marcy St., Freehold,
- N. J. Bud Radio, Inc., 2118 E. 55th St., Cleveland 3,
- Ohio
- Buda Co., Harvey, Ill. Buggie & Co., H. H., 2141 Madison Ave., Toledo
- 1, Ohio Buhl Optical Co., 1009 Beech Ave., Pittsburgh 12, Pa.
- Bundy Tubing Co., 8109 E. Jefferson Ave., Detroit 14. Mich.
- Bunnell and Co., J. H., 215 Fulton St., New York, N. Y. Burgess Battery Co., Battery Div., Freeport, Ill. Burke Electric Co., 12 & Cranberry Sts., Erie, Pa.
- Burling Instrument Co., 253 Springfield Ave.,
- Newark 3, N. J. Burlington Instrument Co., Burlington, Iowa
- Burndy Engineering Co., Inc., 107 Bruckner Blvd., New York 54, N. Y.
   Burnell & Co., 45 Warburton Ave., Yonkers 2, N. Y.
- N. Y.
- Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif. Burnett Service Co., 178 E. 168th St., New York 52, N. Y.
- Burnley Battery & Mfg. Co., Clay St., North East, Pa. Bussmann Mfg. Co., St. Louis 7, Mo. C. B. Mfg. Co., 480 Broome St., New York 13, N. Y. J. D. J.
- C-O-Two Fire Equipment Co., P. O. Box 390, U. S. Highway 1, Newark 1, N. J. Calidyne Co., The, 751 Main St., Winchester,
- Mass.
- Califone Corp., 1041 N. Sycamore Ave., Holly-wood 38, Calif. Callite Tungsten Corp., 540 39th St., Union City,
- N. J. Caltron Co., 1406 So. Hobart Blvd., Los Angeles 6, Calif.
- Cambridge Thermionic Corp., 445 Concord Ave.,
- Cambridge, Mass. Camburn, Inc., 32-40 57th St., Woodside, N. Y. Camloc Fastener Corp., 420 Lexington Ave., New
- York 17, N. Y. Cannon Co., C. F., Springwater, N. Y. Cannon Electric Development Co., 3209 Humboldt

- Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
  Cantol Wax Products Co., Bloomington, Ind.
  Capacitron Co., Div. of Jefferson Electric Co., 849 No. Kedzie Ave., Chicago 51, Ill.
  Carbide and Carbon Chemicals Corp., Unit of Union Carbide and Carbon Corp., 30 East 42nd St., New York 17, N. Y.
  Carbonneau Industries, Inc., Grand Rapids, Mich.
  Carbornudum Co., The, Globar Div., Niagara Falls, N. Y.
- Carby Mfg. Co., Inc., 62 Cottage Place, Waterbury
- 5, Con. Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
- Cardy-Lundmark Co., 1801 W. Byron St., Chicago 13, Ill.
- Carnegie Illinois Steel Corp., U. S. Steel Corp. Sub., Carnegie Building, Pittsburgh, Pa. Carol Cable Co., 190 Middle St., Pawtucket, R. I. Carpenter Steel Co., Kenilworth, N. J. Carpenter Steel Co., The, 142 West Bern St., Reading Pa.
- Reading, Pa. Carron Mfg. Co., 415 S. Aberdeen St., Chicago,
- TH
- Carson Machine & Supply Co., Box 4547, Okla-homa City 9, Okla. Carson Micrometer Corp., 2 E. Main St., Little
- Falls, N. J. Carter Motor Co., 2644 N. Maplewood Ave., Chi-
- cago 47, Ill.
- Carter Radio Div., Precision Parts Co., 213 Institute Place, Chicago 10, Ill.

- Castlewood Mfg. Co., 12th & Burnett Sts., Louisville, Ky. Catalin Corp. of America, 1 Park Ave., New York
- 16, N. Y. Celauese Corp. of America, 180 Madison Ave., New York 16, N. Y.
- Cellusuede Products Inc., Rockford, Ill. Central Paper Co., Inc., 2400 Lakeshore Drive, Muskegon, Michigan
- Central Research Laboratories, Inc., Red Wing, Minn.
- Central Scientific Co., 1700 Irving Park Rd., Chi-
- cago 13, Ill. Central Screw Co., 3501 Shields Ave., Chicago 9. III.
- Centralab, Div. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis. Centro Research Laboratories, Inc., Briarcliff
- Manor, N. Y. Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
- Century Geophysical Corp., 1333 North Utica, Tulsa, Oklahoma.
- Chace Co., W. M., 1600 Beard Ave., Detroit, Mich.
- Chandler Products Co., 1491 Chardon Rd., Cleveland, Ohio Channel Master Co., Ellenville, N. Y. Chase Brass & Copper Co., Inc., Waterbury 91,
- Conn. Chaslyn Co., The, 1952 Irving Park Rd., Chicago
- 13, Ill. Chatham Electronics Corp., 475 Washington St., Newark 2, N. J.
- Chatillon & Sons, John, 93 Cliff St., New York 7, N. Y.
- <sup>7</sup>, N. Y.
  Cherry Rivet Co., 231 Winston Street, Los Angeles 13, Calif.
  Chicago Condenser Corp., 3255 W. Armitage Ave., Chicago 47, Ill.
  Chicago Die Mold Mfg. Co., 4001 Wrightwood Ave., Chicago 39, Ill.
  Chicago Electronics Engineering Co. 3223 W.

- Ave., Chicago 39, 11. Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill. Chicago Metal Hose Corp., 1309 S. Third Ave.,
- Maywood, Ill. Chicago Rivet & Machine Co., 9600 W. Jackson

- Chicago Rivet & Machine Co., 9600 W. Jackson Blvd., Chicago, III.
  Chicago Telephone Supply Corp., 1142 W. Beardsley Ave., Elkhart, Ind.
  Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
  Cima Corp., 91 Boylston St., Jamaica Plains 32, Mass. Mass.
- Cinaudagraph Speakers Inc., Div. of Aireon Mfg. Corp., 1401 Fairfax Trafficway, Kansas City, Kansas
- Cinch Mfg. Corp., 2335 W. Van Buren St., Chi-cago 12, Ill. Cincinnati Molding Co., 2037 Florence Ave., Cincinnati 6, Ohio Cinema Engineering Co., 1510 W. Verdugo Ave., Rurbank Calif
- Burbank Calif. Citizens Radio Corp., 1869 Prospect, Cleveland,
- Ohio
- Clarage Fan Co., Kalamazoo, Mich. Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill. Clark Controller Co., 1146 E. 152nd St., Cleve-
- land 10, Ohio Clark Crystal Co., 2 Farm Rd., Marlboro, Mass. Clark Electronic Labs., Box 165, Palm Springs, Calif.
- Clarke Instrument Corp., 910 King St., Silver Spring, Md. Clarkstan Corp., 1 Angeles 34, Calif. 11927 W. Pico Blvd., Los
- Clarostat Mfg. Co., Inc., 130 Clinton St., Brook-lyn 2, N. Y. Clearprint Paper Co., 677 Folsom St., San Fran-
- cisco, Calif. Cleveland Container Co., The, 6201 Barberton Ave., Cleveland 2, Ohio
- Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland, Ohio
- Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio
- Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio
- Climax Industries, Inc., Climax Engineering Div., Clinton, Iowa
- Clippard Instrument Laboratory, Inc., 1125 Bank St., Cincinnati 14, Ohio
- Clough Brengle Co., 6014 N. Broadway, Chicago, Illinois
- Clowes Ceramic Corp., 3711 Calhoun Ave., P. O. Box 1802, East Lake, Chattanooga 7, Tenn.

- Coastwise Electronics Co. Inc., 130 N. Beaua. Ave., Los Angeles, Calif. Coda Record Co., 1291 Sixth Ave., New York
- 19, N. Y. Cohn Corp., Sigmund, 44 Gold St., New York,
- N. Y. Coil Winders Inc., 61 Bergen St., Brooklyn 2,
- Cole Instrument Co., 1320 S. Grand Ave., Los
- Angeles 15, Calif Cole Radio Works, 86 Westville Ave., Caldwell,
- N. J. Cole-Worner Corp., 345 Albert Ave., Mansfield, Ohio
- Coleman Instruments, Inc., 318 Madison St., Maywood, Illinois
- Colgate Mfg. Corp., Lindenhurst, L. I., N. Y. Collins Audio Products Co., P. O. Box 368, West-
- field, N. J. Collins Radio Co., Cedar Rapids, Iowa Collyer Insulated Wire Co., 249 Roosevelt Ave., Restricted P. J.
- Pawtucket, R. I.
- Colonial Brass Co., 100 Vine St., Middleboro, Mass Colonial Radio Corp., 254 Rano St., Buffalo 7,

Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio Columbia Metal Box Co., 260 E. 143rd St., New

York, N. Y. Columbia Nut & Bolt Co., 945 Main St., Bridge-

Columbia Nut & Bolt Co., 945 Main St., Bridgeport 3, Conn.
Columbia Wire & Supply Co., 5734 N. Elson Ave., Chicago 30, Ill.
Columbian Rope Co., Auburn, N. Y.
Columbus Electronics Inc., 229 South Waverly St., Yonkers, N. Y.
Columbus Process Co., Inc., State & Maple Sts., East Columbus, Ind.
Comar Electric Co. 3148 N. Washtenaw, Aug.

Comar Electric Co., 3148 N. Washtenaw Ave.,

Comar Electric Co., 3148 N. Washtenaw Ave., Chicago 18, Ill.
Combustion Control Corp., 77 Broadway, Cambridge 42, Mass.
Combustion Research Laboratories, Inc., 104-18 Metropolitan Ave., Forest Hills, N. Y.
Commercial Equipment Co., 112 W. 18th St., Kansas City 8, Mo.
Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y.
Commercial Research Labs. Inc., 20 Bartlett Ave., Detroit 3, Michigan
Commodore Record Co., 289 Nepperhan Ave., Yonkers 2, N. Y.
Communicating Systems Inc., 203 East 18th St., New York 3, N. Y.

Communicating Systems Inc., 203 East 18th St., New York 3, N. Y.
Communication Accessories Co., Box 345, 110th St. & Hillerest Rd., Hickman Hills, Mo.
Communication Equipment & Engineering Co., 5646 W. Race St., Chicago 44, III.
Communication Measurements Lab. Inc., 120 Greenwich St., New York, N. Y.
Communication Products Company, Inc., Broad-way & Clark St., Keyport, N. J.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Communications Parts, 1101 N Paulina St., Chicago 22, Ill.
Conant Labs., 6500 "O" St., Lincoln 5, Nebraska
Concord Radio Corp., 901 W. Jackson Blvd., Chicago 7, Ill.
Condenser Products Co., 1375 N. Branch St., Chicago 22, Ill.

Congress Tool & Die Div., Tann Corp., 3300 Denton Ave., Detroit 12, Mich. Conn Ltd., C. G., Electronics Div., Elkhart, Ind. Connecticut Hard Rubber Co., 407 East St., New

Connecticut Specialties Co., Box 501, Stamford,

Connecticut Telephone & Electric Div., Great American Industries, 70 Brittania St., Meriden,

Consolidated Engineering Corp., 620 N. Lake Ave., Pasadena 4, Calif. Consolidated Molded Products Corp., Scranton 2,

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Illinois

Continental Carbon, Inc., 13900 Lorain Ave.,

Continental Diamond Fibre Co., 16 Chapel St.,

Continental Electric Co., Inc., 334 Ferry St.,

Continental Electronics, Ltd., 252 Norman Ave.,

Continental Electronics Mfg. Co., 1728 Wood St.,

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Continental Screw Co., New Bedford, Mass.

Continental Electric Co., Geneva, Ill.

Haven 9, Conn

Cleveland 11, Ohio

Newark 5, N. J.

Brooklyn 22, N. Y

Dallas 1, Texas

Newark 16, Delaware

Conn

Conn.

Pa

- trol Corp., 718 Central Ave., Minneapolis 14, Ainn
- ontrol Products Inc., Harrison, N. J ook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.
- Cook Electric Co., 2700 Southport Ave., Chicago, TIL.
- Laboratories, 139 Gordon Blvd., Floral Cook
- Park, N. Y. Cooper Co., Clark, 345 N. Market St., Palmyra, N. J. Cooper Electronic Products Co., 5106 Frankford

- Cooper Electronic Products Co., 5106 Frankford Ave., Philadelphia 24, Pa.
  Copperweld Steel Co., Glassport, Pa.
  Coral Designs, P. O. Box 248, Forest Hills, N. Y.
  Corbin Screw Division, American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.
  Cords Ltd., 780 Frelinghuysen Ave., Newark 5, N. J.
- N. J. Cornell Dubilier Electric Co., 1000 Hamilton Blvd., South Plainfield, N. J. Corning Glass Works, Corning, N. Y. Cornish Wire Co., 15 Park Row, New York 7,
- Corona Engineering Service, 94-52 Corona Ave.,
- Elmhurst, N. Y. Coronet Radio & Television Corp., 500 W. 52nd St., New York 19, N. Y.
- Cortley Television Corp., 15 W. 27th St., New York 1, N. Y. Cosmic Radio Corp., 699 East 135th St., New
- Cosmic radio corp. 1 York, N. Y. Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada Coto-Coil Co., Inc., 65 Pavilion Ave., Providence
- 5, R. I. Cottrell Paper Co., 88 Purchase St., Fall River,
- Mass Craft Mfg. Co., 3949 W. Schubert St., Chicago,
- **T**11.
- III.
  Cramer Co., Inc., R. W., Centerbrook, Conn.
  Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, III.
  Crocker-Wheeler Electric Mfg. Co., Div. of Joshua Hendy Corp., Ampere, N. J.
  Croname, Inc., 3701 Ravenswood Ave., Chicago, III
- 111.
- Ill. Crosley Div., Avco Mfg. Corp., 1329 Arlington St., Cincinnati 25, Ohio Cross Co., H., 15 Beekman St., New York, N. Y. Crowley & Co. Inc., Henry L., 1 Central Ave., West Orange, N. J. Crown Capacitor Corp., Minot & Depot Sts., Wrentham, Mass. Crozier Scientific Glass Co., 17 Madison Ave., Lansdowne, Pa.

- Crozier Scientific Glass Co., 11 Mathematical Arcs, Lansdowne, Pa.
   Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N. Y.
   Crystal Devices Co., Inc., 50 Mill Rd., Freeport,
- Y.
- Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
- Lord, Conn.
  Curtis Development and Mfg. Co., 1 N. Crawford Ave., Chicago 24, Ill.
  Cutler-Hammer, Inc., 315 No. 12th St., Mil-watkee 1, Wis.
  Cuyahoga Spring Co., 10272 Berea Rd., Cleve-land, Ohio
  Curdebu Mate Comp. Device, With

- Cyclohm Motor Corp., Racine, Wis. Cyclotron Specialties Co., Moraga 8, Calif. D. & M. Manufacturing Co., 2 Delford Ave.,
- Cyclotron Specialties Co., Moraga 8, Calif.
  D. & M. Manufacturing Co., 2 Delford Ave., Bergenfield, N. J.
  DX Radio Products Co. Inc., 2304 Armitage Ave., Chicago 47, Ill.
  Dahlstrom Metallic Door Co., Jamestown, N. Y.
  Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
  Dano Electric Co., San Carlos, Calif.
  Dano Electric Co., Winsted. Conn.
  Daven Co., 191 Central Ave., Newark 4, N. J.
  Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.
  Davis Electric Co., Cape Girardeau, Mo.
  Davoe Radio Corp., 915 Valley St., Dayton 4, Ohio

- Ohio Decca Records, Inc., 50 W. 57th St., New York 19, N. Y.
- Decimeter Inc., 1430 Market St., Denver 2, Colorado
- De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
- 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., 115 Cornelia St., Boonton, N. J.

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- De Mornay-Budd Inc., 475 Grand Concourse, New York 51, N. Y. Despatch Oven Co., 619 S. E. 8th St., Minneapolis
- 14, Minn. Detect-O-Ray Co., 2622 N. Halsted St., Chicago
- 14. Ill.
- Deutschmann Corp., Tobe, Norwood, Mass. Development Engineering Co., Inc., 1818 Ashland
- St., Houston S, Texas De Vine Laboratories, Madison, N. J. DeWald Radio Mfg. Corp., 35-15 37th Ave., Long Island City, N. Y.
- Island City, N. Y. Dial Light Co. of America, Inc., 900 Broadway, New York 3, N. Y. Diamond Drill Carbon Co., 53-63 Park Row, New
- York 7, N. Y.
- Diamond Instrument Co., North Ave., Wakefield, Mass.
- Mass. Diamond Wire & Cable Co., Sycamore, Ill. 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
- Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
  Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
  Diemolding Corp., Rasbach St., Canastota, N. Y.
  Dietz Design & Mfg. Co., 5810 Park Ave., Kansas City 4, Mo.
  Dietzgen Co., Eugene, 2425 Sheffield Ave., Chi-cago Ul.
- cago, Ill. Dilks Co., Seymour, Conn. Dilks Co., Seymour, Conn. Dilon & Co., Inc., W. C., 5410 W. Harrison St., Chicago 44, Ill.
- Chicago 44, Ill. Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif. Dinion Coil Co., Inc., Caledonia, N. Y. Distillation Products, Inc., Vacuum Equip. Div., 755 Ridge Rd. W., Rochester, N. Y. Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill. Dixon Crucible Co., Joseph. Jersey City, N. J.

- Dixon Crucible Co., Joseph, Jersey City, N. J. Do-All Co., 254 No. Laurel Ave., Des Plaines, Ill. Dobeckmun Co., The, Industrial Products Div., Dobeckmun Co., Th Cleveland 1, Ohio
- Doehler-Jarvis Corp., 386 Fourth Ave., New York 16, N. Y. Dolph Co., John C., Monmouth Junction, N. J. Dongan Electric Mfg. Co., 2987 Franklin St.,
- Detroit, Mich. Doolittle Radio, Inc., 7421 S. Loomis Blvd., Chi-
- Domitte Ratio, Inc., 112 C. Bound St., 2000 Cago 36, Ill. Dormitzer Electric & Mfg. Corp., 782 Common-wealth Ave., Boston 15, Mass. Douglas Radio Labs., 40 Wayland St., Boston 25,
- Mass.

- Dow Chemical Co., Midland, Mich. Dow Corning Corp., Midland, Mich. Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.
- Drake Mig. Co., 1713 Hubbard St., Chicago, Ill.
   Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J.
   Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
- Dual-Remote Control Co., Garden City, Mich. Dumont Electric Co., 308 Dyckman St., New
- York, N. Y.
- Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J. Dumore Co., The, 1225 14th St., Racine, Wis. Dunton Co., M. W., The, 670 Eddy St., Providence
- Dunton Co., M. W., The, 670 Eddy St., Providence 3, R. I.
  Duotone Co., 799 Broadway, New York, N. Y.
  Duplan Corp., 512 Seventh Ave., New York, N. Y.
  du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
  du Pont de Nemours & Co., E. I., Patterson Screen Div., Tonawanda, Pa.
  Durakool Inc., 1010 N. Main, Elkhart, Ind.
  Durez Plastic & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.
  Dynamic Air Engineering Inc., 1619 S. Alameda

- Dynamic Air Engineering Inc., 1619 S. Alameda St., Los Angeles, Calif. Dzus Fastener Co., Inc., Box 785, Babylon, N. Y.
- Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
- Eagle Electronics, Inc., Irvington, N. Y.
- Eagle Pencil Co., 703 E. 13th St., New York, Y.
- Eagle Signal Corp., Moline, Ill.
- Eastern Air Devices Inc., 585 Dean St., Brooklyn 17, N. Y.
- Eastern Case Co., 5401 5th Ave., Brooklyn, N. Y. Eastern Industries Co., 296 Elm St., New Haven, Conn.
- Eastern Metals Industries, 250 W. 54th St., New York 19, 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 Sales Div., 343 State St., Rochester 4, N. Y. Easy-Up Tower Co., 3800 Kinzie Ave., Racine, Wis
- Wis. Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y.
- Brooklyn 22, N. Y.
  Ebert Engineering Co., 185-09 Jamaica Ave., Hollis 9, N. Y.
  Eby, Inc., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.
  Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
  Eckert-Mauchly Computer Corp., 3747 Ridge Ave., Philadelphia 32, Pa.
  Eckstein Radio & Television Co., Le Roy, Minn.
  Eclipse Manufacturing Company. Inc., 294 East

Eclipse Manufacturing Company, Inc., 294 East 137th St., New York 54, N. Y.

Eclipse Pioneer Div., Bendix Aviation Corp., Teter-

Economy Fuse & Mfg. Co., 2717 Greenview Ave., Chicago 14, Ill.

Edin Electronics Co., 207 Main St., Worcester,

Edin Electronics Co., 207 Main St., Worcester, Mass.
Edison, Inc., Thomas A., 51 Lakeside Ave., West Orange, N. J.
Edison, Inc., Thomas A., Instrument Div., West Orange, N. J.
Edison Storage Battery Div., Thomas A. Edison, Inc., Main St. at Lakeside Ave., W. Orange, N. J.
Edo Corp., College Point, Long Island, N. Y.
Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y.
Eicor, Inc., 1501 W. Congress St., Chicago 7, Ill.
Eidoson Electronic Co., 1802 N. Third St., Temple, Texas

Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J. Eitel-McCullough, Inc., San Bruno, Calif. Elastic Stop Nut Corp., 2330 Vauxhall Rd., Union,

Elcor, Inc., 4525 N. 124th St., Butler, Wis. Elcheen Co., The, 610-16 W. National Ave., Mil-waukee 4, Wis.

Electran Mfg. Co., 4596 Elston Ave., Chicago 30,

III. Electric Auto-Lite Co., The, Toledo 1, Ohio Electric Design & Mfg. Corp., Burlington, Iowa Electric Eye Equipment Co., 16 W. Fairchild St., Danville, III.

Electric Furnace Co., Salem, Ohio. Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio

Electric Indicator Co., 21 Parker Ave., Stamford,

Conn. Electric Machinery Manufacturing Co., 1331 NE Tyler St., Minneapolis 13, Minn. Electric Motor Corp., Racine, Wis. Electric Products Co., 1725 Clarkstone Rd., Cleve-

land 12, Ohio Electric Regulator Corp., 1938 Park Ave., New York 35, N. Y.

Electric Soldering Iron Co., W. Elm St., Deep River, Conn. Electric Sorting Machine Co., 410 44th St., SW, Grand Rapids, Mich. Electric Specialty Co., 211 South St., Stamford, Conn.

Electric Storage Battery Co., Allegheny Ave., & 19th St., Philadelphia 32, Pa. Electric Tachometer Corp., 2218 Vine St., Phila-

delphia 3, Pa. Electrical Coil Winding Co., 2733 Saunders St.,

Camber, N. J. Electrical Industries, Inc., 42 Summer Ave., New-ark 4, N. J. Electrical Insulation Co., Inc., 12 Vestry St., New

Electrical Reactance Corp., Elm St., Franklinville,

Electrical Refractories Co., 50 Clark St., East

Palestine, Ohio Electrical Windings, Inc., 2015 N. Kolmar Ave.,

Chicago 39, Ill. Electricoil Transformer Co., 421 Canal St., New York 13, N. Y. Electrix Corp., 150 Middle St., Pawtucket, R. I.

Electro-Connector Corp., 110 W. Oxford St., Phila.

Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.

Electro-Mechanical Instrument Co., 812 Chestnut

Electro Metallurgical Division, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Electro-Medical Lab., Inc., Holliston, Mass.

boro, N. J.

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St., Perkasie, Pa.

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22, Pa.

- Electro Motive Mfg. Co., South Park & John St.,
- Willimantic, Con. Electro-Nite Carbon Co., 1133 E. Columbia Ave., Phila. 25, Pa.
- Electro Physical Labs., Inc., 290-8 Dyckmann St., New York 34, N. Y. Electro Products Labs., 549 W. Randolph St., Chi-
- Cleerto Products Labs., 549 W. Randolph St., Chi-cago 6, Ill. Electro-Seal Corp., 946 Lee St., Des Plaines, Ill. Electro Switch Corp., 193 Broad St., Weymouth 88, Mass.
- Electro-Tech Equipment Co., 117 Lafayette St., New York 13, N. Y. Electro-Technical Products Div., Sun Chemical
- Electro-lechnical Products Div., Sun Chemical Corp., Nutley 10, N. J.
   Electro-Voice, Inc., Buchanan, Mich.
   Electrodyne Company, 899 Boylston St., Boston
   Electrofax Corp., 30 Burtis Ave., New Canaan, Control Control Science Sci
- Conn. Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif. Electronic Associates, Inc., Long Branch, N. J.
- Electronic Batteries Inc., Bush Terminal Bidg. No. 4, 28-34 35th St., Brooklyn 32, N. Y. Electronic Coils, Inc., 44 Taylor St., Springfield,
- Mass. Electronic Control Corp., 1573 E. Forest St., De-
- Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
   Electronic Controls Co. of New York, 3124 Avenue I, Brooklyn 10, N. Y.
   Electronic Corp. of America, 353 W. 48th St., New York, N. Y.
- New York, N. Y. Electronic Designs, Inc., Irvington, N. Y. Electronic Development Co., 4420 N. 23rd St., Omaha 11, Nebraska Electronic Development Laboratory, 2655 West 19th St., Chicago 8, III. Electronic Engineering Co., 616 G St., San Diego 1, Calif.
- 1, Calif.
- Electronic Engineers, 1039 B Pacific St., Santa
- Monica, Calif. Electronic Enterprises, Inc., 65 7th Ave., Newark 4. N. J.
- Electronic Indicator Corp., 53 Wyckoff St., Brook-
- Ivn, N. Y. Electronic Instrument Co., Inc., 276 Newport St., Brooklyn 12, N. Y.
- Brooklyn 12, N. Y. Electronic Labs, Inc., 24 W. 24th St., Indiana-polis 4, Ind. Electronic Measurements Co., Red Bank, N. J. Electronic Mechanical Products Co., 13-15-17 N. Virginia Ave., Atlantic City, N. J. Electronic Mechanics, Inc., 70 Clifton Blvd., Clifton, N. J.
- Electronic Products Co., St. Charles, Ill. Electronic Products Co., 443 Greenwich St., New
- Electronic Products Co., 445 Greenwich St., New York, N. Y. Electronic Products Co., 111 E. 3rd St., Mt. Vernon, N. Y. Electronic Rectifier Inc., 737 N. East St., In-
- dianapolis, Ind. Electronic Specialties Mfg. Co., 125 N. Main St., Elkhart, Ind. Electronic Specialty Co., 3456 Glendale Blvd.,
- Los Angeles, Calif.
- Electronic Supply Co., 207 Main St., Worcester, Mass
- Electronic Systems Co., 201 N. Wells St., Chicago 1, Ill.
- Electronic Transformer Co., Inc., 207 W. 25th St., New York, N. Y. Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
- Detroites Contracting Co., 122 Chambers St., New York 7, N. Y. Electrons, Inc., 127 Sussex Ave., Newark 4, N. J.
- Electrovox Co., Inc., 66 Franklin St., East Orange, N. J.
- Electyme Motor Products Corp., 565 W. Wash-ington Blvd., Chicago 6, Ill.
- Elematic Equipment Corp., 6046 S. Wentworth Ave., Chicago 21, Ill.
- Ellinwood Industries, 150 W. Slauson Ave., Los Angeles 3, Calif.
- Elliott Mfg. Co., 218 Prospect Ave., Binghamton, N. Y.
- Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y
- Elpar Co., 326 Cooper St., Camden, N. J.
- Eltron Inc., 407 N. Jackson St., Jackson, Mich. El-tronics, Inc., 2647 No. Howard St., Philadelphia, 33. Pa.
- Emeloid Co., Inc., The, 1239 Central Ave., Hillside
- 5 N J Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
- Empire Coil Co., Inc., 238 Huguenot St., New Rochelle, N. Y.

Engineering Co., 27 Wright St., Newark, N. J.

- Engineering Lab., Inc., 602 E. 4th St., Tulsa 3, Okla.
- Bagineering Research Associates, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
  Engineering Research Corp., Shreveport, La.
  Engineers Specialties Div., Universal Engraving & Colorplate Co., 980 Ellicott St., Buffalo 8, N. Y.
- Englewood Electrical Supply Co., 5801 S. Halsted
- St., Chicago, Ill. Enjay Co., Inc., 26 Broadway, New York, N. Y. Ensign Coil Co., 2516 S. Pulaski Rd., Chicago,
- III.

- III. Entwistle Co., James L., P. O. Box 305, Provi-dence, R. I. Eppley Lab., Inc., The, Newport, R. I. Eraser Co., Inc., The, Industrial Products Div., 104 S. State St., Syracuse 2, N. Y. Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
- City, N. Y. Ericsson Screw Machine Products Co., 25 Lafay-ette St., Brooklyn 1, N. Y. Erie Resistor Corp., 644 W. 12th St., Erie, Pa. Espey Mfg. Co., Inc., 528 E. 72nd St., New York, N. Y.

- York, N. Y. Espy Electronic Corp., Dawkins, 11747 W. Pico Blvd., Los Angeles 34, Calif. Ess Instrument Co., 96 So. Washington Ave., Bergenfield, N. J. Essex Electronics, Berkeley Heights, N. J. Essex Wire Corp., 1601 Wall St., Ft. Wayne 6, Ind
- Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
- Lis, N. Y.
   Esterline-Angus Co., Inc., P. O. Box 596,
   Indianapolis, Ind.
   Etched Products Corp., 39-01 Queens Blvd.,
   Long Island City, N. Y.
- Long Island City, N. Y. Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y. Ewart & Koch, 15 Brattle St., Cambridge 38, Mose
- Mass.

- Mass. 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 I, N. Y. Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, 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, Ill. Farley & Loetscher Mfg. Co., Dubuque, Iowa Farmers' Engineering & Mfg. Co., 549 Brushton Ave., Pittsburgh, Pa.
- Farnsworth Television & Radio Corp., Ft. Wayne, Ind.
- Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y. Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Parelloy Co., 1245 N. 26th St., Philadelphia 21,
- Pa. Fasco Industries, Inc., Rochester 2, N. Y. Fast & Co., John E., 3101 N. Pulaski Rd., Chi-cago 41, Ill. Federal Electric Products Co., 50 Paris St.,
- Newark, N. J.
- Newark, N. J.
   Federal Engineering Co., 37 Murray St., New York 7, N. Y.
   Federal Instrument Corp., 14-02 Broadway, L. I.
   City 2, N. Y.
   Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.

- Chicago 10, Ill.
  Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J.
  Federal Telephone and Radio Corp., 100 Kingsland Rd., Clifton, N. J.
  Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Louis Park, Minneapolis 16, Minn.
  Federal Wire & Cable Corp., Haverstraw, N. Y.
  Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
  Feiler Engineering Co., 945 W. George St., Chicago 14, Ill.

- Feller Engineering Co., 945 W. George St., Chicago 14, Ill.
  Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
  Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
  Felters Co., The, 210 South St., Boston, Mass.
  Fernaul, Inc., 43A Pleasant St., Ashland, Mass.
  Ferranti Electric, Inc., 30 Rockefeller Plaza, New York 20, N. Y.
- Ferris Instrument Co., 110 Cornelia St., Boonton, N. J.
- Fidelitone Corp., 1616 Devon Ave., Chicago 26, III.
- Fidelity Amplifier Co., 1632 No. Halsted St., Chicago 14, Ill.
- Field Electrical Instrument Co., 109 E. 184th St., New York 53, N. Y.

- Fielden Electronics Inc., 1171 New York Av Huntington Station, N. Y. Filtron Co., Inc., The, 38-25 Bell Blvd., Baysic Long Island, N. Y.
- Long Island, N. Y. Finch Telecommunications, Inc., Passaic, N. J. Fischer & Porter Co., Hatboro, Pa. Fischer-Smith, Inc., 164 State St., West Engle-wood, N. J. Fish-Schurman Corp., 230 E. 45th St., New York 17, N. Y. Fisher-Pierce Co., 70 Ceylon St., Boston 21, Mass

- Mass. Fisher Radio Corp., 41 East 47th Street, New York, N. Y.
- Sher Research Lab., 1961 University Ave., Palo Alto, Calif.
- Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.
- Five Star Radio Co., 416 Broadway, Cambridge, Mass
- Flexo Wire Co., Inc., 70 W. First St., Oswego, Flexo wire co., and N. Y. Flight Research Engineering Corp., P. O. Box 1-F, Richmond I, Va. Flock Process Co., Velvetone Div., 3 Quincy St., Norwalk, Conn.

Norwalk, Conn. Norwalk, Conn. Flowmeter Corp. of America, High Falls, N. Y. Fluke Engineering Co., John, Box 755, Spring-

dale, Conn. Flush Wall Radio Co., 9 W. Park St., Newark 2,

N. J. Follansbee Steel Co., 3rd & Liberty Sts., Pitts-burgh 30, Pa. Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, III. Foote Mineral Co., 10 E. Chelten Ave., Phila-dalwin, 44 Pa

Ford Island City, N. Y. Ford Radio & Mica Corp., 536 63rd St., Brooklyn,

Fordham Mfg. Co., 2736 Creston Ave., New York 58, N. Y.

Foredom Electric Co., 27 Park Place, New York

7, N. Y. Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati 32, Ohio

Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio Fostoria Pressed Steel Corp., Fostoria, Ohio Foxboro Co., The, Foxboro, Mass. Frankel Connector Co., 177 Hudson St., New Vock N.V.

York, N. Y. Franklin Fibre-Lamitex Corp., 12th and French

Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Delaware
Franklin Mfg. Corp., A. W., 43-20 34th St., Long Island City 1, N. Y.
Franklin Paint & Varnish Co., Benjamin, 4820 Langdon St., Philadelphia 24, Pa.
Franklin Transformer Mfg. Co., 65 22nd Ave., NE, Minneapolis 13, Minn.
Fredericks Co., Geo. E., Bethayres, Pa.
Freed Radio Corp., 200 Hudson St., New York, N. Y.

N. Y. Freed Transformer Co., Inc., 1736 Weirfield St.,

Baltimore 4, Md. Fryling Mfg. Co., 639 W. 12th St., Erie, Pa. Fugle-Miller Laboratories, 398 Main St., Metuchen, N. J.

Fulton Sylphon Div., Robertshaw-Fulton Con-trols Co., Knoxville 4, Tenn. Furst Electronics, 10A S. Jefferson St., Chicago

G-M Laboratories, Inc., 4313 N. Knox Ave.,

Chicago, Ill. G. V. Mfg. Corp., 1001 First Ave., Asbury Park, N. J.

Gadgets Inc., 3629 N. Dixie Dr., Dayton 5, Ohio

Gaertner Scientific Corp., 1201 Wrightwood Ave.,

Gale-Dorethea, 37-61 85th St., Jackson Heights, L. I., N. Y.

Gamewell Co., The, Newton Upper Falls 64, Mass.

Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.

Garod Radio Corp., 70 Washington St., Brooklyn

Garrard Sales Corp., 315 Broadway, New York 7, N. Y.

Garrett Co., Inc., George K., 1421 Chestnut St., Philadelphia 2, Pa.

Gasket Engineering Co., 2440 Charlotte St., Kansas City 8, Mo.

Carthage at Hannaford, Cincin-

Mfg. Co., 4227 Hollis St.,

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Brooklyn 27, N. Y. iez Instrument Div., Bendix Aviation Corp.,

delphia 44, Pa.

N. Y

Friez

6. Ill. Fusite Corp., C nati 12, Ohio

Chicago 14, Ill.

Gardner Electric

1, N. Y

Emeryville 8, Calif.

ton Power Tools, 2659 W. 95th St., Chicago

42, 111. tes Radio Co., Quincy, Ill. tatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J.

Gaveco Labs., Inc., 2 East End Ave., New York 21,

21, N. Y. Gear Specialties, 2635 W. Medill Ave., Chicago 47, Ill.

47, 111. Gemioid Corp., 79-10 Albion Ave., Elmhurst, N. Y. General Aniline & Film Corp., Antara Products, 444 Madison Ave., New York 17, N. Y. General Cable Corp., 420 Lexington Ave., New York, N. Y. General Cement Mfg. Co., 919 Taylor Ave., Rock-ford. 11.

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 Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
General Controls Co., Glendale 1, Calif.
General Dry Batteries, Inc., 13000 Athens Ave., Cleveland, Ohio
General Electric Co., Schenectady 5, N. Y.
General Electric Co., Chemical Dept., Pittsfield, Mass.

Mass. General Electric Co., Construction Materials Dept.,

Bridgeport 2, Conn. General Electric Co., Electronics Dept., Syracuse, N. Y.

General Electric Co., Nela Park, Cleveland 12, Ohio

General Electric X-Ray Corp., 4855 W. McGeoch Ave., Milwaukee, Wisc. General Electronics, Inc., 101 Hazel St., Pater-

son, N. J. General Industries Co., Taylor & Olive Sts.,

Elyria, Ohio General Instrument Corp., 829 Newark Ave.,

Elyria, Ohio
General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
General Lead Batteries Co., 196 W. Railway Ave., Paterson, N. J.
General Magnetic Corp., 10001 Erwin Ave., Detroit 5, Mich.
General Photo Products Co., Inc., 15 Summit Ave., Chatham, N. J.
General Plate Div., Metals & Controls Corp., Attleboro, Mass.
General Precision Lab., Inc., Pleasantville, N. Y.
General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
General Television and Radio Corp., 2701 N. Lehmann St., Chicago 14, III.
General Transformer Corp., 4321 N. Knox Ave., Chicago 41, III.
General Transformer Co., 1820 N. Nach St.

Chicago 41, Ill. Geophysical Instrument Co., 1820 N. Nash St.,

Arlington, Va. George Co., P. D., 5200 N. 2nd St., St. Louis,

Mo.

Mo.
Gerett Corp., M. A., 724 W. Winnebago St., Mil-waukee 5, Wis.
Giannini & Co., Inc., 285 W. Colorado St., Pasa-dena 1, Calif.
Gibbs Division, George W. Borg Corp., Delavan, Wie

Gibson Co., Wm. D., Div. of Associated Spring Gibson Co., Wm. D., Div. of Associated Spring Corp., 1800 Clybourn Ave., Chicago, Ill.
Gibson-Electric Co., 8350 Frankstown Ave., Pittsburgh 21, Pa.
Gilandun Electronics, 14 Union Ave., Campbell, Calif.

Gilandun Electronics, 14 Unton Ave., Campbell, Calif. Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif. Giner Mfg. Co., 21 E. 34th St., Steger, Ill. Girard-Hopkins, 1000 40th Ave., Oakland 1, Calif. Girdler Corp., Thermex Div., 224 E. Broadway, Louisville 1, Ky.

Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis. Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn,

N. Y.

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Gleason-Avery Inc., Auburn, N. Y.

Globe Industries, 125 Sunrise Pl., Dayton, Ohio Globe Phone Mfg. Co., 2 Linden Street, Reading, Mass.

Globe Products Corp., 870 Maplewood Ave., Bridgeport 5, Conn.

Glyco Products Co., Inc., 26 Court Street, Brooklyn, N. Y

Goat Co., Inc., Fred, 314 Dean St., Brooklyn, N. Y.

Godfrey Mfg. Co., 171 S. 2nd St., Milwaukee 4, Wis.

Goldmark Wire Co., James, The, 75 Murray Street, New York 7, N. Y.

Goldsmith Bros. Smelting & Refining Co., 109 N. Wabash Ave., Chicago, Ill. Goodrich Chemical Co., B. F., Cleveland 15, Ohio Goodyear Tire & Rubber Co., Chemical Div., 1144 E. Market St., Akron 16, Ohio Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill

16, Ill.

16, 111. Gordon Specialties Co., 542 S. Dearborn St., Chi-Cago 5, 111. Gorham Co., Bronze Div., Providence 7, R. I. Goriell & Gorrell, Haworth, N. J. Goslin Electric and Manufacturing Co., 2921 W. Olive St., Burbank, Calif. Gothard Mfg. Co., 2110 Clear Lake Ave., Spring-field Ul.

field Ill.

Gould Moody Co., 395 Broadway, New York, N. Y. Gould Storage Battery Corp., 35 Neoga St., DePew, N. Y. Gow.Mac Instrument Co., 22 Lawrence St., New-

ark 5, N. J.

Grady Instrument Co., 689 Belmont St., Belmont

78, Mass. Grafo Colloids Corp., Sharon, Pa. Gramer Company, The, 2734 N. Pulaski Rd., Chi-cago 39, Ill.

cago 39, Ill.
Grammes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa.
Grant Pulley & Hardware Co., 57th St. & Broadway, Woodside, L. I., N. Y.
Graphite Metallizing Corp., 1041 Nepperhan Avenue, Yonkers. 3, N. Y.
Gray Mfg. Co., 16 Arbor St., Hartford, Conn.
Gray Radio Co., 501 Forest Hill Blvd., W. Palm Beach Fla.

Beach, Fla. Gray Research & Development Co., 16 Arbor St.,

Hartford I, Con. Grayhill, 1 N. Pulaski Rd., Chicago 24, Ill. Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill. Green Electric Co., W., 130 Cedar St., New York,

Y

N. Y. Greene Mfg. Corp., G. G., Warren, Pa. Greenhut Insulation Co., 31 W. 21st St., New York 10, N. Y. Greenlee Tool Co., 2136 12th St., Rockford, Ill. Gregory Mfg. Co., Inc., The, 67 Franklin St., New Haven 11, Conn.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Gross Electronics, Inc., 1865-71 Prospect Ave., Cleveland 15, Ohio

Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill. Guthman, Inc., Edwin I., 15 S. Throop St., Chi-

cago, Ill. aft & Sons, Inc., 79 Third St., Brooklyn 31, Haft

Haft & Sons, Inc., 10 June 2017 N. Y. Hague & Co., Inc., Alfred, 227 34th St., Brook-lyn, N. Y. Hall Co., Gordan L., Old Lyme, Conn. Halldorson Co., The, 4500 Ravenswood, Ave., Chicago 40, Ill. Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.

Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, 111.

Ill. Haloid Co., The, 6 Haloid St., Rochester, N. Y. Halowax Products Div., Union Carbide & Carbon Corp., 30 E. 42nd Street, New York, N. Y. Hammarlund Mfg. Co., 460 W. 34th St., New York 1, New York Hamilton Kent Mfg. Co., Kent, Ohio Handy & Harman, 82 Fulton St., New York 7, N. Y. Hanavia Chemical & Mfg. Co., 233 N. J. P. P.

N. Y. Hanovia Chemical & Mfg. Co., 233 N. J. R.R. Ave., Newark, N. J. Hansen Mfg. Co., Inc., Princeton, Indiana Hardwick, Hindle, Inc., 40 Hermon St., Newark,

N. J.

Harmonia Records, 1328 Broadway, New York, N. Y.

N. Y. Harnett Electric Corp., 138 Haven Ave., Port Washington, L. I., N. Y. Harper Co., The, H. M., 2620 Fletcher Street, Chicago 18, Ill. Harris Mfg. Co., 2422 W. 7th Street, Los Angeles

5, Calif.

b, Call. Hart & Co., Inc., Frederick, 839 Main Ave., Poughkeepsie, N. Y. Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.

Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio

Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.

Harvey Wells Electronics, Inc., North St., Southbridge, Mass.

Haskins Co., R. G., 2651 W. Harrison St., Chi-cago 12, Ill.

Hassall, Inc., John, Clay & Oakland Sts., Brook-lyn, N. Y.

Hastings Instrument Co., Box 1275, Hampton, Va.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Hawley Products Co., St. Charles, Ill. Haydon Mfg. Co., Inc., 584 E. Elm St., Torrin ton, Conn.

ton, Conn. Haydon Co., A. W., The, 111 W. Main St., Water-bury 32, Conn. Haydu Bros., Plainfield, N. J. Haynes Labsz, Inc., C. W., 61 Chandler St., Springfield, Mass. Haynes Stellite Co., Unit of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N V

N. Y Hazard Insulated Wire Works Div., The Okonite

Co., Wilkes Barre, Pa. Heath Co., Benton Harbor, Mich. Heiland Research Corp., 130 E. 5th Ave., Denver

Heinemann Electric Co., 97 Plum St., Trenton 2,

Heintz & Kaufman Ltd., South San Francisco, Calif. Heinze Electric Co., 685 Lawrence St., Lowell,

Heli-Coil Corp., 47-23 35th St., Long Island City 1, N. Y. Helipot Corp., 1011 Mission St., So. Pasadena,

Helpot Corp., 1011 Mission St., So. Fasadena, Calif.
Heller Co., Gerald K., 1540 Ridgely St., Balti-more 30, Md.
Helwig Co., 2544 N. 30th St., Milwaukee 10, Wise

Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Avenue, Brooklyn 7, N. Y. Hercules Powder Co., Inc., 900 Market St., Wil-

mington 99, Del. Heresite and Chemical Company, Manitowoc,

Wisc. Herlec Corp., The, 422 N. Fifth St., Milwaukee

3, Wisc. Hermaseal Co., The, Riverside Drive, Elkhart,

Hermetic Seal Products Co., 29-37 South 6th St., Newark, N. J. Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio Hetherington & Son, Inc., Robert, Sharon Hill,

Pa. Hewlett-Packard Co., 395 Page Mill Rd., Palo

Alto, Calif. Hexacon Electric Co., 130 W. Clay Ave., Roselle Park, N. J. Heyman Mfg. Co., 300 Michigan Ave., Kenilworth,

Hickok Electrical Instrument Co., 10514 Dupont

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Hillburn Electronic Products Co., 55 Nassau Ave., Brooklyn 22, N. Y.
Hi-Par Products Co., Fitchburgh, Mass.
High Frequency Heating Co., 143 Glen Park Ave., Gary, Indiana
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.

Mass. Hoffman Engineering Corp., Anoka, Minn. Hoffman Radio Corp., 3716 S. Hill Street, Los Angeles 7, Calif. Hofmann Corp., C. L., 436 Blvd. of the Allies, Pittsburgh 19, Pa. Hollingsworth & Vose Co., East Walpole, Mass. Hollister Crystal Co., Boulder, Colo. Holliston Mills, Inc., Norwood, Mass. Hollymade Hardware & Mfg. Co., 4865 Exquisi-tion Blvd., Los Angeles, Calif. Hollywood Radio Cabinet Co., 924 N. Formosa Ave., Hollywood, Calif. Holtzer-Cabot, Inc., 125 Amory St., Boston 19, Mass.

Home Recording Products Corp., Freeport, L. I.,

N. Y. Homelite Corp., Port Chester, N. Y. Hope Webbing Co., Providence 1, R. I. Hopp Press Inc., 460 W. 34th St., New York, N. Y.

Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y. Horton Machine Products Co., Horton & Rock-away Aves., Valley Stream, N. Y. Hose-McCann Telephone Co., Inc., 25th St. & 3rd Ave., Brooklyn 32, N. Y. Hoskins Mfg. Co. 4445 Lawton Ave. Detect 2

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8,

Houlihan Company, T. J., 2508-14 W. Lawrence Avenue, Chicago 25, Illinois

House of Television, 601 W. 26th St., New York, N. Y.

Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.

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9, Colo.

N. J.

Mass.

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Mich.

Y. N

- Howard Co., The, 934 Argyle Rd., Drexel Hill, Pa
- Howard Mfg. Corp., 1401 S. Main, Council Bluffs, Iowa
- Hubbard Spring Co., M. D., Central Ave., Pontiac, Mich.

- Mich. Hubbell, Inc., Harvey, Bridgeport 2, Conn. Hudson Wire Co., Winsted Div., Winsted, Conn. Hunt Corp., The, 455 Lincoln St., Carlisle, Pa. Hunter Photo Copyist Co., 566 Spencer St., Syra-

- Hunter Photo Copyist Co., 200 Spencer St., Syla cuse, N. Y. Hunter Pressed Steel Co., Lansdale, Pa. Hunter Spring Co., Lansdale, Pa. Hunton Plastics Co., 178 S. Van Brunt St., Englewood, N. J. Huse Liberty Mica Co., 171 Camden St., Boston, Mass
- Mass. Hydraulic Press Mfg. Co., Mt. Gilead, Ohio HyLite Antennae, 528 Tiffany St., Bronx, N. Y. Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass. I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa. Ideal Industries, Inc., Park & Borden Avenues, Sycamore, III. Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

- Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.
  Illinois Condenser Co., 1616 N. Throop St., Chi-cago 22, Ill.
  Illinois Testing Labs., Inc., 420 N. La Salle Street, Chicago 10, Ill.
  Illinois Wood Products Corp., 1656 No. Besly Court, Chicago 22, Ill.
  Ilsco Copper Tube & Products Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio
  Indiana Steel Products Co., 6 N. Michigan Ave., Chicago 2, Ill.
- Chicago 2, Ill. Indiana Steel & Wire Co., 700 S. Council St.,
- Muncie, Ind. Induction Heating Corp., 181 Wythe Ave., Brook-
- Iyn 11, N. Y. Inductive Equipment Co., Gettysburg, Pa. Inductograph Laboratory, Box 76, Brookfield, Conn
- Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill.
- Industrial Devices Inc., 22 State Rd., Edgewater,
- Industrial Electronics, Inc., 2457 Woodward Ave., Detroit 1, Mich. Industrial Electronics & Transformer Co., 1809
- Industrial Electronics & Transformer Co., 1809
  E. Slauson Ave., Los Angeles II, Calif.
  Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.
  Industrial Products Co., Danbury, Conn.
  Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
  Industrial Television Inc., 359 Lexington Ave., Clifton, N. J.
  Industrial Timer Corp., 115 Edison Pl., Newark 5, N. J.

- Industrial Timer Corp., 115 Edison Pl., Newark 5, N. J.
  Ingrahm Co., E., Bristol, Conn.
  Inland Plastic of America, Inc., 20 W. 30th St., New York, N. Y.
  Instrument Development & Mfg. Corp., 3018 E.
  Foothill Blvd., Pasedena 8, Calif.
  Instrument Electronics, 42-17A Douglaston Parkway, Douglaston, L. I., N. Y.
  Instrument Resistors Co., 1036 Commerce Ave., Union, N. J.
  Instrument Specialties Co., Inc., 254 Bergen Blvd., Little Falls, N. J.
  Instrument Parts Corp., P. O. Box 150, Ossining, N. Y.
- N. Y. Insulatine Co., 1 Broadway, New York, N. Y. Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y. 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., Brook-lyn, New York

- Insulation Mfrs. Corp., 565 W. Washington Blvd.,
- Chicago 6, Ill.
- Insuline Corp. of America, 36-02 35th Avenue, Long Island City, N. Y.
- International Derrick & Equipment Co., 875 Michigan Ave., Columbus 8, Ohio
- International Detrola Corp., Detrola Radio Div., 1501 Beard Ave., Detroit, Mich. International Instruments, Inc., 331 East St.,
- New Haven 11, Conn. International Machine Works, 2027 46th St.,
- North Bergen, N. J. International Merit Products Corp., 254 W. 54th St., New York 19, N. Y.
- International Nickel Co., Inc., The, 67 Wall St., New York 5, N. Y.

- International Rectifier Corp., 6809 S. Victoria Ave., Los Angeles 43, Calif. International Resistance Co., 401 N. Broad St.,
- International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
  International Telephone & Telegraph Corp., 67 Broad St., New York, N. Y.
  International Television Corp., 238 William St., New York 7, N. Y.
  Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
  Store Corp. 2504 C. March 199
- Intervox Corp., 2701 California Ave., Seattle, Wash.

- Wash.
  Intra-Video Corp. of America, 851 Madison Ave., New York 21, N. Y.
  Ionic Equipment Co., 1705 N. Kenmore Ave., Los Angeles, 27, Calif.
  Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J.
  Islip Radio Mfg. Corp., Beech St., Islip, N. Y.
  Isotopes Div., Atomic Energy Commission, Oak Ridge, Tenn.
  J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Hts., Pa.
- Clifton Hts., Pa.
- J B T Instruments Inc., 441 Chapel St., New
- J B 1 Instruments Inc., 441 Chapel St., New Haven 8, Conn. J. F. D. Mig. Co., 6101-23 Sixteenth Ave., Brooklyn, N. Y. Jackson Electrical Instrument Co., 16 S. Patter-und Deuter 1 Ohio.
- son Blvd., Dayton 1, Ohio
- Jackson Electro Corp., 124 Bleecker St., New York, N. Y. Janette Mfg. Co., 556 W. Monroe St., Chicago 6, Illinois
- Jarrel-Ash Co., 165 Newbury St., Boston 16, Mass.
- Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, III. Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport,
- N. Y.
- Jefferson Electric Co., Bellwood, Ill. Jefferson-Travis Inc., 76 Ninth Ave., New York 11, N. Y.
- Jelliff Mfg. Corp.; C. O., 200 Pequot Ave., South-
- port, Conn. Jennings Radio Mfg. Co., 1098 E. William St., San Jose 12, Calif. Jensen Industries Inc., 329 S. Wood St., Chicago,
- III. Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago
- 38, Ill.
- Jerome Camera & Instrument Corp., Massapequa, N. Y. Jerrold Electronics, 121 N. Broad St., Phila., Pa.
- Jewel Radio Corp., 583 Avenue of the Americas, New York 11, N. Y. Jiffy Sales Co., 1820 East 37th St., Cleveland
- 14, Ohio Johns-Manville, 22 E. 40th St., New York 16,
- N. Y. Johnson Co., E. F., Waseca, Minn.
- Johnson Co., E. F., Waseca, Minn.
  Johnson Fan & Blower Corp., 1319 W. Lake St., Chicago 7, III.
  Johnson Gas Appliance Co., 520 Ave. E. N.W., Cedar Rapids, Iowa
  Johnson Mfg. Co., Inc., Mt. Vernon, Iowa
  Johnston Tin Foil & Metal Co., 6100 S. Broad-way, St. Louis 11, Mo.
  Jones Electronics Co., M. C., 96 N. Main St., Bristol. Conn.
- Bristol, Conn.
- Jones, Howard B., Div., Cinch Mfg. Corp., 2460 W. George St., Chicago 18, Ill. Jones Motrola Corp., 432 Fairfield Ave., Stam-

- Jones Motrola Corp., 432 Fairfield Ave., Stamford, Conn.
  Jones Spring Co., W. B., 124 E. 7th St., Cincinnati, Ohio
  Joyner Corp., The, 462 N. Parkside Ave., Chicago 44, Ill.
  K-V Transformer Corp., 4414 Park Ave., New York 57, N. Y.
- Kaar Engineering Co., 2815 Middlefield Road, Palo Alto, Calif. Kahle Engineering Co., 1307 7th St., North
- Kalie Engineering Co., 1307 7th St., North Bergen, N. J.
  Kalbfell Labs., Inc., 1076 Morena Blvd., San Diego 10, Calif.
  Karet Associates, Inc., R. M., 510 N. Dearborn St., Chicago, Ill.
  Karp Metal Products Co., Inc., 215 63rd St., Brooklyn 20, N. Y.
- Kartron, Inc., Box 472, Huntington Beach, Calif. Kay Electric Co., 14 Maple Ave., Pine Brook, N. J.
- Keasbey & Mattison, Ambler, Pa.
- Keithley Instruments, 1507 Warrensville Center Rd., Cleveland 21, Ohio
- Kellems Co., Saugatuck, Conn.
- Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, III.
- Kelnor Mfg. Corp., 215 Kearney St., San Fran-cisco 8, Calif.

Kemlite Labs., 1819 W. Grand Ave., 22. III.

- Kemode Mfg. Co., 161 W. 18th St., New 11, N. Y
- Kent Co., F. C., 64-72 Howard St., Irvingt
- Kent Woodcraft Corp., 2-20 Hooper St., Brook-
- Kent Woodcraft Lorp., 2-20 Hooper St., Dion-lyn 11, N. Y.
  Kenyon Transformer Co., Inc., 840 Barry Street, New York 59, N. Y.
  Kepco Labs. Inc., 149-14 41st Ave., Flushing, N. Y.
  Kester Solder Co., 4212 Wrightwood Ave., Chi-caro 33, III Kester Solder Co., 4212 Wrightwood Ave., Chrcago 33, III.
  Keuffel & Esser Co., Hoboken, N. J.
  Keystone Carbon Co., Inc., Saint Marys, Pa.
  Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
  Kilburn Glass Co. Inc., J. R., 22 S. Worcester Street, Chartley, Mass.
  King Laboratories Inc., 127 Solar St., Syracuse 4. N. Y.

King Laboratories Inc., 121 Classon Ave.,
4, N. Y.
Kings Electronics Co., Inc., 372 Classon Ave., Brooklyn 5, N. Y.
Kingston Radio Co., Inc., Kokomo, Ind.
Kinney Mfg. Co., 3529 Washington St., Boston, Mass

Kinsey Radio Mfg. Co., 5807 Oak St., Omaha 7,

Nebraska Kip Electronics Corp., 155 Waverly Place, New York 14, N. Y. Kirchberger & Co., Inc., M., 1425 Thirty Seventh Street, Brooklyn 18, N. Y. Kirk & Blum Mfg. Go., 2893 Spring Grove Ave., Cincinnet: 25 Obio

Kirk & Blum Mig. Go., 2893 Spring Grove Ave., Cincinnati 25, Ohio
Kirkland Co., H. R., The, 8 King St., Morristown, N. J.
Kling Metal Spinning Co., 174 Centre Street, New York 13, N. Y.
Klipsch & Associates, Hope, Arkansas
Kluge Electronics Inc., 1913 Montrose St., Los Angeles 26, Calif.
Knights Co., James 131 S. Wells St. Sandwick

Knights Co., James, 131 S. Wells St., Sandwich,

Kobzy Tool Co., 1535 N. Dayton Ave., Chicago 22, Ill.

Koh-I-Noor Pencil Co., Bloomsbury, N. J. Kollsman Instrument Div. of Square D. Co., 80-08 45th Avenue, Elmhurst, N. Y.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Avenue, Newark 5, N. J.
 Kopp Glass Inc., 1 East 42nd St., New York 17, N. Y.

Koppers Co., Inc., Chemical Div., Koppers Bldg., Pittsburgh 19, Pa. Korfund Co., Inc., 4815 32nd Pl., L. I. City 1,

N.Y. Kotron Rectifier Corp., A Standard Arcturus Affiliate, 54 Clark St., Newark 4, N. J. Kraft & Kraft, Hicksville, N. Y. Krementz & Co., 49 Chestnut St., Newark 5,

Krieg Co., Charles W., 52 Dickerson St., Newark, N. J.
Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton, N. J.
Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y.

Kuika Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
Kurz-Kasch, Inc., 1415 S. Broadway, Dayton 1, Oliver

Kuthe Laboratories, Inc., 150 Summit Street,

Newark 4, N. J. Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif. Kyle Co., Div. of Line Material Co., South Mil-waukee, Wisc.

N. J. L. & R. Mfg. Co., 577 Elm St., Arlington, N. J. L & R. Mfg. Co., 2323 Chestnut St., Oakland 7,

La Magna Mfg. Co., Inc., East Rutherford,

In J. Lambda Electronics Corp., 103-02 Northern Blvd., Corona, N. Y. Lamicoid Fabricators, Inc., 4545 Cortland St.,

Laminated Plastics, Inc., 14838 Euclid Ave., Cleveland 12, Ohio

Laminated Shim Co., Inc., 56 Union Street, Glen-

La Motte Chemical Products Co., Towson 4,

Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio

Landis & Gyr, Inc., 104 Fifth Avenue, New York 11, N. Y.

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Lampkin Laboratories, Inc., Bradenton, Fla.

A. B. Corporation, 31 Union Place, Summit,

L.

N.

Chicago 39, Illinois

brook, Conn.

Baltimore, Md.

Nebraska

n Mfg. Corp., 37 W. 65th Street, New ( 23, N. Y.

c 23, N. Y.
g: Engineering Co., Electronics Div., 735 Kalamazoo St., Lansing 12, Mich.
...g Sound Inc., James B., 4221 S. Lincoln 9tvd., Venice, Calif.
Lansing Stamping Co., 1159 S. Pennsylvania Avenue, Lansing, Michigan
Lansky Die Cutting Co., 192½ Greene St., New York 12, N. Y.
LaPointe-Plascomold Corp., Unionville, Conn.
Lap Insulator Co., Inc., 31 Gilbert St., LeRoy, N. Y.
La Rose & Associates W. T. 640.0

La Rose & Associates, W. T., 646 Second Avenue,

Troy, N. Y. Larrimore Sales Co., P. O. Box 1234, St. Louis 1, Missouri

Laurehk Radio Mfg. Co., 3931 Monroe Avenue,

Wayne, Michigan Lavoie Laboratories, Morganville, N. J. Leach Relay Co., 5915 Avalon Blvd., Los Angeles

3, Calif. Lear, Inc., 110 Ionia Avenue, N.W., Grand Rapids 2, Michigan Leco Engineering Corp., Box 908, Lincoln, Nebr. Lectrohm, Inc., 5939 Archer Ave., Chicago 38,

111. Lectronic Research Labs., 1021 Callowhill St., Phila. 23, Pat Leeds & Northrup Co., 4970 Stenton Avenue, Philadelphia 44, Pa. Legri-S Co., Inc., 846 Amsterdam Ave., New York 25, N. Y.

Lehigh Structural Steel Co., 17 Battery Pl., New

York 4, N. Y. Leiman Bros., 114 Christie St., Newark 5, N. J. Lektra Labs., 30 E. 10th St., New York, N. Y. Leland, Inc., G. H., 123 Webster Street, Dayton Leland,

2, Ohio Leland Electric Co., 1501 Webster St., Dayton,

Ohio Lenk Mfg. Co., The, 30 Cummington St., Boston

15, Mass.

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Lenkurt Electric Co., Inc., San Carlos, Calif.
Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
Leonard Electric Products Co., 1562 61st St., Brooklyn, N. Y.
Lepel High Frequency Labs., Inc., 39 West 6th St., New York 23, N. Y.
Leru Laboratories, Inc., 360 Bleecker St., New York 14, N. Y.
Leupold & Stevens Instruments, 4445 N.E. Glisan Street, Portland 13, Oré.
Lewis Engineering Co., 52 Rubber Ave., Nauga-tuck, Conn.

Lewis Engineering Co., 52 Rubbel Mee, Mass-tuck, Conn. Lewis Spring & Mfg. Corp., 2646 North Ave., Chicago 47, Ill. Lewyt Corp., 60 Broadway, Brooklyn, N. Y. Liebel-Flarsheim Co., 303 W. Third St., Cin-cinnati 2, Ohio Lincrophone Co., Inc., 226 Lansing St., Utica, N

Linde Air Products Co., Unit of Union Carbide and Carbon Corp., 30 E. 42nd St., New York

and Carbon Corp., 50 and 25th Ave., Melrose 17, N. Y. Lindsay Corp., The, 1740 25th Ave., Melrose Park, Ill. Lingo & Son, Inc., John E., 28th St. & Buren Ave., Camden, N. J. Linick Chemical Co., 29 E. Madison St., Chicago

Link Engineering Co., 13581 Elmira St., Detroit 27, Mich. Link Radio Corp., 125 W. 17th St., New York,

N. Y

Linton & Bros. Inc., Horace, 3081 Ruth St., Philadelphia 34, Pa. Littelfuse Inc., 4757 Ravenswood Ave., Chicago

40, Ill. Little Falls Alloys, Inc., 189 Caldwell Ave., Pater-

son 1, N. J. Litton Industries, San Carlos, Calif. Locke Incorporated, P. O. Box 57, Baltimore 3,

Md.
Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 7, Calif.
London Gramophone Corp., The, 16 W. 22nd St., New York 10, N. Y.
Lorain Products Corp., 1122 F. St., Lorain, Ohio Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.
Lored Mfg. Co., 1635 W. 12th St., Erie, Pa.
Lored Mfg. Dec. H. K. 391 W. Broadway, New York

Lorentzen, Inc., H. K., 391 W. Broadway, New York 12, N. Y.

Lowell Insulated Wire Co., 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

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Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

Lundey Associates, Mfg. Div., 694 Main St., Waltham 54, Mass. Luzerne Rubber Co., Muirhead Ave., Trenton,

N J Lyman Electronic Corp., 12 Cass Street, Spring-

field, Mass. Lynch Co., F. W., 151 2nd St., San Francisco,

Calif. Lyte Parts Co., 312 Park Ave., Plainfield, N. J. McColpin-Christie Corp., 4922 S. Figueroa St., Los Angeles 37, Calif. McElroy Mig. Corp., Littleton, Mass. McMurdo Silver Co., Inc., 1240 Main Street, Hartford 3, Conn. McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10 Mo. Calif.

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 Avenue, Newark 4, N. J. Macallen Co., The, 16 Macallen St., Boston 27, Conn

Mass. Macdonald & Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass. Machine-O-Matic, Inc., P. O. Box 238, Ashley,

Ohio

Machlett Laboratories, Springdale, Conn. Mack Electrical Devices Inc., 43 Glenside Ave.,

Wyncote, Pa. Mack Molding Co., Wayne, N. J. MacLeod & Hanopol, 10 Joiner St., Charlestown 29. Mass.

Magnavision, Inc., 1546 Second Ave., New York
 28, N. Y.
 Magnavox Co., The, Components Div., Fort
 Wayne 4, Indiana
 Magnecord, Inc., 360 N. Michigan Ave., Chicago
 111

1, Ill. Magnetic Analysis Corp., 42-44 Twelfth Street, Long Island City I, N. Y. Magnetic Core Corp., 142-144 S. Highland Ave., Ossining, N. Y. Magnetic Devices, Corp., 232 Broad Ave., Pali-sades Park, N. J. Magnetic Devices, Inc., 712 East St., Frederick, Md.

Magnetic Metals Co., Hayes Ave. & 21st St.,

Camden, N. J. Magnetic Products Corp., The, Norwalk, Conn. Magnetic Recorders Co., 7120 Melrose St., Los

Angeles, Calif. Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton,

Magnograph Corp., 5800 W. 3rd St., Los Angeles, Calif.

Maguire Industries Inc., Electronics Dept., Bridgeport, Conn. Maico Co. Inc., 25 North 3rd St., Minneapolis,

Minn. aida Development Co., 12 E. Howard St., Maida

Phoebus, Va. Major Television Corp., 19 W. 44th St., New

York, N. Y. Makepeace Co., D. E., Attleboro, Mass. Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. Manning, Maxwell & Moore, Inc., 11 Elias St.,

Manning, Maxwell & Moore, Inc., 11 Enas St, Bridgeport 2, Conn. Manross & Sons, F. N., Div. Associated Spring Corp., Bristol, Conn. Manufacturers Battery Co., Sub. of Ray-O-Vac

Co., Madison, Wisc. Manufacturers Engr. & Equip. Corp., Willow

Manutacturers Engr. & Equip. Corp., Window Grove, Pa. Marathon Battery Co., Wausau, Wisc. Marathon Electric Mfg. Corp., Randolph & Cherry Sts., Wausau, Wisc. Marble-Card Electric Co., Gladstone, Mich. Marblette Corp., 37-21 30th St., Long Island City, N V Y Ν

Marbon Corp., Gary, Ind. Marco Industries, 210 South Clementine, Ana-

heim, Calif. Marco Industries, Inc., Depew, N. Y. Marino Radio Co., 203 Greenwich St., New York 7, N. Y.

Marion Electrical Instrument Co., Manchester, N. H.

Maritime Quality Hardware Co., Inc., Belfast, Maine

Markem Machine Co., Keene, N. H.

Market Forge Co., Everett 49, Mass.

Marlboro Tool & Mfg. Co., Charles St. & New Brunswick Ave., Matawan, N. J. Box 617, Edgewater

Martindale Electric Co., Bo Branch, Cleveland 7, Ohio

Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md. Masonite Corp., 111 W. Washington St., Chicago

2, Ill. Massa Laboratories, 3868 Carnegie St., Cleveland,

Maurer Inc., J. A., 37-01 31st St., Long Island City, N. Y. Mayfair Mokled Products Corp., 4440 N. Elston Avenue, Chicago 30, Ill. Ohio

Measurement Engineering Ltd., Arnprior, Ontario, Canada

Measurements Corp., Boonton, N. J. Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.

Medical Electronics Co., P. O. Box 3541, Cleve-

Medical Electronics Co., P. O. Box 3541, Cleveland 18, Ohio
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Melco Products, Inc., 22 E. Hennepen Avenue, Minneapolis 1, Minn.
Mellaphone Corp., Rochester 2, N. Y.
Melpar, Inc., 452 Swann Ave., Alexandria, Va.
Mepco Inc., 37 Madison Ave., Morristown, N. J.
Merck & Co., Inc., Rahway, N. J.
Mercoid Corp., The, 4201 Belmont Ave., Chicago 41, Ill.

Mercold Corp., 1ne, 4201 Bennont Ave., Chroago 41, Ill. Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. Metalace Corp., 2101 Grand Concourse, Bronx,

N. Y. Meters, Inc., 915 Westfield Blvd., Indianapolis

20, Ind. Methode Mfg. Corp., 1733 N. Milwaukee Ave., Chicago 47, Ill.

Metron Instrument Co., 432 Lincoln St., Denver 9, Colorado

Metropolitan Electronics & Instruments Co., 42 Warren St., New York 7, N. Y. Mettler Co., Lee B., 406 S. Main Street, Los Angeles 13, Calif.

Angeles 13, Call. Metzger & Son, F. F., 2600 N. 6th St., Phila-delphia 33, Pa. Meyercord Co., 5323 W. Lake St., Chicago 44, Ill. Mica Fabricating Co., 53 Central Ave., Rochelle

Mica Fabricating Co., 53 Central Ave., Rochene Park, N. J.
Mica Insulator Co., Schenectady 1, N. Y.
Micacraft Products Inc., 701 McCarter Highway, Newark 5, N. J.
Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y.
Micarta Fabricators, Inc., 5324 Ravenswood Avenue, Chicago 40, Illinois
Mico Instrument Co., 80 Trowbridge St., Cam-bridge 38, Mass.

Mico Instrument Co., 80 Thowninge St., Cam bridge 38, Mass. Micro Switch Division of First Industrial Corp., 7 Spring St., Freeport, Ill. Microtone Co., Ford Parkway on the Mississippi, St. Paul 5, Minn.

St. Paul 5, Minn. Microwave Equipment Co., North Caldwell, N. J. Mid-American Sales Co., 315-17-19 N. Cardinal Ave., St. Louis 3, Mo. Midco Mfg. & Distributing Co., S. 13th & Ken-tucky Avenue, Sheboygan, Wisconsin

Midco Mfg. & Distributing Co., S. 13th & Kentucky Avenue, Sheboygan, Wisconsin
Midland Paint & Varnish Co., 9115 Reno Avenue, Cleveland 5, Ohio
Midwest Molding & Mfg. Co., 319 N. Whipple Street, Chicago 12, Illinois
Midwest Radio Corp., 909 Broadway, Cincinnati 2, Ohio

Midwest Radio Corp., 505 Broadway, Cheminike 2, Ohio
Mid-West Spring Mfg. Co., 4632 S. Western Avenue, Chicago 9, Illinois
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
Milford Rivet & Machine Co., Milford, Conn.
Millen Mfg. Co., James, 150 Exchange St., Maldon Mass

den, Mass. Miller, August E., 9226 Hudson Blvd., North Bergen, N. J. Miller, B. F., P. O. Box 568, Trenton 4, N. J. Miller Co., J. W., 5917 S. Main St., Los Angeles,

Miller Corp., William, 362 W. Colorado St., Pasadena, Calif. Miller Mig. Co., M. A., 1169 E. 43rd St., Chicago 15, Ill.

Milwaukee Resistor Co., 700 W. Virginia Street,

Milwaukee Stamping Co., 800 S. 72nd St., Mil-waukee, Wisc. Minerallac Electric Co., 25 N. Peoria St., Chicago,

Mines Equipment Co., 4235 Clayton Ave., St. Louis, Mo.

Miniature Precision Bearings, Inc., Keene, New

Minnesota Electronics Corp., 97 E. Fifth St., St. Paul 1, Minn.

Co.,

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Minneapolis-Honeywell Regulator Co. Fourth Avenue S., Minneapolis, Minn.

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- Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul, Minn. Minute Man Products, Inc., 309 East 22nd Street,
- New York 10, N.
- Mirror Record Corp., 1133 Broadway, New York
- Mirror Record Corp., 1133 Broadway, New York 10, N. Y. Miskella Infra-Red Co., The, E. 73rd & Grand Ave., Cleveland 4, Ohio Mission Electric Mfg. Co., 132 W. Colorado Blvd., Pasadena, Calif. Mitchell Rand Insulation Co., Inc., 51 Murray Streat Naw York 7 N V
- Street, New York 7, N. Y. Mobile Communications Co., 110 W. Ocean Blvd.,
- Long Beach 2, Calif. Model Engineering & Mfg., Inc., Huntington, Indiana
- Indiana
  Model Rectifier Corp., 127 Atlantic Ave., Ocean-side, L. I., N. Y.
  Modern Hearing Aids Laboratory, The, 2076 Kingsway, Vancouver, Canada
  Modulation Products Co., 202 E. 44th St., New York, N. Y.
  Moisture Register Co., P. O. Drawer No. 910, Aliambea Colifornia.
- Molsture Register Co., P. O. Drawer No. 910, Alhambra, California Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa. Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif. Monroe Coil Co., 1606 N. California St., Chicago, ID
- III.
- Monsanto Chemical Co., Plastics Div., Springfield 2. Mass. Montgomery Mfg. Co., 549 W. Washington Blvd.,
- Chicago 6, Ill. Mooradian High Frequeeny Labs, 13 E. Fort Lee Rd., Bogota, N. J.
- Rd., Bogota, N. J.
  Moore Co., Howard J., 108 Park Row, New York
  7, N. Y.
  Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
- Mosher Electronic Controls, 130 W. 42nd St., New York, N. Y. Mosinee Paper Mills Co., Mosinee, Wisconsin Mossman Inc., Donald P., 612 N. Michigan Ave., Chicago 11, 111, Motorelo Lug. 45 45 W. Aver to Phylor Chic
- Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill. Moulic Specialties Co., 1005-1007 W. Washing-
- ton St., Bloomington, III. Moyen, C. P., 908 Chicago Ave., Chicago, III. Mu Switch Div., The Chase Shawmut Co., 33 Pequit St., Canton 31, Mass.
- Mueller Electric Co., 1583 E. 31st St., Cleveland 14, Ohio
- Multicore Solders Ltd., Mellier House, Albemarle St., London, W. 1, England Multi-Products Tool Co., 123 Sussex Ave., Newark
- Multi-Products Iool Co., 123 Sussex Ave., Newark 4, N. J.
  Multiple Television Mfg. Co., 987 Hegeman Ave., Brooklyn 8, N. Y.
  Murdock Mfg. Co., Wm. J., Chelsea, Mass.
  Murray American Corp., 95 Summit Ave., Summit, N. J.
  Murray Industries, 10 S. 25th St., Colorado Spatial Colorado

- Murray Industries, 10 S. 25th St., Colorado Springs, Colorado Muter Co., 1255 S. Michigan Ave., Chicago, Ill. Mycalex Corp. of America, 60 Clifton Blvd., Clifton, N. J. Myers & Sons, E. A., Radioear Bldg., Beverly
- Radioear Bldg., Beverly
- Rd., Pittsburgh 16, Pa. Mykroy, Inc., Arlington Heights Airport, Arling-ton Heights, Ill.
- National Carbon Co., Inc., Unit of Union Carbide & Carbon Corp., 30 E. 42nd Street, New York 17. N. Y
- National Ceramic Co., 400 Southard St., Trenton 2, N. J. National Company, Inc., 61 Sherman Street, Malden 48, Mass.
- National Electric Coil Co., Columbus 16, Ohio National Electrical Machine Shops, In Jesup-Blair Drive, Silver Spring, Md. Inc., 919
- National Electric Controller Co., 5307 Ravenswood Avenue, Chicago, Illinois
- National Electronic Míg. Corp., 35-05 36th St., Long Island City 5. N. Y.
- National Electronics, Inc., Geneva, Ill.
- National Electronics Labs., Inc., 200 King St., Alexandria, Va.
- National Gasket & Washer Mfg. Co., Inc., 122 E. 25th St., New York 10, N. Y.
- National Instrument Co., 246 Walnut Street, Newtonville 60, Mass. National
- ational Intercommunicating Systems, Devon Avenue, Chicago 26, Illinois 1531National Lead Co., 111 Broadway, New York 6,
- N Y National Lock Washer Co., 40 Hermon St., Newark 5, N. J.

- National Molding Co., 2141 W. Washington Blvd., Los Angeles 7, Calif.
   National Moldite Co., Hillside 5, N. J.
   National Research Corp., 70 Memorial Drive, Cambridge 42 Maga
- Cambridge 42, Mass. National Screw & Mfg. Co., The, Cleveland 4,
- Ohio
- Onio
   National-Simplex-Bludworth, Inc., Bludworth Division, 92 Gold Street, New York 7, N. Y.
   National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland, Ohio
   National Technical Lab., 820 Mission St., South Paradena, Colif.
- Pasadena, Calif
- Pasadena, Cant.
   National Union Radio Corp., 350 Scotland Rd., Orange, N. J.
   National Varnished Products Corp., The, 211 Randolph Ave., Woodbridge, N. J.
   National Vulcanized Fibre Co., Wilmington, Del.
   Nabel Lab. P. F. 1104 Unsche Resetting
- Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
- Nelson Specialty Corp., San Leaudro, Calif.
   Nelson Vacuum Pump Co., George F., 2133
   Fourth Street, Berkeley 10, Calif.
   Network Mfg. Corp., Bayonne, N. J.
   Newark Transformer Co., Park & Linden Aves., Linden N. J.

- Linden, N. J. New England Electrical Works Inc., Lisbon, N. H. New England Etching & Plating Co., 25 Spring
- New England Etering e Flating Co., 20 Spring St., Holyoke, Mass. New England Mica Co., Waltham, Mass. New England Screw Co., Keene, New Hampshire New Hampshire Ball Bearings, 5 Main St., Peter-
- New Hampshire Ball Bearings, 5 Main St., Peterborough, N. H.
  New Jersey Wood Finishing Co., Amboy Ave., Woodbridge, N. J.
  New Jersey Zinc Co., 160 Front St., New York 7, N. Y.
  New York Solder Co., 684 E. 133rd St., New York Solder Co., Value St., New York Solder Co., New York Solder St., New York St., New York Solder St., New York St.,
- York 54, N. Y. ew York Transformer Co., Inc., Third Ave., New
- Alpha, N. J. Newcomb Audio Products Co., 6824 Lexington
- Ave., Hollywood 38, Calif. New Co., J. M., 179 Elm St., Hartford, Conn. Niagara Electron Laboratories, Andover, New
- York Nickel Cadmium Corp., Easthampton, Mass. Nielsen Television Corp., Newton Rd., Norwalk,
- Conn.
- Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y. Noble & Westbrook Mfg. Co., 27 Westbrook St., E. Hartford 8, Conn.

- St., E. Hartlord 8, Conn. Noblitt Sparks Industries, Columbus, Ind. Nonotuck Mfg. Co., Holyoke, Mass. Norrman Labs., Ernst, Williams Bay, Wisc. 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 Electric Mfg. Co., 501 S. Market St., Galion, Ohio Northeastern Engineering Inc., Manchester, N. H. Northern Communications Mfg. Corp., 210 E. 40th St., New York 16, N. Y. Northern Industrial Chemical Co., 7-11 Elkins Street South Boston 27, Mass. Northern Radio Co., 314 Bell St., Seattle 1, Wash

- Wash.
- Northern Radio Co., Inc., 143-145 W. 22nd St., New York 11, N. Y. Norton Co., 1 New Bond Street, Worcester 6,
- Mass.
- Norton Electrical Instrument Co., 59 Hilliard St.,

- Norton Electrical Instrument Co., 59 Hilliard St., Manchester, Conn.
  Norton Laboratories, Inc., Lockport, N. Y.
  Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
  Nuclear Development Lab., Box 7601, Kansas City, Mo.
  Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
  Nukem Products Corp., 111 Colgate Ave., Buffalo 20, N. Y. 20. N. Y
- Numberall Stamp & Tool Co., Huguenot Park, Staten Island 12, N. Y.
- Nurnberg Thermometer Co., Inc., 4 Corey St., Boston 32, Mass.
- O. Z. Electrical Mfg. Co., Inc., 262 Bond Street, Brooklyn 2, N. Y.
- Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, Ill. Oak
- ak Ridge Antennas Div. of Video Television, Inc., 239 E. 127th St., New York 35, N. Y. O'Connor & Co., John T., West Orange, N. J.
- Offner Electronics Inc., 5320 N. Kedzie Ave., Chicago 25. Ill.
- Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio
- Ohio Crankshaft Co., Tocco Div., 3800 Harvard Ave., Cleveland 1, Ohio

- Ohmite Mfg. Co., 4835 W. Flournoy St., 44, Ill.
- Okonite Co., The, Canal Street, Passaic, N. Olek & Son, Inc., A., 4757-59 Melrose a Philadelphia 37, Pa.
- Olesen Co., Otto K., 1560 Vine Street, Hollywood 28, Calif. Olin Industries Inc., Electrical Division, New
- Haven 4, Conn.
- Haven 4, Conn. Olympic Radio & Television Co., 34-01 38th Ave., Long Island City, N. Y. Olympic Tool & Mfg. Co., Inc., 39 Chambers St., New York 7, N. Y. Omaha Scientific Supply Co., 3623 Lake St., Ownho 1, Neb.
- Omaha 4, Neb.
- Onan & Sons Inc., D. W., 3264 Royalston Ave., Minneapolis 5, Minn. O'Neil-Irwin Mfg. Co., 316 8th Ave., Lake City,

Operadio Mfg. Co., 135th & Indiana Sts., St.

Openheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y. Optical Film Engineering Co., 2125 Cherry St.,

Optical Film Engineering Co., 2125 Cherry St., Philadelphia 3, Pa.
Orthon Corp., The, Electronic Div., 196 Albion Ave., Paterson 2, N. J.
Oris Mfg. Co., Inc., Thomaston, Conn.
Osborne Transformer Corp., 948 E. Lafayette Avenue, Detroit 7, Mich.
Osgood Engineering Co., 110 Pleasant St., Malden, Marce

Oster Mfg. Co., John, Racine, Wisconsin Owen Laboratories, 9130 Orion St., San Fernando,

Owens-Corning Fiberglas Corp., 1860 Nicholas

Ovens-Corning Fibergias Corp., 1860 Nicholas Bildg., Toledo I, Ohio
Owens-Ilinois Glass Co., Toledo, Ohio
Oxford Radio Corp., 3911 S. Michigan Avenue, Chicago 15, Ill.
Ozalid Div. of Gen. Aniline & Film Corp., 770 Ansco Rd., Johnson City, N. Y.
Pacific Electricord Company, 9304 Santa Monica, Blvd., Beverly Hills, Calif.
Pacific Mills, Industrial Fabrics Dept., 214 Church St., New York, N. Y.
Paisley Products Inc., 1770 Canalport Ave Chi-

Paisley Products Inc., 1770 Canalport Ave., Chi-cago 16, Ill.
 Palnut Co., Inc., 77 Cordier St., Irvington 11,

Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York, N. Y. Panero Mirrors Inc., 2958 Los Feliz Blvd., Los

Angeles, Calif. Panoramic Radio Corp., 10 South Second Ave., Mt. Vernon, N. Y.

Panoranic Radio Products, Inc., 10 South Second Ave., Mt. Vernon, N. Y. Paper Machinery & Research, Inc., 1014 Oak St.,

Paragon Electric Co., Two Rivers, Wisc.
Paragon-Revolute Corp., 71 South Ave., Rochester 4, N. Y.
Paramount Paper Tube Co., 614 LaFayette St., Ft. Wayne, Ind.
Paravox, 2056 E. 4th St., Cleveland 15, Ohio
Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.
Park Metalwara Co., 28 Bank St. Ownhowd Back.

Park Metalware Co., 28 Bank St., Orchard Park, N. Y.

Parker-Kalon Corp., 200 Varick St., New York

Parker Rust Proof Co., 2177 E. Milwaukee Ave.,

Par-Metal Products Corp., 32-62 49th Street, Long Island City 3, N. Y.

Pass & Seymour, Inc., Solvay Station, Syracuse, N. Y.

Paterson Co., C. J., 3947 Broadway, Kansas City, Mo. Patrick's Industries 1507 W. Saratoga Avenue,

Ferndale 20, Mich. Patton-MacGuyer Co., 17 Virginia Avenue, Provid-

ence 5, R. I. Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.

Pawtucket Mfg. Co., 327 Pine St., Pawtucket,

Pease Co., C. F., 2601 W. Irving Park Rd., Chi-cago, Ill.

Peck & Harvey, 5736-38 N. Western Ave., Chi-

Peck Springs Co., 9 King St., Plainville, Conn. Peerless Electrical Products Co., 6920 McKinley Ave., Los Angeles 1, Cal<sup>-</sup>f.

Peerless Photo Products, Shoreham, L. I., N. Y. Peerless X-Ray Laboratories & Mfg. Corp., 467 10th Ave., New York 18, N. Y. Peirce Wire Recorder Corp., 1328 Sherman Ave-nue, Evanston, Illinois

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Detroit, Mich. Parkwood Corp., Wakefield, Mass.

Paragon Electric Co., Two Rivers, Wisc.

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Roselle, N. J.

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cago 45, Ill.

Charles, Ill.

Engineering & Mfg. Corp., Box 311, Doyles-

vn, Pa. Fibre & Specialty Co., 2030 E. Westmore-id St., Phila. 44, Pa. enn-Union Electric Corp., 315 State St., Erie,

Pa.

- Perfection Electric Co., Chicago, Ill. Perkin Elmer Corp., The, Glenbrook, Conn. Perkins Machine & Gear Co., Box 1331 Spring-field, Mass.

Permanente Products Co., Inc., 1924 Broadway, Oakland 12, Calif. Permo Inc., 6415 Ravenswood Ave., Chicago, Ill. Permoflux Corp., 4900 W. Grand Ave., Chicago,

TIL Peters Chemical Mig. Co., 3623 Lake St., Mel-

- rose Park, Illinois Petersen Radio Co., Inc., 2800 W. Broadway, Council Bluffs, Iowa Pfanstiehl Chemical Co., 104 Lake View Ave.,
- Waukegan, Ill.
- Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass.
- Phelps Dodge Copper Products Corp., 40 Wall St., New York, N. Y.
- Pheoll Mig. Co., 5700 Roosevelt Rd., Chicago 50, III.
- Philadelphia Insulated Wire Co., 220 N. 3rd St.,
- Phila., Pa.
  Philadelphia Steel & Wire Corp., Penn. St. & Belfield Ave., Phila., Pa.
  Philadelphia Thermometer Co., 4401 N. Sixth St., Dhiladelphia Thermometer Co., 4401 N. Sixth St.,

Phila., Pa. Philco Corp., Tioga & C Streets, Philadelphia 34,

Pa.

- Pra.
  Phillips Control Corp., 84 W. Jefferson St., Joliet, Illinois
  Philson Mfg. Co., Inc., 156 Chambers St., New York, N. Y.

- York, N. Y. Phonograph Needle Mfg. Co., 42 Dudley St., Providence 5, R. I. Phosphor Bronze Corp., 2200 Washington Ave., Philadelphia 46, Pa. Photobell Company, 116 Nassau St., New York 7, N. Y. Photocon Research Products, 1062 N. Allen Ave., Developer 7, Colif.
- Pasadena 7, Calif. Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
- Photovolt Corp., 95 Madison Ave., New York 16, N.Y
- Pho Tron Instrument Co., 5713 Euclid Ave., Cleveland, Ohio
- Picker X-Ray Corp., 300 Fourth Ave., New York 10, N. Y.
- Pickering and Co., 309 Woods Ave., Oceanside, New York
- Pierce Renewable Fuses Inc., 211 Hertel Ave., Buffalo 7, N. Y. Pierce Template Corp., 2646 N. Coral Street,
- Pierce Temprate Corp., 2040 N. Coral Street, Philadelphia 25, Pa.
  Piezo Mfg. Corp., 110 E. 42nd Street, New York 17, N. Y.
  Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.

- Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
  Pioneer Electric Co., 3700 East Olympic Blvd., Los Angeles 23, Calif.
  Pioneer Gen-E-Motor Corp., 5841 W. Dickens Ave., Chicago 39, Ill.
  Piqua Machine & Mfg. Co., Young & College Sts., Piqua, Ohio
  Planet Radio Mfg. Corp., 6508 Euclid Ave., Cleveland 3, Ohio
  Plaskop Division' Libbey-Owens-Ford Glass Co.,

Plaskon Division. Libbey-Owens-Ford Glass Co., 2112-14 Sylvan Avenue, Toledo 6, Ohio Plastex Corp., 402 Mt. Vernon Ave., Columbus

- 3. Ohio
- Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y. Plastic Fabricators Co., 440 Sansome Street, San

- Plastic Fabricators Co., 440 Sansome Street, San Francisco 11, Calif.
  Plastic Manufacturers Inc., Stamford, Conn.
  Plastic Metals Division, The National Radiator Co., 169 Bridge Street, Johnstown, Pa.
  Plastic Wire & Cable Corp., Jewett City, Conn.
  Plasticraft Products Co., 20 Hudson St., New York 13, N. Y.

- Plastoid Corp., 10 Mill Rd., Hamburg, N. J. Plax Corp., P. O. Box 1019, Hartford 5, Conn. Plume & Atwood Mfg. Co., Waterbury, Conn. Poinsettia Co., Inc., 95 Cedar Ave., Pitman, N. J. Polan Industries, 220 Eighth St., Huntington, Wast Virginia
- West Virginia
- Polarad Electronics Co., 9 Ferry St., New York 6, N. Y.
- Polymer Corp., The, Reading, Pa. Polytechnic Research & Development Co., Inc., 66 Court St., Brooklyn 2, N. Y.
- Polytron Corp., 133 Martine Ave., White Plains, N. Y. Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 3,

Calif.

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- N. J. Potdevin Machinery Co., 1278 38th St., Brooklyn
- 18, N. Y. Potter & Brumfield Sales Co., 549 W. Washington
- Blvd., Chicago 6, Ill. Potter Co., 1850 Sheridan Rd., No. Chicago, Ill. Potter Instrument Co., 136-56 Roosevelt Ave.,
- Flushing, N. Y. Powdered Metal Products Corp., Franklin Park, Ill.
- Power Equipment Co., 55 Antoinette St., Detroit 2, Mich. Powhatan Mining Co., Baltimore 7, Md.
- Pratt & Whitney Div., Niles-Bement-Pond Co., West Hartford 1, Conn.
- West Hartford I, Conn. Precise Mig. Co., 24-34 New Chambers St., New York 7, N. Y. Precision Apparatus Co., Inc., 92-27 Horace Hard-ing Blvd., Elmhurst, N. Y. Precision Audio Products Inc., 1133 Broadway, New York 10, N. Y. Precision Electronics 641 Milwankee Ave Chi-
- Precision Electronics, 641 Milwaukee Ave., Chi-
- cago 22, Ill. Precision Fabricators, Inc., Roosevelt Rd., E. Rochester, N. Y.
- Normester, N. 1. Precision Machine Works, Inc., 730 Lyndale Ave. No., Minneapolis 11, Minn. Precision Metal Products Co., 342 Eastern Ave., Malden 48, Mass. Precision Paper Tube Co., 2033 W. Charleston St.,
- Chicago 47, Ill. Precision Piezo Service, 427 Mayflower St., Baton
- Rouge, La. Precision Plastic Products Inc., 628-30 W. Lake St., Chicago 6, Ill.
- Precision Products Co., 26 Bedford St., Waltham 54. Mass.
- Precision Resistor Co., 334 Badger Avenue, Newark 8, N. J. Precision Transformer Co., Inc., 1101 N. Paulina

- Precision Transformer Co., Inc., 1101 N. Paulina St., Chicago 22, Ill.
  Precision Tube Co., Inc., 3828 Terrace St., Philadelphia 28, Pa.
  Preis Engraving Machine Co., 649 Highway No. 29, Hillside, N. J.
  Premax Products Div., Chisholm-Ryder Co., Inc., Niagara Falls 2, N. Y.
  Premier Crystal Labs. Inc., 79-89 Seventh Ave., New York 11, N. Y.
  Premier Instrument Corp., 52 W. Houston St.,

- New York 11, N. Y. Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y. Premier Metal Etching Co., 21-03 44th Ave., Long Island City, N. Y. Press Wireless Mfg. Co., Inc., Cantiague Rd., Hicksville, L. I., N. Y. Presto Electric Co., Inc., 4511 New York Avenue, Union City. N. J.
- Union City, N. J. Presto Recording Corp., Paramus, N. J

- Presto Recording Corp., Paramus, N. J. Prestole Corp., 3119 Bellevue Rd., Toledo 6, Ohio Printloid Inc., 95 Mercer St., New York, N. Y. Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. Proctor Soundex Corp., 133 N. 6th Ave., Mt. Vergen N. Y.
- Vernon, N. Y. Production Engineering Co., 173 Sargeant Ave.,
- Clifton, N. J Production Equipment Co., 37 W. Main St., Oyster Bay, N. Y.
- Progressive Mfg. Co., 52 Norwood St., Torrington Conn.
- Progressive Welder Co., 3050 E. Outer Dr., De-
- troit, Mich. Public Operating Co., 100 W. 42nd St., New York, N. Y.
- York, N. Y. Pure Carbon Co., St. Marys, Pa. Pyle-National Co., 1334 N. Kostner Ave., Chicago 51. Ill.
- Pyramid Electric Co., 155 Oxford St., Patterson, N. J
- Pyramid Products Co., 2224 S. State St., Chicago, 111.
- Pyroferric Co., 621 E. 216th St., New York 67, N. Y.
- Quadriga Mfg. Co., 213 W. Grand Ave., Chicago 11, Ill. Quaker City Gear Works, 1908-32 N. Front St.,
- Philadelphia, Pa. Quam Nichols Co., 526 E. 33rd Pl., Chicago 16,
- III.
- R. B. M. Division, Essex Wire Corp., Logansport, Ind.
- RMS Electronics, Inc., 622 E. 6th St., New York,
- Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
- Radar Engineers, 110 University St., Seattle 1, Wash.
- Rad-El Mfg. Co., 6300 Euclid Ave., Cleveland 3, Ohio

Radex Corp., 2076 N. Elston Avenue, Chicago 14, III.

- Radiad Service, 720 W. Schubert Ave., Chicago
- 14, Ill. Radiart Corp., The, 3571 W. 62nd St., Cleveland, Ohio
- Radiation Counter Laboratories, Inc., 1844 West
- 21st St., Chicago 8, Ill. Radio City Products, 152 W. 25th St., New York 1, N. Y. I, N. Y. Radio Condenser Co., Camden, N. J. Radio Corp. of America, RCA Victor Div., Front & Cooper Sts., Camden, N. J. Radio Craftsmen, Inc., 1341 S. Michigan Ave., Chicago 5, Ill. Radio Design Co., 1353 Sterling Place, Brooklyn, N V

Radio Development and Research Co., 26 Cornell-

son Ave., Jersey City, N. J. Radio Engineering Labs., Inc., 35-54 36th St., Long Island City, N. Y. Radio Irequency Labs., Inc., Boonton, N. J. Radio Inventions, Inc., 155 Perry St., New York

Radio Inventions, Inc., 200
14, N. Y.
Radio Mfg. Engineers Inc., 300-306 First Ave., Peoria 6, Ill.
Radio Merchandise Sales, 550 Westchester Ave., New York 55, N. Y.
Radio-Music Corp., Port Chester, N. Y.
Radio Receptor Co., 251 W. 19th St., New York 11, N. Y.
Y. Terrer, 186 Union Ave., New Rochelle,

11, N. Y. Radio Sonic Corp., 186 Union Ave., New Rochelle,

Radio Speakers Inc., 221 E. Cullerton St., Chicago,

III.
 Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
 Radio-Television Institute, Inc., 480 Lexington Ave., New York 17, N. Y.
 Radio Transceiver Laboratories, 116-23 Jamaica Ave., Richmond Hill 18, N. Y.
 Radioactive Products Inc. 3201 E. Woodbridge

Radioactive Products Inc., 3201 E. Woodbridge St., Detroit 7, Mich. Radiocrafters, 1156 Commonwealth Ave., Boston

Radiomarine Corp. of America, 75 Varick St., New

Radionic Transformer Go., 411 S. Sangamon St.,

Rahm Instruments, Inc., 12 West Broadway, New York 7, N. Y. Ranco, Inc., 601 W. Fifth Ave., Columbus, Ohio Ranggrtone, Inc., 73 Winthrop St., Newark 4,

N. J. Rapid Design. Inc., P. O. Box 592, Glendale, Calif. Rapid Specialties Co., 325 W. Huron Street, Chi-cago 10, Ill. Rattan Mfg. Co., The, 10 Wall St., P. O. Box 1745, New Haven 7, Conn. Rauland-Borg Corp., 4245 N. Knox Ave., Chicago 41 JU

Rauland-Borg Corp., 4249 A. Massara, 41, 11.
Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
Ray-Dyne Mfg. Corp., 141 West 24th St., New York 11, N. Y.
Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa.
Ray-O-Vac Co., Madison, Wisc.
Raytheon Mfg. Co., Equipment Sales Div., Waltham 54, Mass.
Raytheon Mfg. Co., Power Tube Division, Waltham 54, Mass.

Waltham 54, Mass. Raytheon Mfg. Co., Receiving & Special Tube Div., 55 Chapel St., Newton 58, Mass. Rea Magnet Wire Co., E. Pontiac St., Fort Wayne, Ind. Ready Power Co., The, Power Plant Div., 11231 Frend 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., 1803 E. Seventh St., Los Angeles 21, Calif. Red Arrow Electric Corp., 100 Colt St., Irvington

Redmond Co., Inc., Owosso, Mich. Reeder & Co., Charles M., 171 Victor Ave., De-troit 3, Mich.

Reeves-Hoffman Corp., 321 Cherry St., Carlisle, Pa.

Reeves Instrument Corp., 215 East 91st Street, New York, N. Y.

Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.

REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y. Regal Electronics Corp., 603 West 130th St., New York 27, N. Y.

Reichhold Chemicals Inc., 601-707 Woodward Heights Blvd., Ferndale Sta., Detroit 20, Mich. Reilly Tar and Chemical Corp., Merchants Bank

Bldg., Indianapolis, Ind.

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Raytheon Mfg. Co., Waltham 54, Mass.

Reiner Electronics Co., 152 W. 25th St., New

- York, N. Y. Reister Mfg. Co., Hagerstown, Md. Rek-O-Kut Co., Inc., 38-01 Queens Blvd., Long Island City, N. Y.
- Reliable Spring and Wire Forms Co., Fulton Rd. and Paris Ave., Cleveland 9, Ohio Reliance Automatic Lighting Co., 1927 Mead St.,
- Racine, Wisc. Reliance Instrument Co., 3027 W. Van Buren St.,
- Chicago 12, Ill. Remington Radio Corp., 80 Main St., White Plains,
- Remington Rand, Systems Div., Vericon Dept., South Norwalk, Conn. Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
- Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio
- Research Electronics Lab., 2459 Susquehanna
- Rd., Roslyn, Pa. Resistance Products Co., 714 Race St., Harrisburg, Pa.
- burg, Pa.
  Respro, Inc., Wellington Ave., Cranston, R. I.
  Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
  Revnolds Electric Co., 2650 W. Congress St., Chicago 12, III.
  Reynolds Metals Co., Technical Service Dept., 2500 So. Third St., Louisville 1, Ky.
  Rhode Island Insulated Wire Co., Inc., 50 Burnham Ave., Cranston, R. I.
  Rhodes Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.

- ford, Conn.

- Rhodes InC., M. H., 30 Bartholomew Ave., Hartford, Conn.
  Rice's Sons Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
  Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
  Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y.
  Richardson Company, The, Melrose Park, Illinois Riggs & Jeffreys, Inc., 140 Glenridge Ave., Montclair, N. J.
  Ripley Co., Inc., P. O. Box 31, Middletown, Conn.
  Rittenhouse Co., Inc., The, Honeoye Falls, N. Y.
  Riverside Metal Co., Riverside, N. J.
  Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio
  Robinson Aviation, Inc., Teterboro, N. J.
  Robbinson Aviation, Inc., Teterboro, N. J.
  Robotom Corp., 5570 W. Chicago Blvd., Detroit 4, Mich.

- Rockbestos Products Corp., 308 Nicoll St., New
- Roeblard's Corp., 308 Nicoli St., New Haven 4, Conn.
   Roeblarg's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
   Rogan Bros., 2500 W. Irving Park, Chicago 18, 11
- ĬĬI.
- Rogers Corp., Manchester, Conn. Rohm & Haas Co., Washington Square, Phila-delphia 5, Pa. Rola Co., Inc., The, 2530 Superior Ave., Cleve-land 14, Ohio Pollon Flortrial Co. 2020 S. South Bask Chi
- Rollan Electrical Co., 8020 S. South Park, Chi-
- cago, III. Roller-Smith, Bethlehem, Pa. Rollin Co., 2070 N. Fair Oaks Ave., Pasadena 3,
- Cant. Rome Cable Corp., 330 Ridge St., Rome, N. Y. Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Phila. 4, Pa. Ross Mfg. Co., 860 Washington St., Burlington, Lowa
- Iowa
- Rostan Corp., 202 East 44th St., New York 17, N. Y.
- Rotron Division, 7-9 Schoonmaker Lane, Woodstock, N. Y.
- Rowe Engineering Corp., 2422 N. Pulaski Rd., Chicago 39, Ill.
- Rowe Industries, 1702 Wayne St., Toledo 9, Ohio
- Royal Diamond Tool Co., 403 Statler Bldg., Bos-ton 16, Mass.
- Ruberoid Co., The, 500 5th Ave., New York 18, N. Y.

Rubicon Co., 3751 Ridge Ave., Phila. Pa. Ruby Chemical Co., 68 McDowell St., Columbus,

- Ohio Ruge-DE Forest, Inc., 76 Massachusetts Ave., Cambridge 39, Mass.
- Rupp's Assembling & Mfg. Works, 2341 N. Semi-nary Ave., Chicago 14, Ill.
- Russell, Burdsall & Ward Bolt and Nut Co., Mid-land Ave., Port Chester, N. Y.
- Russell Electric Co., 340 West Huron St., Chicago 10, Ill.
- Russell & Stoll Co., Inc., 125 Barclay St., New York 7, N. Y.

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- Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
- "S" Corrugated Quenched Gap Co., Scientific Electric Div., 107 Monroe St., Garfield, N. J. S. N. C. Mig. Co., Inc., Oshkosh, Wis. SOS Cinema Supply Co., 602 W. 52nd St., New York 19, N. Y.
- S-W Inductor Co., 1056 N. Wood St., Chicago,
- Sag Harbor Industries, Inc., The, Sag Harbor, N. Y.
- N. 1. St. John X-Ray Laboratory, Califon, N. J. St. Louis Microphone Co., 2726-28 Brentwood Blvd., St. Louis 17, Mo. St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
- Louis Sciew & Boit Co., 0500 Broadway, St. Louis 15, Mo. St. Mary's Carbon Co., State Rd., St. Marys, Pa. Sanborn Co., 39 Osborn St., Cambridge 39, Mass. Sanders Bros. Mfg. Co., 409 W. Main St., Otta-
- wa, Ill. Sandwick Bowen Corp., 4712 Bethesda Ave., Bethesda, Md. Sangamo Electric Co., Springfield, Illinois
- Sarco Co., Inc., Empire State Bldg., New York 1, N. Y. I, N. Y. Sargent-Rayment Co., The, 212 Ninth St., Oak-
- land, Calif. Sauereisen Cements Co., Sauereisen Bldg., Pitts-burgh 15, Pa.
- Saxi Instrument Co., Harvard, Mass. Schaefer Bros. Co., 1059 W. 11th St., Chicago,

- II.
  Schauer Machine Co., Cincinnati 2, Ohio Schenectady Varnish Co., Schenectady, N. Y.
  Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.
  Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
  Schottland, Frederic D., 104-18 Metropolitan Ave., Forest Hills, N. Y.
  Schulmerich Electropics Inc. Schlarenille, Be.

- Ave., Forest Hills, N. Y.
  Schulmerich Electronics, Inc., Sellersville, Pa.
  Schutter, Carl W., Rockville Centre, N. Y.
  Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
  Schweitzer Inc., Peter J., 405 Lexington Ave., New York 17, N. Y.
  Sciaky Bros., 4915 W. 67th St., Chicago 38, Ill.
  Scientific Radio Products Co., 738 W. Broadway, Council Bluffs, Iowa
  Scientific Radio Service, 4301 Sheridan St., University Park, Md.

- versity Park, Md. Scinitila Magneto Div., Bendix Aviation Corp.,
- Sidney, N. Y. Scott Inc., Herman Hosmer, 385 Putnam Ave., Scott Inc., Herman Hosmer, 360 Futuan Ave., Cambridge, Mass.
   Scott Radio Labs., Inc., 4451 N. Ravenswood Ave., Chicago 40, Ill.
   Scovill Mfg. Co., Waterville Screw Prods. Div., Waterbury, Conn.
   Scoully Machine Co. 62 Walter St., Bridgeport,
- Scully Machine Co., 62 Walter St., Bridgeport,
- Conn. Seager Carbon Co., 289 Church St., New York
- 13, N. Y. Sealol Corp., 45 Willard Ave., Providence 5,

- R. I.
  Secon Metals Corp., 228 E. 45th St., New York 17, N. Y.
  Searle Aero Industries, Inc., Orange, Calif.
  Seeburgh Corp., J. P., 1500 N. Dayton Ave., Chicago 22, Ill.
  Selectar Industries, Inc., 401 East 138th St., New York 54, N. Y.
  Self Winding Clock Co., 205 Willoughby Ave., Brooklyn 5, N. Y.
  Sensitive Research Instrument Corp., 9 Elm
- Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y. Sentinel Radio Corp., 2100 Dempster St., Evan-
- ston, Ill. Sentry Crystal Co., 206 S. W. Washington St.,
- Portland 4, Oregon Serdex, Inc., 91 Cambridge St., Boston, Mass. Serv-All Mfg. Co., 334 N. Bell Ave., Chicago 12,
- III.
- Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y. Servo-Tek Products Co., 4 Godwin Ave., Pater-son, N. J.
- Servomechanisms Inc., 142 Mineola Blvd., Mi-
- neola, N. Y. Setchell Carlson, 2233 University Ave., St. Paul, Minn.
- Minn. Sewell, Inc., Norman M., Susquehanna at Der-stine, Lansdale, Pa. Shakeproof Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill. Shakespeare Products Co., 241 E. Kalamazoo Ave., Kalamazoo, Mich.
- Shallcross Mfg. Co., 10 Jackson Ave., Colling-
- dale, Pa.
- Shannon Luminous Materials Co., 7346 Santa Monica Blvd., Hollywood 46, Calif.

Shaw Insulator Co., 160 Colt St., It N J

- Shawinigan Products Corp., 350 Fifth Ax
- York 1, N. Y. Sheboygan X-Ray Co., 1135 Indiana, Shebo
- W18. Sheffco Mfg. Co., 116 W. Ruby Ave., Palisader Park, N. J. Sheffield Corp., The, Dayton 1, Ohio Sheffield Instrument Corp., 2021 N. Lincoln St., Burkach, Calif.

Cleveland 1, Ohio

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Sheffield Instrument Corp., 2021 N. Lincoln St., Burkank, Calif.
Sherman Industrial Electronics Co., Inc., 503 Washington Ave., Belleville 9, N. J.
Sherman Míg. Co., H. B., 22 Barney St., Battle Creek, Mich.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn G. N. Y.

Brooklyn 6, N. Y. Sherwin-Williams Co., 101 Prospect Ave., N. W.,

Shevers Inc., Harold, 33 W. 46th St., New York

Shevers Inc., Harold, 33 W. 40th St., New Fork 19, N. Y. Short Wave Plastic Forming Co., 2921 W. Ala-meda St., Burbank, Calif. Shur-Antenna-Mount Inc., Sea Cliff, N. Y. Shure Brothers, 225 W. Huron St., Chicago, Ill. Shurite Meters, 61 Hamilton St., New Haven

Sickles Co., F. W., 165 Front St., Chicopee, Mass. Sierra Electronic Corp., Belmont & San Carlos,

Sightmaster Corp., 220 Fifth Ave., New York,

Sigma Instruments, Inc., 80 Ceylon St., Boston 22, Mass. Signal Engineering & Mfg. Co., 154-6 W. 14th St. Min. Varit. M. Mfg. Co., 154-6 W. 14th St., New York, N. Y. Sillcocks-Miller Co., 10 Parker Ave., West, So. Orange, N. J. Simmonds Saw & Steel Co., Lockport, N. Y. Sinmonds Fastener Corp., North Broadway, Al-

bany 1, N. Y. Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass. Simpson Electric Co., 5218 W. Kinzie St., Chi-

Simpson Electric Co., 5218 W. Kinzle St., Chi-cago 44, Ill. Simpson Mig. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. Sipp-Eastwood Corp., Keen and Summer Sts., Paterson, N. J. Sisalkraft Co., 205 W. Wacker Drive, Chicago 6 III

Sittler Corporation, 18 N. Ada St., Chicago 7,

Skaneateles Mfg. Co., Inc., 122 Dickerson St., Syracuse 2, N. Y. Skinner Electric Valve Div., The Skinner Chuck

Skinner Electric Valve Div., The Skinner Chuck Co., 40 Belden Ave., Norwalk, Conn.
Skoning Corp., 319-325 Taunton Ave., E. Provi-dence 14, R. I.
Skydyne Inc., River Rd., Port Jervis, N. Y.
Skyline Tower Co., Chicago, Ill.
Slepian Co., Arthur, Bridgeport, Conn.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
Smith, Inc., Herman H., 405 44th St., Brooklyn 20, N. Y.
Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.

Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
Smith-Meeker Engineering Co., 125 Barclay Street, New York 7, N. Y.
Smith Paper Inc., Lee, Mass.
Smuckler & Co., Inc., A. F., 202 Tillary St., Brooklyn 1, N. Y.
Snaider Television Corp., 540 Bushwick Ave., Brooklyn 6, N. Y.
Sola Electric Co., 4633 W. 16th St., Chicago 50, III.

Solar Corp., 1000 W. Bruce St., Milwaukee 4,

Solar Mfg. Corp., 1445 Hudson Blvd., North Ber-gen, N. J. Soldering Specialties Co., Summit, N. J. Sonerset Laboratories, Inc., 1701 Palisades Ave., Union City, N. J.

Sonic Recording Products, Inc., 50 Mill Rd., Freeport, N. Y. Sonotone Corp., P. O. Box 200, Saw Mill River Road, Elmsford, N. Y.

Sorensen & Co., Inc., 375 Fairfield Ave., Stam-ford, Conn.

Sorgel Electric Co., 838 W. National Ave., Mil-waukee 4, Wis.

Soundscriber Corp., 146 Munson St., New Haven

South River Metal-Products Co., South River,

Southington Hardware Mfg. Co., Southington,

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Sound Apparatus Co., Stirling, N. J.

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Inquistrial Electronic Co., 2831 Rost

Hutustrial Electronic Co., 2831 Post 4 Houston 19, Texas Fibre Co., Inc., 310 Wheeler St., Tona-6 N. Y. K-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 Products Co., Silver Spring, Md. Specialty Battery Co., Madison 4, Wisconsin Spectrum Mfg. Co., 540 N. 63rd St., Phila. 31, Pa.

Pa.

Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.

Speer Carbon Co., Lincoln Ave., St. Marys, Pa. Speer Resistor Corp., St. Marys, Pa. Spellman Television Inc., 2898 Jerome Ave., New York, N. Y.

Spencer-Kennedy Labs., Inc., 186 Massachusetts Ave., Cambridge 39, Mass. Spencer Thermostat Co., 34 Forest St., Attleboro,

Mass. Sperman Metal Specialties, 27 Columbia Place,

Brooklyn 2, N.

Brooklyn 2, N. Y. Sperry Gyroscope Co., Div. of The Sperry Corp., Great Neck, N. Y. Sperry Products, Inc., Danbury, Conn. Sperti, Inc., Norwood Station, Cincinnati 12, Ohio Sprague Electric Co., North Adams, Mass. Stackpole Carbon Co., St. Marys, Pa. Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y. Standard Arcturus Corp., 54 Clark St., Newark 4, N. J.

N. J. Standard Coil Products Co., 2329 N. Pulaski Rd.,

Chicago 39, Ill. Standard Crystal Co., 321 East Gregory, Kansas

City 5, Mo. Standard Electric Time Co., The, 89 Logan St.,

Springfield, Mass. Standard Electrical Products Co., Dayton 3, Ohio Standard Electrical Products Co., Dayton 3, Ohio Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Standard Locknut & Lockwasher Inc., 118 W. St. Clair St., Indianapolis 4, Ind.
Standard Piezo Co., 127 Cedar St., Carlisle, Pa.
Standard Pressed Steel Co., Jenkintown, Pa.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England
Standard Transformer Corp., Elston, Kedzie & Addison Sts., Chicago 18, Ill.
Standard Varnish Works, 2600 Richmond Terr., Staten Island 3, N. Y.
Stand Winding Corp., 44-62 Johnes St., Newburgh, N. Y.

Standard Winning Co., burgh, N. Y.
 Stanley Works, The, New Britain, Conn.
 Stanwyck Winding Co., 102-104 S. Lander St., Newburgh, N. Y.
 Co. 200 Bloomfield Ave.,

Stanwyck Wnining Co., 100 Bloomfield Ave., Newburgh, N. Y.
 Star Electric Motor Co., 200 Bloomfield Ave., Bloomfield, N. J.
 Star Expansion Products Co., 147-149 Cedar St., New York 6, N. Y.
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Star Measurements Co., 442 East 166th St., New York 56, N. Y.

Star Porcelain Co., 61 Muirhead Ave., Trenton 9, J.

Stark Sound Engineering Co., 2131 Fairfield, Fort

Stark Sound Engineering Co., 2131 Fairfield, Fort Wayne 7, Ind.
Starrett Co., L. S., 165 Crescent St., Athol, Mass.
Starrett Television Mfg. Corp., 601 W. 26th St., New York, N. Y.
States Co., 19 New Park Ave., Hartford 6, Conn.
Statham Laboratories, Inc., 9328 Santa Monica Blvd., Beverly Hills, Calif.
Staver Co., Inc., 91 Pearl St., Brooklyn 1, N. Y.
Sta-Warm Electric Co., Ravenna, Ohio
Steer Furniture Mfg. Co., Steven III.

- Steger Furniture Mfg. Co., Steger, Ill. Steiner-Ives Co., 16 Avenue L. Newark 5, N. J. Stephens Mfg. Corp., 8538 Warner Drive, Culver City. Calif.
- Sterling Bolt Co., 209 W. Jackson Blvd., Chi-cago 6, Ill. Sterling Mfg. Co., 9205 Detroit Ave., Cleveland 2,

Ohio

Stevens-Arnold Inc., 22 Elkins St., S. Boston, Mass.

Stevens Mfg. Co., Inc., Geo., 1850 W. Henderson St., Chicago, Ill. Stevens Paper Mills Inc., Windsor, Conn. Stevens-Walden Inc., 468 Shrewbury St., Worces-

ter, Mass. Stevens Wire Insulating Co., 462 N. Parkside Ave., Chicago 44, Ill.

Stevenson Bros. & Co., 110 Race St., Philadelphia

6. Pa.

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Steward Mfg. Co., D. M., Chattanooga, Tenn. Stewart Mfg. Corp., F. W., 4311 Ravenswood Ave., Chicago 13, 111.

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. Stiles Co., H. A., 174 Portland St., Boston 14,

Mass.

Mass. Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y. Stoddart Aircraft Radio Co., 6644 Santa Monica Blvd., Hollywood 38, Calif. Stokes Machine Co., F. J., 5850 Tabor Road, Olney Post Office, Philadelphia 20, Pa. Stokes Molded Products, Inc., Taylor St. at Web-ster Trenton, N. J. Stow Manufacturing Co., 445 State St., Bingham-

Stow Manufacturing Co., 445 State St., Bingham-

Stow Manufacturing Co., 445 State St., Binghamton, N. Y.
Stromberg-Carlson Co., Rochester, N. Y.
Stronghold Screw Products Inc., 216-222 West Hubbard St., Chicago 10, Ill.
Struthers-Dunn, Inc., 150 N. 13th Street, Phila-delphia 7, Pa.
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
Submating Signal Dia. Baythacu Mig. Co. Wal-

Stupakoff Ceramic & Mig. Co., Latrobe, Pa.
 Submarine Signal Div., Raytheon Mig. Co., Waltham, Mass.
 Summerill Tubing Co., Div., Columbia Steel & Shafting Co., P. O. Box 1557, Pittsburgh 30, Distributed Statement State

Pa. Sun Dial Corp., E. Passaic Ave., Caldwell Town-

ship, N. J. Sun Electric Corp., 6323 Avondale Ave.. Chi-

cago 31, Ill. Sun Oil Co., 1608 Walnut St., Phila. 3, Pa. Super Electric Products Corp., 1057 Sunmit Ave.,

Jersey City, N. J. Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio

Superior Electric Co., The, 83 Laurel St., Bristol,

Conn. Superior Flake Graphite Co., 33 S. Clark St., Chi-

cago 3, Ill. Superior Flux Co., 1302 Ontario St., Cleveland

13, Ohio Superior Instruments Co., 227 Fulton St., New York 7, N. Y. Superior Tube Co., 2504 Germantown Pike, Nor-

ristown, Pa. Supreme, Inc., Greenwood, Miss. Surprenant Mfg. Co., 199 Washington St., Boston 10, Mass. Swiss Jewel Co., Lafayette Bldg., Philadelphia 6,

Pa.

Barting Structure, 1328-30 N. Halsted St., Chicago 22, Ill.
Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
Symphony Radio & Television Corp., 721 N. Martel Ave., Los Angeles 46, Calif.
Symphonic Radio & Electronic Corp., 292-8 Main St., Cambridge 42. Mass.
Synchro Start Products, Inc., 1046 W. Fullerton Ave., Chicago 14, Ill.
Syncar Products Co., Malden, Mass.
Synthane Corp., 0aks, Pa.
Synvar Corp., 415 E. Front St., Wilmington, Del.
Syracuse, N. Y.

Syracuse of Miller Co., McJ, 501 C. Canton Co., Syracuse, N. Y. Tablet & Ticket Co., 1021 W. Adams St., Chi-cago 7, Ill. Tagliabue Corp., C. J., 614 Frelinghuysen Ave., Newark 5, N. J.

Newark 5, N. J. Takk Corp., Newark, Ohio Talk A-Phone Co., 1512 S. Pulaski Rd., Chicago 23, Ill.

Z5, III.
Tar Heel Mica Co., Plumtree, N. C.
Taybern Equipment Co., 120 Greenwich St., New York 6. N. Y.
Taylor Fibre Co., Norristown, Pa.
Taylor Mfg. Co., 3056 W. Meinecke Ave., Milwaukee 10, Wise.
Taylor Tubor, Inc. 2219 Webserie Action (The State Sta

Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47. Ill.

Taylor-Wharton Iron & Steel Co., Highbridge, N. J. Tech Laboratories, Inc., Bergen & Edsall Blvds.,

Palisades Park, N. J. Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y. Technical Appliance Corp., Sherburne, N. Y. Technical Associates, 3730 San Fernando Rd., Chulted Colf.

Glendale 4, Calif. Technical Materiel Corp., The, 453 W. 47th St., New York 19, N. Y.

Technical Specialties Co., P. O. Box 1468, Wil-mington, Del.

Technicraft Laboratories, Inc., Box 1908, Waterbury, Conn.

Technitrol Engineering Co., 3212 Market St., Phila. Pa.

Technology Instrument Corp., 1058 Main St., Waltham, Mass.

Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y. Teiner Engineering Corp., 115 Madison St., Malden

48, Mass.

Tektronix, Inc., 712 S. E. Hawthorne Blvd., Port-land 14, Ore. TelAutograph Corp., 16 W. 61st St., New York

Tel-Craft Co., 108 Havemeyer St., Brooklyn 11,

N. Y. Tele King Corp., 601 W. 26th St., New York 1, N. Y.

Telechron Inc., Homer Ave., Ashland, Mass. Telectron Co., The, 4019 Prospect St., Cleveland 3, Ohio Telemark Electronics Corp., 325 Troy Ave., Brooklyn 13, N. Y. Telemark, Inc., 79 Prospect St. Stamford, Conn. Telephonics Corp., 350 W. 31st St., New York,

N. Y. Telequip Radio Co., 1901 S. Washtenaw, Chi-cago, Ill. Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y. Tele-Tone Radio Co., 540 W. 58th St., New York 19, N. Y. Tel-Instrument Co., Inc., 50 Paterson Ave., E. Butherford N. J.

Rutherford, N. J. Tel-O-Tube Corp. of America, Paterson, N. J. Tele-Video Corp., 241 Fairfield Ave., Upper

Darby, Pa. Darby, Pa. Teletronics Laboratory, Inc., 352 Maple Ave., Worthury L. L. N. Y.

Westbury, L. L., N. Y. Television Equipment Corp., 238 William St., New York, N. Y. Television Projects, Inc., 3660 Coral Way, Miami

35, Fla. Televiso Products Inc., 7466 West Irving Park

Televiso Products Inc., 7466 West Irving Park Rd., Chicago 34, Ill.
Televista Corp. of America, 114 E. 16th St., New York 3, N. Y.
Telex Inc., Telex Park, Minneapolis 1, Minn.
Telrex, Inc., Box 879, Rutherford & Neptune Highway, Asbury Park, N. J.
TELvision Labs., Inc., 542 N. Parkside Ave., Chicago 44, Ill.
Tempo Record Co. of America, Hollywood, Calif.
Tennessee Eastman Corp., Sub., Eastman Kodak Co., Kingsport, Tenn.
Tenney Engineering Inc., 26 Avenue B., Newark 5, N. J.
Tensoite Corp., 17 E. 42nd St., New York, 17.

Tensolite Corp., 17 E. 42nd St., New York 17,

N. Y. Terminal Radio Corp., 85 Cortland St., New York 7, N. Y. Tetrad Corp., 60 N. Broadway, Yonkers 2, N. Y. Thall Plastic Engineering Co., 155 Chambers St., New York, N. Y. Ther Electric & Machine Works, 17 South Jef-ferson St., Chicago. Ill. Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. Thermionic Engineering Corp., Pompton Plains.

Thermionic Engineering Corp., Pompton Plains,

N. J. Thermo Laboratories, Inc., 355 W. 26th St., New York 1, N. Y. Thomas & Betts Co., Inc., 36 Butler Street, Eliz-abeth 1, N. J. Thomas & Skinner Steel Products Co., 1122 E. 23rd St., Indianapolis, Ind. Thomas Electronics, Inc., 118 9th St., Passaic, N. J.

Thomas Products, Inc., 9 Bentley St., Salem,

Thompson Corp., The, George S., South Pasa-

Thompson-Bremer & Co., 1640 W. Hubbard St.,

Thompson-Bremer & Co., 1640 W. Hubbard St., Chicago, Ill.
Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.
Thordarson Electric Mfg. Div., Maguire Indus-tries, Inc., 500 W. Huron St., Chicago 10, Ill.
Thwing-Albert Instrument Co., 5351 Pulaski Avenue, Philadelphia 44, Pa.
Tibbetts Industries, Inc., Camden, Maine
Times Facsimile Corp., 229 W. 43rd St., New York, N. Y.
Tinnerman Products Inc., 2038 Fulton Rd., Cleveland 13, Ohio
Titan Metal Mfg. Co., Bellefonte, Pa.
Titanium Alloy Mfg. Co., 111 Broadway, New York 6, N. Y.
Titeflex, Inc., 500 Frelinghuysen Ave., Newark

Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5. N. J.

Todd-Tran Corp., 156 Gramatan Ave., Mt. Ver-

Toman & Co., E., 2621 W. 21st Place, Chicago

Ton-Tex Corp., 247 Pearl St. N. W., Grand Rapids 2, Mich.

Topflight Tape Co., Huber Bldg., York, Pa.

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- Topping Mfg. Co., 3597 Mission St., San Francisco 10, Calif.
  Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.
  Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.

- Tracerlab Inc., 55 Oliver St., Boston 10, Mass. Tradio, Inc., 1001 First Ave., Asbury Park, N. J. Transicoil Corp., 114 Worth St., New York 13,
- N. Y. Transformer Engineers, 389 South Arroyo Park-
- way, Pasadena, Calif. Transmitter Equipment Co., Inc., 345 Hudson St., New York 14, N. Y. Trans-Sonics, Inc., Bedford Airport, Bedford, Mase
- Mass. Transvision Inc., 460 North Ave., New Rochelle,
- N. Y. Trav-Ler Radio Corp., 571 W. Jackson Blvd.,
- Chicago, Ill. Triad Portable Case Corp., 2545 Boston Rd., Bronx 67, N. Y.
- Triad Transformer Mfg. Co., 423 N. Western Ave., Los Angeles 4, Calif. Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee
- 12, Wis.
- Tricon Mfg. Co., 8318 S. Racine Ave., Chicago, III.
- Tricraft Products Co., 1535 N. Ashland Ave.,
- Chicago 22, III. Trimm Inc., 400 W. Lake St., Libertyville, III. Triplett & Barton Inc., 831 N. Lake St., Bur-Trimm Inc., 400 W. Lake St., Libertyville, Ill.
  Triplett & Barton Inc., 831 N. Lake St., Burbank, Calif.
  Triplett Electrical Instrument Co., 286 Harmon Road, Bluffton, Ohio
  Triumph Mfg. Co., 913 W. Van Buren St., Chicago 7, Ill.
  Trotter & Co., E. T., 594 Johnson Ave., Brooklyn 6, N. Y.
  Trov Electronic Laboratories P. O. Box 501

- Troy Electronic Laboratories, P. O. Box 581, Troy, N. Y.

- Troy, N. Y. Trumbull Electric Mfg. Co., Plainville, Conn. Truscon Steel Co., Youngstown, Ohio Tubing Seal-Cap, Inc., 2810 E. 11th St., Los Angeles 23, Calif. Tubular Rivet & Stud Co., Wollaston 70, Mass. Tudor Products Co., 57 E. Alpine St., Newark 5 N J.
- Tung-Sol Lamp Works Inc., 95 Eighth Ave., Newark 4, N. J.
  Turner Co., The, 909 17th St., N. E., Cedar Rapids, Iowa
  Tuttle & Kift, 1832 N. Monitor St., Chicago, 10
- T11.
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- Ulanet Co., George, 413 Market St., Newark 5,

- Ulanet Co., George, 413 Market St., Newark 5, N. J.
  Ultra-Violet Products, Inc., 5205 Santa Monica Blvd., Los Angeles 27, Calif.
  Ungar Electric Tools Inc., 615 Ducommun St., Los Angeles 54, Calif.
  Uniform Tubes, Shurs Lane & Laruiston St., Roxborough, Phila., Pa.
  Unimax Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York I, N. Y.
  United Carr Fastener Corp., Cambridge 42, Mass.
  United Condenser Corp., 337 E. 139th St., New York 54, N. Y.
  United Electric Controls Co., 85 School St., Watertown 72, Mass.
  United Electronics Co., 42 Spring St., Newark 2, N. J.

- United Industries, Inc., Everett, Mass. United Insulator Co., Ltd., Tolworth-Surbiton-Surrey, England
- United Radio Electronics Corp., 901 W. Jackson
- Blvd., Chicago, Ill.
  United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
  United Screw & Bolt Gorp., 2513 W. Cullerton St., Chicago, Ill.
  U. S. Electrical Motors, Inc., 200 E. Slauson Ave., Los Angeles Calif.
- Los Angeles, Calif. U. S. Electronics Corp., 275 Warren St., Lynd-hurst, N. J.
- U. S. Gauge Div., American Machine and Metals, Inc., Sellersville, Pa.
- . S. Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich. U.
- U. S. Instrument Corp., 409 Broad St., Summit,
- N. J. U. S. Plastics Corp., 2835-53 Irving Park Road,
- Chicago, Ill. U. S. Radium Corp., 535 Pearl St., New York 7,
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- U. S. Rubber Co., Mechanical Goods Div., 1230 Avenue of the Americas, New York 20, N. Y. U. S. Stoneware Co., The, Akron 9, Ohio

- U. S. Television Mfg. Corp., 3 W. 61st St., New York 23, N. Y. United Transformer Co., 150 Varick Street, New
- York 13, N. Y. United Wood Specialty Mfg. Co., Inc., 951 Broad-
- way, Fall River, Mass.
- Way, Fail River, Mass. Universal Broadcast Equipment Corp., 6035 Northwest Highway, Chicago 31, Ill. Universal Drafting Machine Co., 3110 Payne Ave., Cleveland 14, Ohio Universal Electric Co., 300 E. Main St., Owosso, Mich.
- Mich.
- Universal Motor Co., 186 Harrison St., Oshkosh, Wisc.
- Wisc.
  Universal Winding Co., 1655 Elmwood Ave., Cranston 3, R. I.
  University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y.
  Urison Brothers, 2077 Coney Island Ave., Brook-lyn 23, N. Y.
  V-M Corp., Benton Harbor, Mich.
  Vaco Products Co., 317 E. Ontario St., Chicago 11, Illinois

- Vacolite Co., 3001-3003 N. Henderson, Dallas,
- Texas
- Vacuum Electronic Engineering Co., 316 37th St., Brooklyn 2, N. Y. Vacuum Tube Products, 203 North Clementine St., Oceanside, 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. Vangtronic Corp., The, 237 John St., Bridgeport 3. Conn.
- Varflex Corp., N. Jay St., Rome, N. Y. Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y.
- Varian Associates, 99 Washington St., San Carlos, Calif.
- Varo Mfg. Co., Inc., Box 638, Garland, Texas Vasco Electrical Mfg. Co., 4116 Avalon Blvd., Los Angeles, Calif.
- Los Angeles, Can.
   Vendo Co., 7400 E. 12th St., Kansas City 8, Mo.
   Vertrod Corp., 11 Park Place, New York 7, N. Y.
   Vibrapower Co., James, 3224 Armitage Ave., Chi-cago, Ill.
   Vibroplex Co., Inc., 833 Broadway, New York, N V
- N. Y.
- Vibroscope Co., 6 East 39th St., New York 16,
- Vickers Electric Div., Vickers Inc., 1815 Locust St., St. Louis 3, Mo. Victor Electric Products Inc., 2950 Robertson Ave., Cincinnati 9, Ohio
- Victoreen Instrument Co., 5806 Hough Ave.,
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  Vokar Corp., 7300 Huron River Dr., Dexter, Mich.
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- St., Brooklyn 5, N. Y. Vulcan Electric Co., 88 Holten St., Danvers, Mass. Waage Electric Inc., 54 Park Place, New York 7, N. Y.
- Wagner Electric Corp., 6400 Plymouth Avenue, St.
- Wagner Electric Corp., 2020 Madison Ave., Louis, Missouri
   Wagner Recorder Mfg. Corp., 292 Madison Ave., New York 17, N. Y.
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- Ward Leonard Electric Co., 31 South St., Mt. Vernon, N. Y.

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- troit 3, Mich. Warrick, Frederick P., 8666 Grandville, 10, Mich. Waterbury Companies, Inc., Waterbury 90, Con. Waterman Products Co., Inc., 2445-63 Emerald St., Phinadelphia 25, Pa. Waterproof Electric Co., 72 E. Verdugo Ave., Burbank, Calif.
- Minn.

- Minn. Watertown Mfg. Co., Watertown, Conn. Watterson Radio Mfg. Co., P. O. Box 840, Dallas, Tex. Waveguide Mfg. & Equipment Co., Inc., 190-A Duane St., New York, N. Y. Weaver Specialty Co., 6344 Aurelia St., Pitts-burgh, Pa. Weber Co., F., 1220 Buttonwood St., Philadelphia 23, Pa. Webster-Chicago Corp. 5622 Bloomingdale Ave.

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West Coast Electronics Co., 1601 S. Burlington Ave., Los Angeles 6, Calif.
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Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.
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Weston Electrical Instrument Corp., 618 Fre-linghuysen Ave., Newark 5, N. J.
Weston Laboratories, Weston 93, Mass.
Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
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Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.

Whiteman, R. A., 630 N. Wisner Ave., Park Ridge, Ill.

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  Wilcox-Gay Corp., Charlotte, Mich.
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  Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.

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  Winchester Repeating Arms Co., Div. of Olin Industries, Inc., New Haven, Conn.
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  Winslow Co., Inc., The, 9 Liberty St., Newark 5, N. J.
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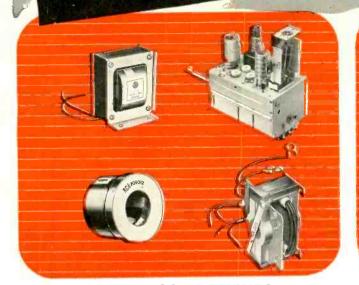
- Mich.
- Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.
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- Workshop Associates Inc., The, 66 Needham St., Newton Highlands 61, Mass.
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- Xervac Instrument Co., 101 Vine St., Hartford 5, Conn.
- Yates Engineering Services, Box 67, Cranford, N. J.
- York Materials Co., Inc., P. O. Box 510, Jamaica, N. Y.
- Zenith Electric Co., 152 W. Walton St., Chicago 10, 1<sup>fl</sup>.
- Zenith Optical Co., Div. of Polan Industries, Huntington 19, West Virginia
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- Zephyr Products Co., 160 E. 116th St., New York 29, N. Y.
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- Zetka Télevision Tubes Inc., 131-37 Getty Ave., Clifton, N. J.
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Los Angeles [3, Calif)	420 S. San Pedro St.	Madison 9-3671

2. Inquiries relative to technical bulletins: Commercial Engineering, RCA, 415 South 5th Street, Harrison, New Jersey.

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